

August 28, 2013

Mr. Paul Certeza  
Oil Control Program  
Maryland Department of the Environment  
1800 Washington Boulevard, Suite 620  
Baltimore, Maryland 21230-1719

RE: Off-Site Vapor Monitoring Point Installation/Sampling Events  
**Midway Site**  
6902 Holabird Avenue  
Dundalk, MD 21222  
MDE-OCP Case No. **9-0037BA**  
CGS Project No. CG-09-0491.09 and .12

Dear Mr. Certeza:

Chesapeake GeoSciences, Inc. (CGS) is pleased to present this summary report of the Vapor Monitoring Point (VMP) Installation/Sampling Events performed at off-site properties located near the Midway Site which is located at 6902 Holabird Avenue in Dundalk, Maryland (Site) (Figure 1).

## 1.0 INTRODUCTION

CGS submitted a File and Records Review & Site Visit Report for the Site to the Maryland Department of the Environment, Oil Control Program (MDE-OCP) on July 15, 2010. According to this report, the Site was formerly utilized as a gasoline station that operated under the name Midway Petroleum. Thirteen (13) underground storage tanks (USTs), which contained gasoline or diesel fuel, were previously located at the Site and had been removed and/or closed in place between 1987 and 2007. A series of subsurface investigations, including those performed by CGS on behalf of MDE-OCP, confirmed the presence of liquid phase hydrocarbon (LPH) in groundwater monitoring wells located in the northern portion of the Site and in public space located north of the Site. The layout of the Site and the locations of the groundwater monitoring wells installed to date are shown on Figure 2. LPH has routinely been detected in on-site wells MW-02, MW-03, MW-07, MW-09, and MW-10 and in off-site wells MW-12 and MW-13.

CGS performed an on-site VMP Installation/Sampling Event in January 2012 to gather data to evaluate the potential for vapor intrusion, from the subsurface petroleum hydrocarbon contamination, into nearby off-site residential structures. The results of the on-site sampling event are documented in CGS' April 10, 2012 report. Petroleum hydrocarbon constituents were detected in all of the soil vapor samples collected during this sampling event at concentrations which exceeded the screening levels that were used to evaluate the vapor intrusion exposure pathway. Based on these results, it was concluded that vapor intrusion into off-site residential structures may be an exposure pathway of potential concern for the Site.

MDE-OCP retained CGS to perform the Off-Site VMP Installation/Sampling Events, discussed herein, to gather additional data and further evaluate the potential for vapor intrusion into off-site residential

structures. The scopes of work for these tasks were performed as specified in CGS Proposal CG-P12-1381, dated May 3, 2012, and CGS Proposal CG-P12-1424, dated August 10, 2012 (Work Orders). The off-site residential properties included in these sampling events are located at 6905 5<sup>th</sup> Avenue, 6907 5<sup>th</sup> Avenue, and 6911 5<sup>th</sup> Avenue (on the southern side of 5<sup>th</sup> Avenue) and at 6900 5<sup>th</sup> Avenue, 6910 5<sup>th</sup> Avenue, and 6912 5<sup>th</sup> Avenue (on the northern side of 5<sup>th</sup> Avenue). The locations of these properties are shown on Figure 2. It should be noted that the owner of the property located at 6909 5<sup>th</sup> Avenue choose not to participate in the sampling events. This report presents the methodology and results of the Off-Site VMP Installation/Sampling Events.

## **2.0 FIELD INVESTIGATION - METHODOLOGY AND FIELD OBSERVATIONS**

The field investigation was performed in two phases. Phase 1 was initiated on July 9, 2012 and completed on July 18, 2012 and was performed at 6905 5<sup>th</sup> Avenue and 6911 5<sup>th</sup> Avenue. Phase 2 was initiated on September 24, 2012 and completed on October 11, 2012 and was performed at 6907 5<sup>th</sup> Avenue, 6900 5<sup>th</sup> Avenue, 6910 5<sup>th</sup> Avenue, and 6912 5<sup>th</sup> Avenue. Each phase of investigation was comprised of public and private utility clearances; a soil boring program which included soil boring advancement, temporary well installations and gauging, and soil and groundwater sampling; and the installation and sampling of VMPs.

The soil boring/temporary well and VMP locations are shown on Figure 3. All of the soil boring/temporary well and VMP locations were chosen to characterize subsurface conditions as close as possible to the southern side of each off-site residential structure (i.e., between the structure and the Site). Brief discussions of the field investigation methodologies are presented below.

### **2.1 Public and Private Utility Clearances**

Utility clearances were performed on each property prior to initiating each phase of work to ensure that subsurface utilities were not damaged during boring advancement activities. Miss Utility cleared the locations of subsurface public utilities.

Professional utility locating firms were retained to verify Miss Utility's findings and check all potential soil and VMP boring location areas for un-marked, private utilities. Underground Protection, Inc. (UPI) cleared private utilities at 6905 5<sup>th</sup> Avenue and 6911 5<sup>th</sup> Avenue on July 9, 2012. Edwards Utility Mapping Corporation (EUMC) cleared private utilities at 6907 5<sup>th</sup> Avenue, 6900 5<sup>th</sup> Avenue, 6910 5<sup>th</sup> Avenue, and 6912 5<sup>th</sup> Avenue on September 24, 2012 and October 1, 2012. Because work was being performed in the front yards at 6900 5<sup>th</sup> Avenue, 6910 5<sup>th</sup> Avenue, and 6912 5<sup>th</sup> Avenue, EUMC also utilized an air lance to clear the soil boring locations against possible sanitary sewer line conflicts at these properties. As discussed in Section 2.2 below, some of the VMP borings at these properties were advanced via hand auger to ensure that the sanitary sewer lines were not damaged during boring advancement activities.

### **2.2 Soil Boring Program**

CGS retained Tidewater, Inc. (Tidewater) to perform the soil boring program during both phases of work. One soil boring was advanced at each property using a track-mounted Geoprobe® 6620DT rig. Soil borings SB-01 and SB-02 were advanced on July 10, 2012, and soil borings SB-03 through SB-06 were advanced on October 1, 2012. The soil boring locations are shown on Figure 3.

A CGS geologist supervised the soil boring program, logged the retrieved soil core using the Unified Soil Classification System (USCS), and screened it for volatile organic compounds (VOCs) using a photo-ionization detector (PID). Soil boring logs are included in Attachment A.

The soil borings were all advanced to the target depth of at least five feet below the water table. SB-03 was advanced to a depth of 28 feet below ground surface (BGS). The remaining soil borings were advanced to a depth of 36 feet BGS. Continuous soil core was retrieved from each boring using a Marcocore sampler. All down-hole equipment was cleaned and rinsed prior to use and between each soil boring location using a non-phosphate detergent and water.

A temporary 1-inch diameter well was installed in each boring following its completion. The boring for SB-03 collapsed following its initial advancement, and the boring was re-advanced but to a slightly deeper depth. The temporary well at SB-03 was installed to a depth of 28.7 feet which was slightly below the depth to which soil core was retrieved from the original boring. The temporary wells in the remaining soil borings were installed to depths that were equal to or less than the boring completion depth.

Soil retrieved from the borings was comprised of inter-bedded sequences of sand, silty sand, sandy silt, silt, clayey silt, and silty clay. Some of these inter-bedded sequences also contained fine- to medium-grained gravel. Perched groundwater zones have been detected at the Site during prior phases of investigation. Accordingly, the soil core obtained during this off-site soil boring program was inspected for the possible presence of perched groundwater zones at these off-site locations as well. Wet/saturated zones were encountered in soil core obtained from SB-01, SB-03, and SB-06 at depths above the depth where the water table later stabilized in the temporary wells. It is likely that any mobile groundwater from these perched groundwater zones drained to the deeper depths discussed below since each of these perched zones was also included in the screened interval of the temporary wells.

The PID readings observed in the soil core retrieved from SB-01 and SB-02 ranged from 0 to 6.5 parts per million (ppm). These levels are in the range of those considered to be background levels. The PID readings observed in the soil core retrieved from SB-03 and SB-04 ranged from 0 to 29.5 ppm. These maximum PID readings are considered to be slightly elevated above background levels. Higher PID readings were observed in the soil core retrieved from SB-05 and SB-06. The PID readings observed in the soil core retrieved from SB-06 between the depths of 5 and 12.5 feet BGS ranged from 3.3 to 108 ppm. The maximum PID reading of 108 ppm was observed at a depth of 10.75 feet BGS. This PID reading was observed at a depth where a perched groundwater zone was encountered. The PID readings observed in the soil core retrieved from SB-05 between the depths of 29 and 36 feet BGS (i.e., below the water table) ranged from 122 to 4,090 ppm. The maximum PID reading of 4,090 ppm was observed at a depth of 35.25 feet BGS.

One soil sample was collected from each boring for laboratory analysis of VOCs via United States Environmental Protection Agency (EPA) Method 8260 and total petroleum hydrocarbon (TPH) gasoline range organics (GRO) and diesel range organics (DRO) via EPA Method 8015M. The soil samples were collected at the depth where the highest PID reading was recorded in each boring. The VOCs samples were collected using Terra Core™ samplers according to EPA Method 5035. Three VOA vials (two preserved with sodium bisulfate solution and one preserved with methanol) and one (unpreserved) 4-ounce jar, for percent moisture analysis, were collected per sample. Duplicate soil samples were collected from SB-01 (Phase 1) and SB-05(Phase 2).

Grab groundwater samples were collected for laboratory analysis from all of the temporary wells, with the exception of the temporary well installed in SB-03. The samples were submitted for laboratory analysis of VOCs via EPA Method 8260 and TPH-GRO and TPH- DRO by EPA Method 8015M. A grab groundwater sample was not collected at SB-03 because LPH had been detected in this temporary well. The grab groundwater samples were collected using a peristaltic pump and disposable high density polyethylene (HDPE) tubing. Duplicate groundwater samples were collected from the temporary wells installed in borings SB-01 (Phase 1) and SB-05 (Phase 2).

The soil and groundwater samples were preserved on ice. The samples from Phase 1 were hand delivered to Phase Separation Science, Inc. in Baltimore, Maryland, and the samples from Phase 2 were shipped to Air, Water & Soil Laboratories, Inc. in Richmond, Virginia for laboratory analysis.

The temporary wells installed in SB-01 and SB-02 were gauged on July 11, 2012, and the temporary wells installed in SB-03 through SB-06 were gauged on October 8, 2012. The gauging data are presented in Table 1. The depth to groundwater in the temporary wells ranged from 17.06 to 27.85 feet BGS. LPH with a thickness of 1.18 feet was measured in the temporary well at SB-03. Once the gauging was completed, the temporary wells were removed, and all boreholes were backfilled with soil cuttings and bentonite.

## **2.3 Vapor Monitoring Point (VMP) Installation and Sampling**

### **2.3.1 VMP Installation**

The VMPs at 6905 5<sup>th</sup> Avenue and 6911 5<sup>th</sup> Avenue (VMP-05 through VMP-08) were installed on July 11, 2012, and the VMPs at 6907 5<sup>th</sup> Avenue, 6900 5<sup>th</sup> Avenue, 6910 5<sup>th</sup> Avenue, and 6912 5<sup>th</sup> Avenue (VMP-09 through VMP-16) were installed on October 8, 2012. The VMP locations and construction depths are shown on Figure 3.

The borings for VMP-06, VMP-07, VMP-09, VMP-12, VMP-13, and VMP-15 were advanced by Tidewater using its track-mounted Geoprobe® 6620DT rig at locations slightly off-set from the co-located soil borings. The boring for VMP-05 was also advanced via the Geoprobe® rig. Due to access constraints or to avoid potential sanitary sewer line damage, the borings for VMP-08, VMP-10, VMP-11, VMP-14, and VMP-16 were advanced by CGS using a hand auger. The borings were advanced to depths ranging from 4.9 to 7.5 feet BGS to correspond with the depths of the nearby residential structure basement floors and to be above the depths where perched groundwater zones were observed. All down-hole equipment was cleaned and rinsed prior to use and between each boring location using a non-phosphate detergent and water.

Soil retrieved from the VMP borings was consistent with that observed during the soil boring program with the exception that silty clay sequences were absent at these depths. The PID readings observed in the soil core retrieved from the VMP borings ranged from 0 to 7.9 ppm (i.e., in the range of those considered to be background levels).

Each VMP was installed at the bottom of its boring using a 6-inch long, ¼-inch diameter stainless steel screen point, equipped with an expendable point steel implant anchor at the bottom, and Teflon tubing at the top. #1 Silica Sand was placed in the annular space along the length of the screen point, and hydrated bentonite was placed above the screen along the length of the Teflon tubing. Each VMP was completed with a 5-inch diameter flush mount cover.

### **2.3.2 Inert Tracer Gas Monitoring**

The inert tracer gas monitoring was performed on July 16, 2012 (Phase 1) and October 10, 2012 (Phase 2) to monitor for leaks around the surface seal of each VMP. The monitoring was performed using the methodology described in Section 2.7.5 of the New York State Department of Health, Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006). Helium was utilized as the inert tracer gas for the monitoring at the off-site residences. The helium monitoring was performed using an Ion Science GasCheck Helium Detector. For each test, a plastic container, with a foam gasket on its open end, was placed over each VMP. VMP tubing was then extended through a small hole that had been drilled through the container, and the interior space of the container was enriched with helium through a

second small hole that had been drilled through the container. Three volumes of soil vapor were then purged from each VMP using a hand pump. Monitoring was performed to determine pre-test background helium readings in ambient air, pre-test readings in each VMP, the enriched container readings, and post-purge readings in each VMP.

Background helium readings in ambient air ranged from 0.015 to 0.24%. Pre-test helium readings in the VMPs ranged from 0.015 to 0.210%. The helium reading in the enriched container exceeded the range of the helium detector at 99.99% during each test. Post-purge helium readings in the VMPs of less than 10% demonstrate surface seal integrity. Post-purge helium readings above 10% were initially observed at VMP-09, VMP-11, and VMP-13. The surface seals at these VMPs were enhanced and the helium monitoring was repeated at each of these locations. Final post-purge helium readings in the VMPs ranged from 0.054 to 0.568%, thereby demonstrating surface seal integrity at each VMP.

### 2.3.3 Soil Vapor Sampling

The soil vapor sampling was initiated on July 17, 2012 for Phase 1 and on October 10, 2012 for Phase 2. VOC concentrations in the VMPs were measured using a ppbRae® PID, capable of detecting VOCs at concentrations in the part per billion (ppb) range, before purging of the VMP tubing was initiated. The pre-sampling PID readings are summarized below in Table A-1.

**Table A-1  
Pre-sampling and Post-sampling PID Readings (ppb)**

Address	6905 5 <sup>th</sup> Avenue		6911 5 <sup>th</sup> Avenue		6907 5 <sup>th</sup> Avenue	
VMP	VMP-05	VMP-06	VMP-07	VMP-08	VMP-09	VMP-10
Pre-sampling PID reading	0	0	0	820	0	0
Post-sampling PID reading	0	0	590	3,000	0	0

Address	6900 5 <sup>th</sup> Avenue		6910 5 <sup>th</sup> Avenue		6912 5 <sup>th</sup> Avenue	
VMP	VMP-11	VMP-12	VMP-13	VMP-14	VMP-15	VMP-16
Pre-sampling PID reading	0	0	0	0	0	0
Post-sampling PID reading	0	0	0	0	0	MN

MN – not measured

The soil vapor samples were collected in pre-evacuated, pre-cleaned 6-liter Summa canisters, which had been connected to the Teflon tubing at each VMP using an overlapping length of flexible 3/16-inch inner-diameter Viton tubing. A new pair of nitrile sampling gloves was donned prior to each sample setup. Duplicate samples were collected, using T-splitters from VMP-06 (Phase 1) and VMP-09 (Phase 2). Pre-sample and post-sample vacuums were measured for each canister using a vacuum gauge and recorded on the sample Chain-of-Custody form. Post-sampling PID readings were recorded and are summarized in Table A-1.

The Summa canister regulators were calibrated to collect vapor over a 24-hour period at an average rate of approximately 3.44 milliliters per minute (mL/min). The Summa canisters for Phase 1 were set up starting at 8:55 am on July 17, 2012 and retrieved by 9:37 am the following day. The Summa canisters for Phase 2 were set up starting at 10:30 am on October 10, 2012 and retrieved by 12:25 pm the following day. A high residual vacuum, indicating a low sample quantity, was noted for the sample from VMP-16 at the time of sample retrieval. The regulator was removed from the VMP-16 canister, and a grab soil vapor sample was collected at this location. Collection of the grab soil vapor sample was terminated when water was observed entering the VMP tubing.

The soil vapor samples were shipped at the completion of each sampling event to Spectrum Analytical, Inc. in Agawam, MA for VOC analysis via EPA Method TO-15. Pending the results of this investigation,

the VMPs were left in place, each sealed with a plastic cap at the end of the tubing beneath the flush mount cover, after the sampling had been completed.

### **3.0 INVESTIGATION RESULTS**

#### **3.1 Analytical Laboratory Results**

The analytical results for the detected analytes in the soil, groundwater, and soil vapor samples are presented in Tables 2, 3, and 4, respectively. Full analytical results are presented in Tables B-1 through B-3 in Attachment B. The results are reported in the data tables in milligrams per kilogram (mg/kg or ppm) for the soil samples, in micrograms per liter [ $\mu\text{g/L}$  or parts per billion (ppb)] for the grab groundwater samples, and in micrograms per cubic meter ( $\mu\text{g/m}^3$ ) for the soil vapor samples. Concentrations for detected analytes are shown on the tables in bold text. The laboratory reports and chain-of-custody documentation are included in Attachments C and D.

##### **3.1.1 Analytical Laboratory Results Screening Methodology**

The analytical results were compared to various screening levels (SLs), obtained from MDE guidance documents, to identify analytes and associated concentrations that may be of potential concern.

- The soil analytical data were compared to MDE Residential Soil Cleanup Standards (MDE, 2008). These screening levels were developed based on dermal contact, incidental ingestion, and inhalation of volatiles/fugitive dust (in open air) exposure routes for residential receptors. Given that these samples were collected at depths below which direct contact would be expected (i.e., at or more than 9.75 feet BGS), use of these screening levels is deemed to represent a conservative approach for data evaluation for this incomplete exposure pathway.
- The grab groundwater analytical data were compared to MDE Groundwater Standards for Type I and II Aquifers (MDE, 2008). These screening levels were developed with respect to the drinking water ingestion exposure route. CGS understands that drinking water is municipally supplied to the Site and surrounding area. Accordingly, these screening levels are not directly applicable to this investigation. However, use of these screening levels does provide a conservative means of highlighting concentrations that may be of potential concern in the event that drinking water ingestion was a complete exposure pathway.
- The soil vapor analytical data were compared to MDE Target Residential Soil Gas Tier 1 and Tier 2 Remediation Goals (RGs) (MDE, 2013). These RGs were developed by MDE based on the May 2012 EPA Residential Indoor Air Regional Screening Levels (RSLs), a cancer risk of  $1 \times 10^{-5}$  or a Hazard Index of 1, and Attenuation Factors (AFs) of 0.05 for Tier 1 and 0.01 for Tier 2. MDE developed the Tier 1 and Tier 2 RGs to identify sites where long-term monitoring or source reduction was required (i.e., analyte concentrations between the Tier 1 and Tier 2 RGs) and sites where remedial action was required (i.e., analyte concentrations that exceed the Tier 2 RGs) (MDE, 2013).

##### **3.1.2 Soil Sample Analytical Laboratory Results**

The soil sample analytical results are summarized in Tables 2 and B-1. Acetone was detected at concentrations below the SL in the soil samples collected from SB-02 and SB-06. Multiple petroleum hydrocarbon constituents were detected in the soil sample and duplicate soil sample collected from SB-05 at a depth of 35.25 feet BGS at concentrations below the SLs. TPH-DRO and TPH-GRO were detected in this sample/duplicate sample at concentrations that exceed the SLs.

### 3.1.3 Groundwater Sample Analytical Laboratory Results

The groundwater sample analytical results are summarized in Tables 3 and B-2. As shown in these tables, various petroleum hydrocarbon VOCs were detected in the groundwater samples collected from SB-04, SB-05, and SB-06. TPH-DRO was detected in the groundwater samples collected from SB-01, SB-02, and SB-05. TPH-GRO was detected in the groundwater sample/duplicate sample collected from SB-05. Petroleum hydrocarbon constituents were detected in all of the groundwater samples at concentrations that exceed the MDE Groundwater Standards.

### 3.1.4 Soil Vapor Sample Analytical Laboratory Results

The soil vapor sample analytical results are summarized in Table B-3. The results indicate that VOCs were detected above Method Detection Limits (MDLs) in all of the soil vapor samples. It should be noted that the VMP-11 and VMP-13 soil vapor samples required significant dilution which resulted in elevated MDLs for non-detected analytes in these samples.

Petroleum hydrocarbon related VOCs, as summarized in Table 4, were detected in all of the soil vapor samples. All detected petroleum hydrocarbon related VOCs were below MDE Target Residential Soil Gas Tier 1 RGs with the following exception. The 1,2,4-trimethylbenzene concentration of 220.74 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) detected in the soil vapor sample from VMP-08 exceeded the MDE Target Residential Soil Gas Tier 1 RG of 146  $\mu\text{g}/\text{m}^3$  but was below the Tier 2 RG of 730  $\mu\text{g}/\text{m}^3$ . The petroleum hydrocarbon related VOCs, detected in the soil vapor samples, are further discussed below in Section 3.2.

Non-petroleum related VOCs were also observed in all of the soil vapor samples. All of the non-petroleum related VOCs were below MDE Target Residential Soil Gas Tier 1 RGs with the following exception. The chloroform concentration of 30.22  $\mu\text{g}/\text{m}^3$  reported for the soil vapor sample from VMP-15 exceeded the MDE Target Residential Soil Gas Tier 1 RG of 22  $\mu\text{g}/\text{m}^3$  but is below the Tier 2 RG of 110  $\mu\text{g}/\text{m}^3$ . Chloroform is a breakdown product often associated with chlorinated drinking water supplies (and the associated sanitary sewer lines and septic drain fields) and chlorinated pool water (ATSDR, 1997). It should be noted that CGS personnel observed a water supply line leak at 6912 5<sup>th</sup> Avenue or 6914 5<sup>th</sup> Avenue (i.e., in the immediate vicinity of VMP-15) in January 2012. Because its presence does not appear to be related to the subsurface contamination documented at Site, chloroform will not be further discussed in this report.

## 3.2 Site Characterization Discussion

The laboratory analytical results from these sampling events were evaluated to gain information regarding the potential for petroleum hydrocarbon related vapor intrusion into off-site residential properties from the documented subsurface contamination and the potential for unacceptable health risks to the building occupants which may be associated with the vapor intrusion.

The results of monitoring well and temporary well gauging demonstrate that a potentially continuous LPH plume extends north from the Site and minimally to the center of 5<sup>th</sup> Avenue where MW-12 and MW-13 are located. The results of the soil and groundwater sampling demonstrate contaminant migration which extends beyond the LPH plume and minimally to the north side of 5<sup>th</sup> Avenue where SB-04 and SB-05 are located. The presence of LPH beneath residential structures presents a potential concern for the vapor intrusion exposure pathway. It should be noted that source reduction is being performed at the Site and at off-site areas where LPH has been detected.

The VMPs were installed to depths ranging from 4.9 to 7.5 feet BGS to correspond with the depths of the nearby residential structure basement floors. With the exception of the 1,2,4-trimethylbenzene concentration in the soil vapor sample from VMP-08, the results of the soil vapor sampling demonstrate soil vapor petroleum hydrocarbon contaminant concentrations that are below the MDE Target Residential Soil Gas Tier 1 RGs. The results of this one-time sampling event suggest that vapor-phase petroleum contamination, at concentrations indicative of a potential concern for the vapor intrusion exposure pathway, is either not present in most of the exterior portions of the investigation area, is retarded due to perched groundwater and/or low permeability zones, or is biodegrading to concentrations below those of concern. This biodegradation would be naturally occurring in the unsaturated zone between the depths where the LPH/groundwater contamination is present and the depths where the VMPs were installed and would be expected to be enhanced in areas where structures are not present (EPA, February 2012).

It is recommended that additional soil vapor sampling be performed to verify the initial vapor sampling results and to monitor the vapor-phase petroleum concentrations to evaluate the potential concern for the vapor intrusion exposure pathway using a longer-term data set. The additional monitoring should minimally include VMP-05, VMP-08, VMP-09, VMP-10, VMP-11, VMP-13, and VMP-15. VMP-05 and VMP-15 were chosen for additional monitoring to confirm the previous results. VMP-08 was chosen for additional monitoring due to the 1,2,4-trimethylbenzene concentration which exceeded the MDE Target Residential Soil Gas Tier 1 RG. VMP-09 and VMP-10 were chosen for additional monitoring due to the presence and likely presence of LPH at the groundwater table in these areas. VMP-11 was chosen for additional monitoring due to the elevated MDLs that were reported for this sample. VMP-13 was chosen for additional monitoring due to its location which is down-gradient of the known LPH plume.

#### 4.0 CONCLUSIONS

CGS has performed VMP Installation/Sampling Events at six off-site properties located near the Midway Site located at 6902 Holabird Avenue in Dundalk, Maryland. These tasks included the advancement of six soil borings, the installation of six temporary wells, the installation of 12 VMPs, and the collection of soil, groundwater, and soil vapor samples at each property. This work was performed to gather data to evaluate the potential for vapor intrusion from the subsurface contamination, documented at and north of the Site, into off-site residential structures, and the potential for unacceptable health risks to the building occupants which may be associated with the vapor intrusion. Based on the results of this work, CGS concludes the following:

- The stratigraphy observed during this work was comprised of inter-bedded sequences of sand, silty sand, sandy silt, silt, clayey silt, and silty clay. Some of these inter-bedded sequences also contained fine- to medium-grained gravel. The depth to groundwater in the temporary wells ranged from 17.06 to 27.85 feet BGS. Potential perched groundwater zones were observed at SB-01, SB-03, and SB-06.
- LPH with a thickness of 1.18 feet was measured in the SB-03 temporary well located at 6907 5<sup>th</sup> Avenue and between two known LPH areas which demonstrates that a potentially continuous LPH plume extends north from the Site and minimally to the center of 5<sup>th</sup> Avenue where MW-12 and MW-13 are located.
- The subsurface contaminant conditions documented during this and other related site investigations (i.e., the presence of LPH) present a potential concern for the vapor intrusion exposure pathway.
- Petroleum hydrocarbon related VOCs were detected in all of the soil vapor samples collected during this investigation; however, only one petroleum hydrocarbon VOC (1,2,4-trimethylbenzene) was detected in one soil vapor sample (VMP-08) at a concentration which



exceeded a MDE Target Residential Soil Gas Tier 1 RG. The results of this one-time sampling event suggest that vapor-phase petroleum contamination, at concentrations indicative of a potential concern for the vapor intrusion exposure pathway, is either not present in most of the exterior portions of the investigation area, is retarded due to perched groundwater and/or low permeability zones, or is biodegrading to concentrations below those of concern.

## 5.0 RECOMMENDATIONS

Based on the results of the VMP Installation/Sampling Events, CGS recommends the following:

- Continued source reduction which is currently on-going at the Site and at off-site areas where LPH has been detected;
- Additional sampling of select VMPs (minimally including VMP-05, VMP-08, VMP-09, VMP-10, VMP-11, VMP-13, and VMP-15. VMP-05 and VMP-15) to verify the initial vapor sample results and to monitor the vapor-phase petroleum concentrations using a longer-term data set; and
- Maintenance of the VMPs that have been installed at the Site and the off-site residential properties to allow sampling of additional VMPs if the results of the additional monitoring suggest a potential concern for the vapor intrusion exposure pathway.

## 6.0 REFERENCES

ATSDR (Agency for Toxic Substances and Disease Registry), September 1997. Toxicological Profile for Chloroform.

EPA, February 2012, Conceptual Model Scenarios for the Vapor Intrusion Pathway, EPA 530-R-10-003.

MDE (Maryland Department of the Environment), June 2008, "Cleanup Standards for Soil and Groundwater", Interim Final Guidance (Update No. 2.1).

MDE, February 2013, FACTS ABOUT: Vapor Intrusion.

New York State Department of Health, Center for Environmental Health, Bureau of Environmental Exposure Investigation. October 2006. Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

## 7.0 LIMITATIONS

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

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

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

CGS is pleased to have had the opportunity to prepare this report for the Maryland Department of the Environment. If there are any questions, please feel free to contact our office in Columbia, Maryland at (410) 740-1911. Our facsimile number is (410) 740-3299.

Sincerely,  
Chesapeake GeoSciences, Inc.



Nancy D. Love, PG  
Senior Project Manager



Sean P. Daniel  
Operations Manager

cc: Project File

Attachments:

Figures

- Figure 1: Site Location Map
- Figure 2: Site Diagram
- Figure 3: Soil Boring/Temporary Well and VMP Location Diagram

Tables

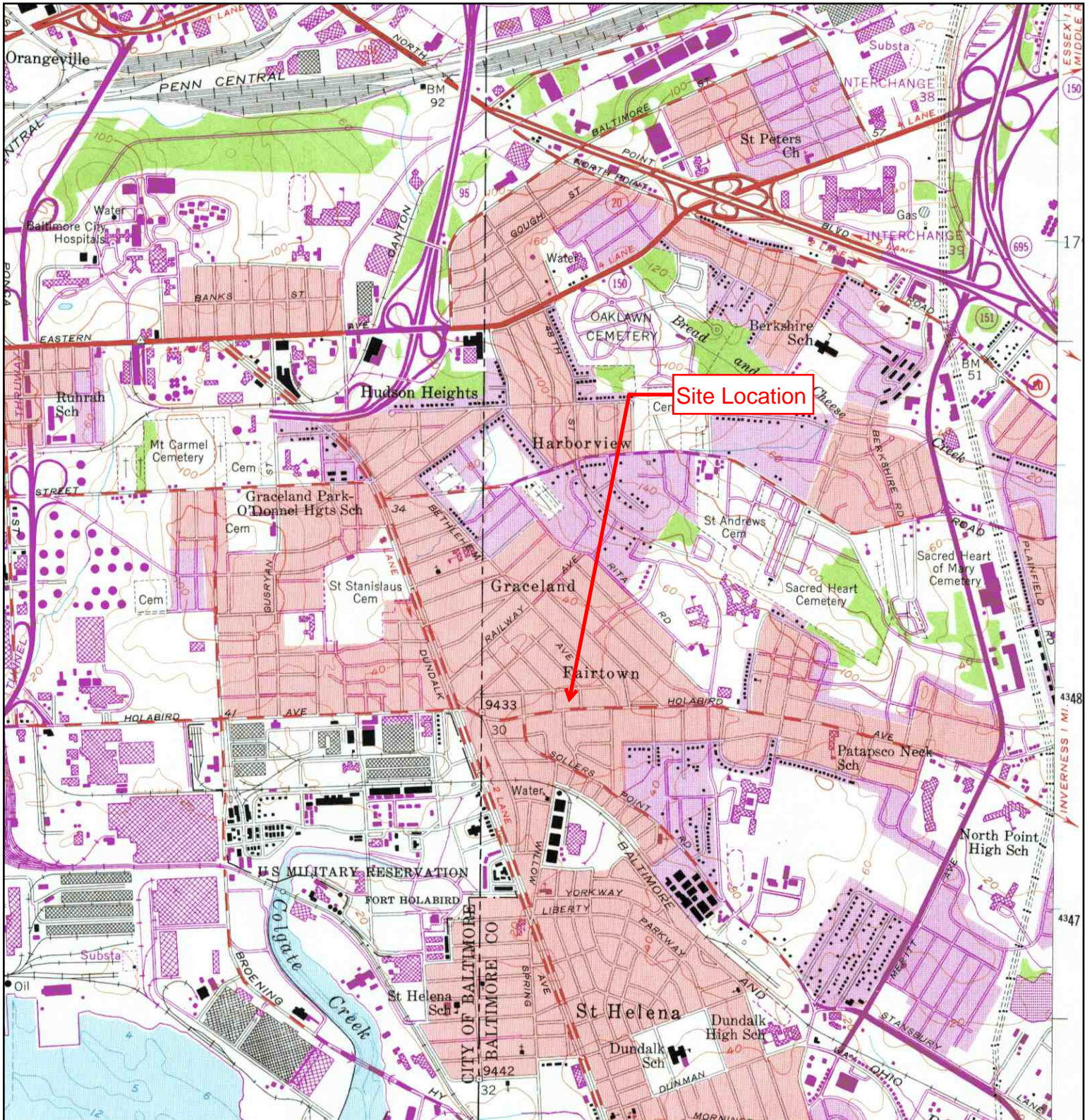
- Table 1: Groundwater Gauging Data
- Table 2: Off-Site Subsurface Soil Sample Analytical Results - Detected Analytes
- Table 3: Off-Site Groundwater Sample Analytical Results - Detected Analytes
- Table 4: Off-Site Soil Vapor Sample Analytical Results - Detected Petroleum Hydrocarbon Related Analytes

Attachments

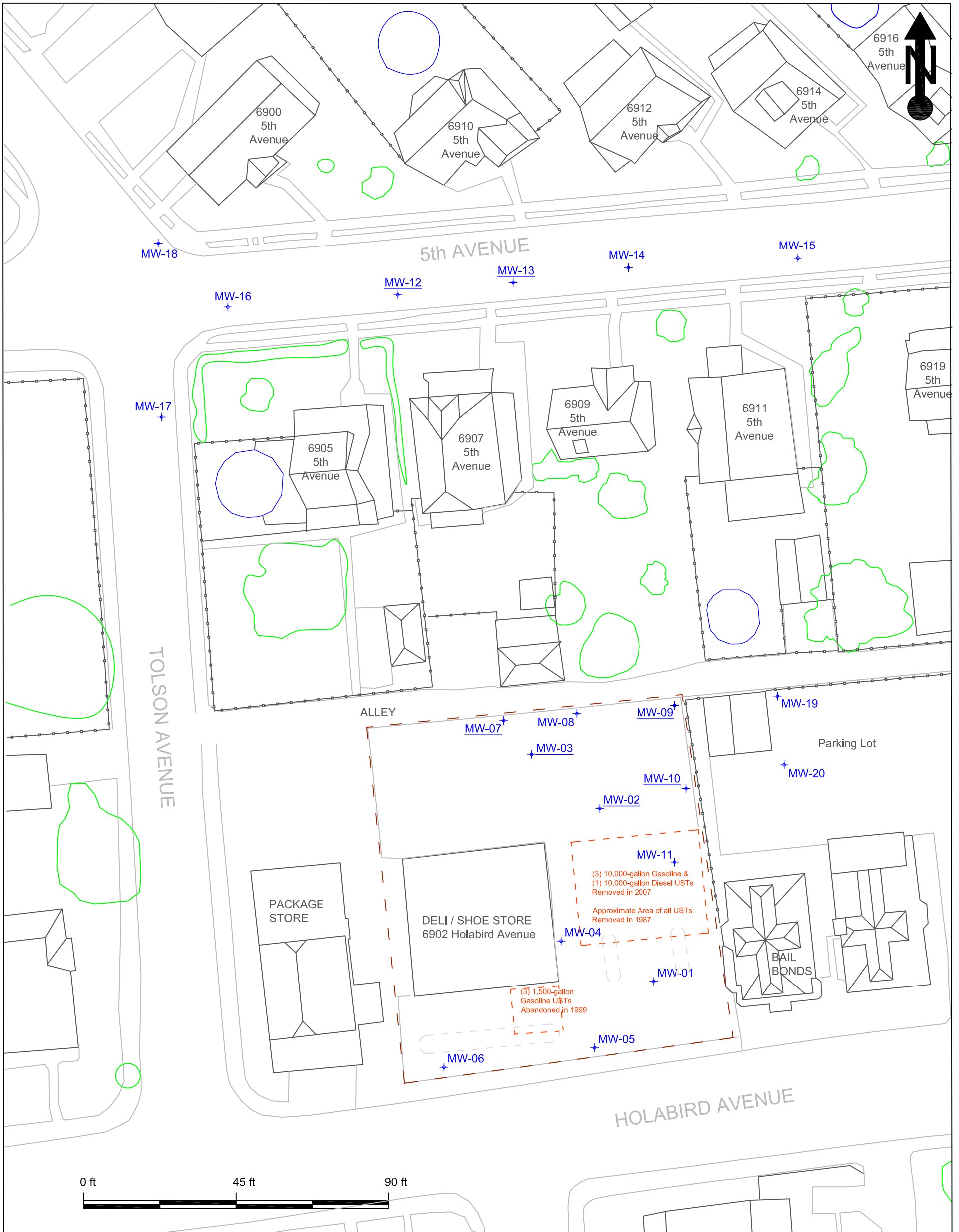
- Attachment A: Soil Boring and VMP Construction Logs
- Attachment B: Full Laboratory Analytical Data Tables
- Attachment C: Laboratory Analytical Reports – Soil and Groundwater Samples
- Attachment D: Laboratory Analytical Reports – Soil Vapor Samples

## **FIGURES**

Figure 1 - Site Location Map



<p>N ↑</p>	TARGET QUAD	SITE NAME:	Midway Service Station	CLIENT:	Chesapeake GeoScience Inc
	NAME: BALTIMORE EAST	ADDRESS:	6902 Holabird Avenue	CONTACT:	Debbie Daniel
	MAP YEAR: 1974	LAT/LONG:	Dundalk, MD 21222	INQUIRY#:	2625573.4
	PHOTOREVISED FROM: 1953			RESEARCH DATE:	10/28/2009
	SERIES: 7.5				
	SCALE: 1:24000				



**LEGEND**

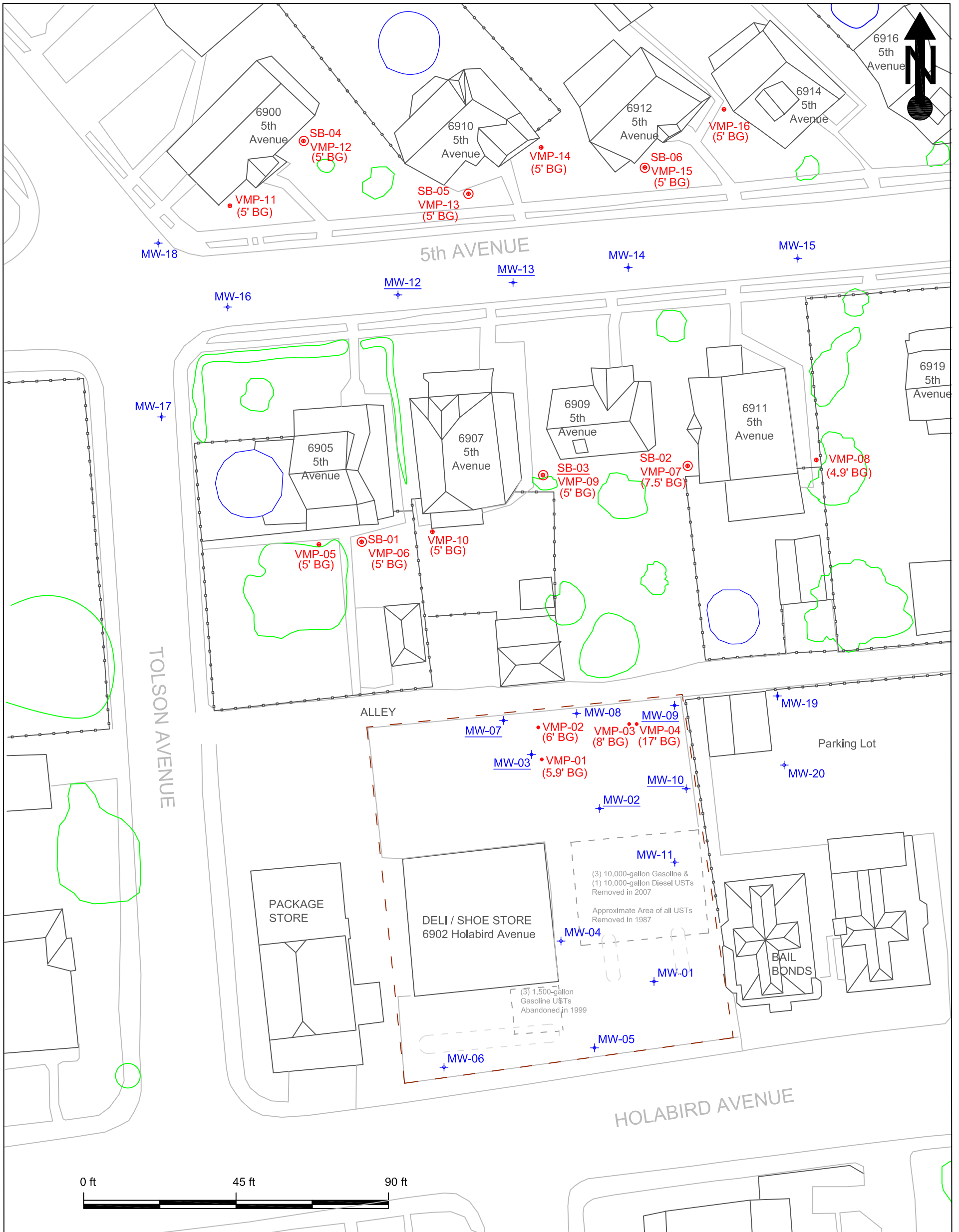
- Building / Structure
- Pavement
- Woods / Trees
- Approximate Property Boundary
- Estimated Area of Former UST Tank Fields
- Estimated Area of Former Island Dispensers
- Monitoring Well Location
- LPH Detected at this Location

**FIGURE 2 -  
SITE DIAGRAM**

Midway Site  
 6902 Holabird Ave  
 Dundalk, MD 21222  
 MDE-OCP Case  
 No. 9-0037BA  
 CGS Project No. CG-09-0491  
 Prepared by:  
 Lara Bennett  
 Date: 10-02-2012



5405 Twin Knolls Road, Suite 1  
 Columbia, Maryland 21045 USA  
 410-740-1911  
 410-740-3299 fax  
 www.cgs.us.com



**LEGEND**

- Building / Structure
- Pavement
- Woods / Trees
- Approximate Property Boundary
- Estimated Area of Former UST Tank Fields
- Estimated Area of Former Island Dispensers
- Monitoring Well Location
- LPH Detected at this Location
- Soil Boring / Temporary Well Location
- + Vapor Monitoring Point (VMP) Location
- (5' BG) Depth of VMP in feet below grade

**FIGURE 3 - SOIL BORING / TEMPORARY WELL AND VMP LOCATION DIAGRAM**

Midway Site  
 6902 Holabird Ave  
 Dundalk, MD 21222  
 MDE-OCP Case  
 No. 9-0037BA  
 CGS Project No. CG-09-0491  
 Prepared by:  
 Lara Bennett  
 Date: 11-06-2012



5405 Twin Knolls Road, Suite 1  
 Columbia, Maryland 21045 USA  
 410-740-1911  
 410-740-3299 fax  
 www.cgs.us.com

## **TABLES**

**Table 1**  
**Midway Site (MDE-OCP Case No. 9-0037BA)**  
**6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222**  
**CGS Project No. CG-09-0491.09 and .12**

**Groundwater Gauging Data**  
**July 10 and October 1, 2012**

<b>Well ID</b>	<b>Address</b>	<b>Depth to LPH (ft)</b>	<b>Depth to Groundwater (ft)</b>	<b>LPH Thickness (ft)</b>	<b>Well Depth (ft)</b>	<b>Well Diameter (in)</b>	<b>Comments</b>
SB-01	6905 5 <sup>th</sup> Avenue	ND	27.85	ND	34.7	1	No odors noted
SB-02	6911 5 <sup>th</sup> Avenue	ND	26.97	ND	36.0	1	No odors noted
SB-03	6907 5 <sup>th</sup> Avenue	20.23	21.41	1.18	28.7	1	Strong fuel odors present; LPH presence visually confirmed with bailer
SB-04	6900 5 <sup>th</sup> Avenue	ND	24.59	ND	30.2	1	No odors noted
SB-05	6910 5 <sup>th</sup> Avenue	ND	26.53	ND	36.1	1	Strong fuel odors present
SB-06	6912 5 <sup>th</sup> Avenue	ND	17.06	ND	34.4	1	No odors noted

**Table Notes:**

LPH - liquid phase hydrocarbon

ND - Not Detected

Sounding Method: Interface Probe

Well Gauging Reference: Below Grade (BG)



**Table 2**  
**Midway Site (MDE-OCP Case No. 9-0037BA)**  
**6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222**  
**CGS Project No. CG-09-0491.09 and .12**

**Off-Site Subsurface Soil Sample Analytical Results - Detected Analytes**  
**July 10 and October 1, 2012**  
**Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbons (TPH)**

Sample ID (Sample Depth)	SB-01 (26.8')	SB-01 (26.8') [SB-Dupe]	SB-02 (24.75')	SB-03 (9.75')	SB-04 (31')	SB-05 (35.25')	SB-05 (35.25') [SB-Dupe]	SB-06 (10.75')	MDE Residential Soil Standard
Sample Location	6905 5th Ave.	6905 5th Ave.	6911 5th Ave.	6907 5th Ave.	6900 5th Ave.	6910 5th Ave.	6910 5th Ave.	6912 5th Ave.	
Co-located Boring/VMP	SB-01/VMP-06	SB-01/VMP-06	SB-02/VMP-07	SB-03/VMP-09	SB-04/VMP-12	SB-05/VMP-13	SB-05/VMP-13	SB-06/VMP-15	
VOCs	Concentration (mg/kg)								
1,2,4-Trimethylbenzene	NR	NR	NR	0.0577 U	0.0538 U	<b>264</b>	<b>246</b>	0.0582 U	na
1,3,5-Trimethylbenzene	NR	NR	NR	0.0577 U	0.0538 U	<b>90.8</b>	<b>83.9</b>	0.0582 U	na
Acetone	0.0090 U	0.0088 U	<b>0.016 J</b>	0.231 U	0.215 U	0.234 U	0.233 U	<b>0.399</b>	7.0E+03
Benzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>8.03</b>	<b>7.34</b>	0.0582 U	1.2E+01
Ethylbenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>152</b>	<b>140</b>	0.0582 U	7.8E+02
Iodomethane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	<b>0.0624</b>	0.0582 U	na
Isopropylbenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>19.3</b>	<b>18.7</b>	0.0582 U	7.8E+02
m,p-Xylenes	0.0045 U	0.0044 U	0.0047 U	0.0577 U	0.0538 U	<b>547</b>	<b>501</b>	0.0582 U	1.6E+03
Naphthalene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>34.9</b>	<b>30.0</b>	0.0582 U	1.6E+02
n-Propylbenzene	NR	NR	NR	0.0577 U	0.0538 U	<b>71.7</b>	<b>66.6</b>	0.0582 U	na
o-Xylene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>218</b>	<b>193</b>	0.0582 U	1.6E+03
p-Isopropyltoluene	NR	NR	NR	0.0577 U	0.0538 U	<b>3.24</b>	<b>3.25</b>	0.0582 U	na
sec-Butylbenzene	NR	NR	NR	0.0577 U	0.0538 U	<b>5.07</b>	<b>5.06</b>	0.0582 U	na
Styrene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>4.85</b>	<b>4.20</b>	0.0582 U	1.6E+03
tert-Butylbenzene	NR	NR	NR	0.0577 U	0.0538 U	<b>0.205</b>	<b>0.204</b>	0.0582 U	na
Toluene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	<b>289</b>	<b>272</b>	0.0582 U	6.3E+02
Xylenes, Total	0.0068 U	0.0066 U	0.0070 U	0.0577 U	0.0538 U	<b>765</b>	<b>693</b>	0.0582 U	1.6E+03
TPH	Concentration (mg/kg)								
Diesel Range Organics (TPH-DRO)	4.6 U	4.6 U	4.5 U	11.5 U	10.8 U	<b>1,270</b>	<b>2,240</b>	11.6 U	2.3E+02
Gasoline Range Organics (TPH-GRO)	0.058 U	0.058 U	0.056 U	5.8 U	5.4 U	<b>6,520</b>	<b>6,480</b>	5.8 U	2.3E+02

**Table Notes:**

VOCs Analytical Method: EPA Method 8260B

TPH Analytical Method: EPA Method 8015C

MDE Residential Soil Clean-up Standard (June 2008)

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

U - Analyte not detected above specified Limit of Detection (LOD) (shown as a gray tone).

J - The reported concentration is less than the Limit of Quantitation (LOQ) but greater than the LOD. The concentration is considered to be estimated.

NR - Not Reported. Differing analyte lists from the two labs were merged.

na - not applicable

**Bold** - Detected analyte concentration

**Additional Screening Level Notes**

**Analyte**                      **MDE Residential Soil Standard**

m,p-Xylenes                  Total Xylenes

o-Xylene                      Total Xylenes

Xylenes, Total                Total Xylenes

**Table 3**  
**Midway Site (MDE-OCP Case No. 9-0037BA)**  
**6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222**  
**CGS Project No. CG-09-0491.09 and .12**

**Off-Site Groundwater Sample Analytical Results - Detected Analytes**  
**July 10 and October 1, 2012**  
**Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbons (TPH)**

Sample ID	SB-01 (GW)	SB-01 (GW) [SB-Dupe (GW)]	SB-02 (GW)	SB-04 (GW)	SB-05 (GW)	SB-05 (GW) [SB-Dupe (GW)]	SB-06 (GW)	MDE Groundwater Standard
Sample Location	6905 5th Ave.	6905 5th Ave.	6911 5th Ave.	6900 5th Ave.	6910 5th Ave.	6910 5th Ave.	6912 5th Ave.	
Co-located Boring/VMP	SB-01/VMP-06	SB-01/VMP-06	SB-02/VMP-07	SB-04/VMP-12	SB-05/VMP-13	SB-05/VMP-13	SB-06/VMP-15	
VOCs	Concentration (ug/L)							
1,1-Dichloropropene	NR	NR	NR	0.2 U	<b>0.3 J</b>	0.2 U	0.2 U	na
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.2 U	<b>0.3 J</b>	0.2 U	0.2 U	7.0E+01
1,2,4-Trimethylbenzene	NR	NR	NR	<b>12.3</b>	<b>1,670</b>	<b>1,520</b>	0.5 U	na
1,2-Dibromoethane (EDB)	0.5 U	0.5 U	0.5 U	0.3 U	<b>31.0</b>	<b>27.2</b>	0.3 U	5.0E-02
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.9 U	0.9 U	<b>1.1</b>	0.9 U	5.0E+00
1,3,5-Trimethylbenzene	NR	NR	NR	<b>3.5</b>	<b>487</b>	<b>416</b>	0.2 U	na
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.2 U	<b>0.2 J</b>	0.2 U	0.2 U	1.8E+00
1,3-Dichloropropane	NR	NR	NR	0.2 U	<b>0.3 J</b>	0.2 U	0.2 U	na
2-Butanone (MEK)	5 U	5 U	5 U	<b>6.2 J</b>	<b>256</b>	<b>138</b>	0.6 U	7.0E+02
Acetone	5 U	5 U	5 U	<b>51.3</b>	7 U	7 U	7 U	5.5E+02
Benzene	0.5 U	0.5 U	0.5 U	<b>22.6</b>	<b>2,860</b>	<b>2,120</b>	0.3 U	5.0E+00
Bromomethane	0.5 U	0.5 U	0.5 U	0.3 U	<b>0.4 J</b>	0.3 U	0.3 U	8.5E-01
Chloroethane	0.5 U	0.5 U	0.5 U	0.4 U	<b>2.9</b>	<b>0.5 J</b>	0.4 U	3.6E+00
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	<b>1.0</b>	0.5 U	1.9E+01
Di-isopropyl ether (DIPE)	5 U	5 U	5 U	0.3 U	<b>0.5 J</b>	<b>0.7 J</b>	0.3 U	na
Ethylbenzene	0.5 U	0.5 U	0.5 U	<b>14.3</b>	<b>2,770</b>	<b>2,100</b>	0.2 U	7.0E+02
Isopropylbenzene	0.5 U	0.5 U	0.5 U	<b>1.0 J1</b>	<b>124</b>	<b>132</b>	0.2 U	6.6E+01
m,p-Xylenes	1 U	1 U	1 U	<b>50.7</b>	<b>9,070</b>	<b>6,970</b>	0.5 U	1.0E+04
Methylene chloride	0.5 U	0.5 U	0.5 U	1.0 U	<b>4.7</b>	1.0 U	1.0 U	5.0E+00
Methyl-t-butyl ether (MTBE)	0.5 U	0.5 U	0.5 U	<b>4.6</b>	<b>5.8</b>	<b>2.6</b>	<b>2.6</b>	2.0E+01
Naphthalene	0.5 U	0.5 U	0.5 U	<b>3.2</b>	<b>508</b>	<b>394</b>	<b>0.7 J</b>	6.5E-01
n-Propylbenzene	NR	NR	NR	<b>1.7</b>	<b>328</b>	<b>344</b>	0.2 U	na
o-Xylene	0.5 U	0.5 U	0.5 U	<b>27.6</b>	<b>4,270</b>	<b>3,400</b>	0.5 U	1.0E+04
p-Isopropyltoluene	NR	NR	NR	0.2 U	<b>11.1</b>	<b>18.3</b>	0.2 U	na
sec-Butylbenzene	NR	NR	NR	0.4 U	<b>17.1</b>	<b>28.3</b>	0.4 U	na
Styrene	0.5 U	0.5 U	0.5 U	<b>0.6 J</b>	<b>117</b>	<b>89.9</b>	0.2 U	1.0E+02
tert-Amyl methyl ether (TAME)	5 U	5 U	5 U	<b>1.7 J</b>	0.3 U	0.3 U	0.3 U	na
tert-Butyl alcohol (TBA)	10 U	10 U	10 U	<b>22.6 J</b>	2.6 U	2.6 U	2.6 U	na
Toluene	0.5 U	0.5 U	0.5 U	<b>39.7</b>	<b>19,200</b>	<b>19,000</b>	0.4 U	1.0E+03
Xylenes, Total	1.5 U	1.5 U	1.5 U	<b>78.4</b>	<b>13,300</b>	<b>10,400</b>	<b>0.6 J</b>	1.0E+04
TPH	Concentration (ug/L)							
Diesel Range Organics (TPH-DRO)	<b>160</b>	<b>160</b>	<b>170</b>	300 U	<b>30,100</b>	<b>7,600</b>	300 U	4.7E+01
Gasoline Range Organics (TPH-GRO)	50 U	50 U	50 U	500 U	<b>40,400</b>	<b>40,400</b>	500 U	4.7E+01

**Table Notes:**

VOCs Analytical Method: EPA Method 8260B

TPH Analytical Method: EPA Method 8015C

MDE Groundwater Standards Type I and II Aquifers (June 2008)

ug/L - micrograms per liter or parts per billion (ppb)

U - Analyte not detected above specified Limit of Detection (LOD) (shown as a gray tone).

J - The reported concentration is less than the Limit of Quantitation (LOQ) but greater than the LOD. The concentration is considered to be estimated.

J1 - The reported concentration had been rounded up to the LOQ due to EPA rounding rules. The concentration is considered to be estimated.

NR - Not Reported. Differing analyte lists from the two labs were merged.

na - not applicable

**Bold** - Detected analyte concentration

**Additional Screening Level Notes**

**Analyte**                      **MDE Groundwater Standard**

m,p-Xylenes                  Total Xylenes

o-Xylene                      Total Xylenes

Xylenes, Total                Total Xylenes

Table 4  
Midway Site (MDE-OCP Case No. 9-0037BA)  
6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222  
CGS Project No. CG-09-0491.09 and .12

Off-Site Soil Vapor Sample Analytical Results - Detected Petroleum Hydrocarbon Related Analytes  
July 17-18 and October 10-11, 2012  
Volatile Organic Compounds (VOCs)

Sample ID	VMP-05	VMP-06	VMP-06 [VMP-dupe]	VMP-07	VMP-08	VMP-09	VMP-09 [VMP-DUPE]	VMP-10	VMP-11	VMP-12	VMP-13	VMP-14	VMP-15	VMP-16	MDE Target Residential Soil Gas Tier 1 RG	MDE Target Residential Soil Gas Tier 2 RG
Sample Location	6905 5th Ave.	6905 5th Ave.	6905 5th Ave.	6911 5th Ave.	6911 5th Ave.	6907 5th Ave.	6907 5th Ave.	6907 5th Ave.	6900 5th Ave.	6900 5th Ave.	6910 5th Ave.	6910 5th Ave.	6912 5th Ave.	6912 5th Ave.		
Co-located Boring/VMP	na	SB-01/VMP-06	SB-01/VMP-06	SB-02/VMP-07	na	SB-03/VMP-09	SB-03/VMP-09	na	na	SB-04/VMP-12	SB-05/VMP-13	na	SB-06/VMP-15	na		
Dilution Factor	2	1	4	4	2	4	4	1	115	1	20	1	1	1.875		
VOCs	Concentration (ug/m <sup>3</sup> )															
Propene	0.73 U	0.37 U	1.47 U	1.47 U	0.73 U	<b>17.00</b>	<b>16.73</b>	0.37 U	42.17 U	<b>28.74</b>	<b>41.65</b>	0.37 U	<b>31.84</b>	0.69 U	6.40E+04	3.20E+05
Ethanol	<b>9.99</b>	<b>24.13</b>	<b>16.52</b>	<b>19.80</b>	<b>18.03</b>	3.05 U	<b>10.26</b>	<b>6.79</b>	87.67 U	<b>4.43</b>	15.23 U	<b>7.60</b>	<b>5.81</b>	<b>37.33</b>	na	na
Methyl tert-butyl ether	1.22 U	<b>16.38</b>	<b>15.15</b>	2.44 U	<b>7.29</b>	2.44 U	2.44 U	0.61 U	69.98 U	0.61 U	12.19 U	0.61 U	0.61 U	1.14 U	1.88E+03	9.40E+03
Isopropyl alcohol	<b>2.16 J</b>	<b>10.38</b>	<b>4.71 J</b>	<b>5.99</b>	<b>3.63</b>	2.24 U	2.24 U	<b>0.56 J</b>	64.29 U	<b>0.79 J</b>	11.19 U	<b>1.45</b>	<b>1.10 J</b>	<b>3.63</b>	na	na
Hexane	1.53 U	<b>7.40</b>	<b>4.94 J</b>	<b>4.65 J</b>	<b>1.69 J</b>	<b>511.21</b>	<b>518.26</b>	<b>2.68</b>	88.14 U	<b>7.62</b>	<b>3,631.33</b>	<b>9.31</b>	<b>5.50</b>	<b>15.48</b>	1.46E+04	7.30E+04
Ethyl acetate	1.98 U	<b>6.63</b>	<b>7.35</b>	<b>6.77 J</b>	<b>4.18</b>	3.96 U	3.96 U	<b>5.12</b>	113.86 U	0.99 U	19.82 U	<b>3.46</b>	<b>4.68</b>	<b>30.95</b>	na	na
Benzene	1.03 U	<b>2.27</b>	<b>2.17 J</b>	<b>3.70 J</b>	<b>1.66 J</b>	<b>9.44</b>	<b>9.19</b>	<b>0.73 J</b>	59.02 U	<b>6.92</b>	10.27 U	0.51 U	<b>4.63</b>	<b>1.08 J</b>	6.40E+01	3.20E+02
Cyclohexane	1.20 U	<b>5.30</b>	<b>4.13 J</b>	2.41 U	1.20 U	<b>150.08</b>	<b>153.52</b>	0.60 U	<b>6,126.99</b>	<b>0.69 J</b>	<b>1,659.11</b>	0.60 U	0.60 U	1.13 U	1.26E+05	6.30E+05
n-Heptane	1.50 U	<b>1.84 J</b>	3.00 U	3.00 U	1.50 U	<b>202.86</b>	<b>197.94</b>	0.75 U	86.06 U	<b>2.46</b>	<b>127.04</b>	0.75 U	<b>0.98 J</b>	1.41 U	na	na
Toluene	<b>5.49</b>	<b>12.57</b>	<b>17.31</b>	<b>20.02</b>	<b>19.57</b>	<b>129.44</b>	<b>121.54</b>	<b>2.45</b>	81.65 U	<b>18.96</b>	<b>17.31 J</b>	<b>1.47 J</b>	<b>6.74</b>	<b>9.37</b>	1.06E+05	5.30E+05
2-Hexanone (MBK)	1.26 U	<b>1.35 J</b>	2.52 U	2.52 U	1.26 U	2.52 U	2.52 U	0.63 U	72.54 U	<b>1.15 J</b>	12.62 U	0.63 U	0.63 U	1.18 U	6.40E+02	3.20E+03
Ethylbenzene	1.69 U	<b>6.59</b>	<b>10.75</b>	3.38 U	<b>15.00</b>	<b>81.94</b>	<b>78.90</b>	0.85 U	97.11 U	<b>2.77</b>	16.91 U	0.85 U	<b>1.73 J</b>	1.59 U	2.00E+02	1.00E+03
m,p-Xylene	4.28 U	<b>9.88</b>	<b>20.81</b>	<b>10.40 J</b>	<b>64.60</b>	<b>419.23</b>	<b>391.48</b>	2.14 U	246.25 U	<b>7.07</b>	42.83 U	2.14 U	<b>5.20</b>	<b>4.14 J</b>	2.20E+03	1.10E+04
o-Xylene	2.64 U	<b>4.08</b>	<b>14.91</b>	5.29 U	<b>30.26</b>	<b>182.09</b>	<b>166.48</b>	1.32 U	152.17 U	<b>3.12</b>	26.45 U	1.32 U	<b>2.38</b>	2.48 U	2.20E+03	1.10E+04
Isopropylbenzene	2.49 U	1.24 U	4.97 U	4.97 U	<b>3.64 J</b>	<b>22.42</b>	<b>21.04</b>	1.24 U	143.06 U	1.24 U	24.88 U	1.24 U	1.24 U	2.33 U	8.40E+03	4.20E+04
1,3,5-Trimethylbenzene	2.87 U	<b>4.28</b>	<b>12.19</b>	5.75 U	<b>100.29</b>	<b>52.60</b>	<b>42.87</b>	1.44 U	165.18 U	1.44 U	28.71 U	1.44 U	1.44 U	2.69 U	1.06E+02	5.30E+02
4-Ethyltoluene	2.33 U	<b>4.52</b>	<b>12.98</b>	4.66 U	<b>28.42</b>	<b>25.17</b>	<b>23.01</b>	1.17 U	134.21 U	<b>1.38 J</b>	23.30 U	1.17 U	1.17 U	2.18 U	na	na
1,2,4-Trimethylbenzene	1.64 U	<b>40.51</b>	<b>29.89</b>	<b>14.36</b>	<b>220.74</b>	<b>101.76</b>	<b>79.64</b>	0.82 U	94.39 U	<b>3.69</b>	16.42 U	0.82 U	<b>0.98 J</b>	<b>3.32 J</b>	1.46E+02	7.30E+02
sec-Butylbenzene	2.67 U	1.33 U	5.34 U	5.34 U	<b>3.29 J</b>	<b>6.59 J</b>	<b>5.71 J</b>	1.33 U	153.14 U	1.33 U	26.68 U	1.33 U	1.33 U	2.50 U	na	na
4-Isopropyltoluene	2.56 U	<b>2.47 J</b>	5.13 U	5.13 U	2.56 U	<b>22.75</b>	<b>24.25</b>	1.28 U	147.57 U	1.28 U	25.65 U	1.28 U	1.28 U	2.40 U	na	na
n-Butylbenzene	2.68 U	<b>7.41</b>	5.36 U	5.36 U	<b>16.80</b>	<b>9.00 J</b>	<b>6.81 J</b>	1.34 U	154.23 U	1.34 U	26.79 U	1.34 U	1.34 U	2.51 U	na	na

**Table Notes:**

VOC Analytical Method: EPA TO-15  
ug/m<sup>3</sup> - micrograms per cubic meter  
RG - Remediation Goal  
MDE Target Residential Soil Gas Tier 1 RGs (February 2013) (at CR = 1x10<sup>-5</sup> or HI = 1 and Attenuation Factor of 20)  
MDE Target Residential Soil Gas Tier 2 RGs (February 2013) (at CR = 1x10<sup>-5</sup> or HI = 1 and Attenuation Factor of 100)

U - Analyte not detected above specified Method Detection Limit (MDL) (shown as a gray tone).  
J - Detected above the MDL but below the Reporting Limit; therefore, result is an estimated concentration.  
na - not applicable  
**Bold** - Detected analyte concentration

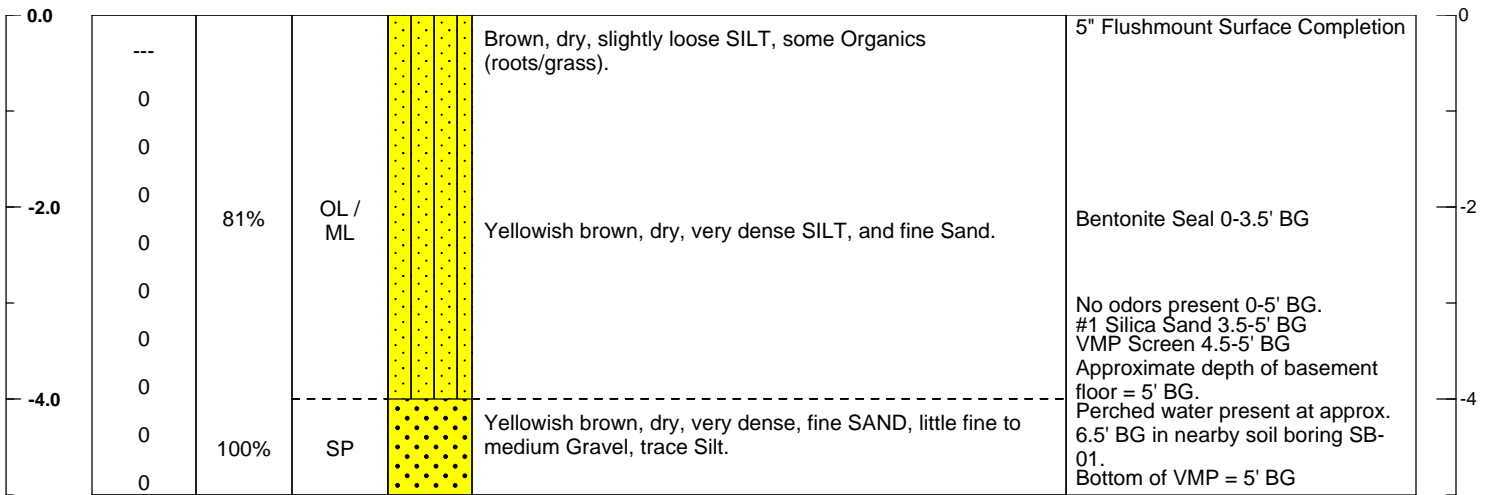
**Additional Screening Level Notes**


<b>Analyte</b>	<b>MDE Residential Soil Gas Tier 1 and 2 RGs</b>
m,p-Xylenes	Total Xylenes
o-Xylene	o-Xylene

**ATTACHMENT A**

**SOIL BORING AND VMP CONSTRUCTION LOGS**

PROJECT		VMP LOG		PAGE 1 OF 1			
CG-09-0491.09		VMP-05					
PROJECT: Midway Site			DATE/TIME STARTED: 07/11/12 11:00				
LOCATION: 6905 5th Avenue, Dundalk, MD 21222			DATE/TIME COMPLETED: 07/11/12 13:00				
DRILLING COMPANY: Chesapeake GeoSciences, Inc.			LOGGED BY: Lara Bennett				
DRILLING METHOD: Hand Auger			PROJECT MANAGER: Nancy Love				
SAMPLING METHOD: No sampling; logged soils			BORING DIAMETER: 2"		BORING DEPTH: 5' BG		
DEPTH TO GW (ft) FROM GRADENA DATE: NA			NOTES: VMP-05 installed to a depth of 5' BG on 07/11/12				
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	DEPTH (ft)

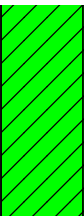

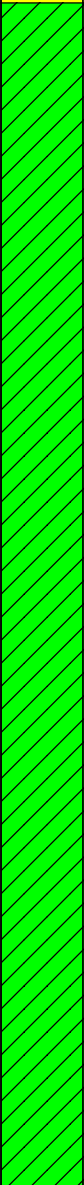
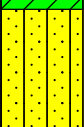



PROJECT: Midway Site	DATE STARTED: 07/10/12 9:00	
LOCATION: 6905 5th Avenue, Dundalk, MD 21222	DATE/TIME COMPLETED: 07/11/12 11:00	
DRILLING COMPANY: Tidewater, Inc.	LOGGED BY: Lara Bennett	
DRILLING METHOD: Geoprobe Direct-Push	PROJECT MANAGER: Nancy Love	
SAMPLING METHOD: Continuous Macrocore	BORING DIAMETER: 2"	
DEPTH TO GW (ft) FROM GRADE: 27.85'	DATE: 07/11/12	NOTES: VMP-06 installed to a depth of 5' BG on 07/11/12


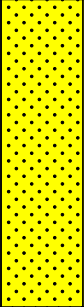

DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------

0.0	0		OL		Light brown, dry, soft SILT, some Organics (roots/grass).	5" Flushmount Surface Completion	
	0					Bentonite Seal 0-3.5' BG.	
	5.5	96%	SM		Light tan, dry, dense, medium SAND, some Silt, little fine rounded Gravel.		
-2.0	6.5						#1 Silica Sand 3.5-5' BG.
	5.8						VMP Screen 4.5-5' BG.
	4.2						
	4.4						
-4.0	4.8						
	0	100%	SW		Tan and dark brown, dry, very dense, fine to medium SAND, trace Silt.		
	0		ML		Tan, dry, soft SILT, trace fine Sand.	Bottom of VMP = 5' BG	
-6.0	0					Temporary piezometer installed to 34.7' BG on 07/10/12, gauged and removed on 07/11/12.	
	0					1" PVC riser 0-5' BG.	
	0		SP / SM		Light tan, dry, loose, medium SAND. Damp to wet 6.5-8' BG.	1" PVC 0.010-slot screen 5-35' BG.	
	0					VMP installed to a depth of 5' BG following removal of piezometer on 07/11/12, adjacent to piezometer boring.	
-8.0	0				Color change at 7.2': reddish yellow (5YR6/8).		
	0				Moist 8-9' BG.	Run-up 8-8.5' BG.	
	0				Tan, moist, very dense, medium SAND, some Silt, little fine to medium Gravel.		
	0	100%	ML		Light yellowish brown (10YR6/4), dry, very hard, slightly plastic SILT & CLAY. Dry 9-13.1' BG.		
-10.0	0						
	0					Color change at 11.3': light gray (10YR7/1).	
-12.0	0					Same as above, mottled with tan.	No odors present 0-36' BG.
	0						
	0						
	0		CL		Damp 13.1-16' BG.		
	0				Light gray, damp, stiff, plastic Silty CLAY.		


PROJECT CG-09-0491.09		SOIL BORING LOG		VMP-06 (SB-01)		PAGE 2 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	

-14.0	0	100%	CL		Same as above, mottled with pink and light brown.		
	0				Color change 15.1-15.6': red.		
	0						
-16.0	0						
	0		SP		2" layer of brown, moist, loose, fine SAND, trace Silt.		
	0		ML / CL		Light brown, mottled with light brown, tan and light gray, damp to wet, slightly soft Clayey SILT, trace fine Sand. Saturated 17.3-17.8' BG.		
-18.0	0	100%			Damp 17.8-20' BG.		
	0				Light gray (7.5YR7/1), damp to wet, medium stiff SILT & CLAY.		
	0						
-20.0	0				Light gray, mottled with light brown, wet, soft Clayey SILT.		
	0				No mottling 20.5-24' BG.		
	0				Damp 20.5-24' BG.		
-22.0	0	100%			Increase in hardness to hard 22-24' BG.		
	0						
-24.0	0		Light gray (7.5YR7/1), mottled with light brown, damp, slightly soft, slightly plastic SILT & CLAY.				
	0						
-26.0	0	100%					
	0				Wet to saturated 26.8-28' BG.		10:54 Soil sample collected at 26.8' BG. Duplicate sample collected.
	0						
-28.0	0				Saturated 28.3-30.5' BG.		
	0				Light gray (7.5YR7/1), mottled with dark red, saturated, soft SILT & CLAY.		
	0						
-30.0	0	100%	SM		Light gray, mottled with red, saturated, loose SILT, and fine Sand, trace Clay.		
	0		ML				

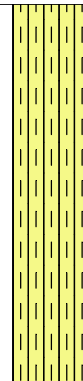
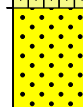
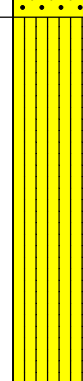
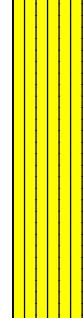


PROJECT		CG-09-0491.09			SOIL BORING LOG		VMP-06 (SB-01)		PAGE 3 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES				

-32.0	0		ML		Light gray, mottled slightly with red, slightly moist, very hard Clayey SILT.						
	0				Light gray, saturated, loose, fine to medium SAND.						
-34.0	0	100%	SW								
	0				Light gray, mottled with tan and red, damp, medium dense Clayey SILT, little fine Sand.						
-36.0	0		ML								13:55 Groundwater sample and duplicate groundwater sample collected.



PROJECT: Midway Site	DATE STARTED: 07/10/12 11:10	
LOCATION: 6911 5th Avenue, Dundalk, MD 21222	DATE/TIME COMPLETED: 07/11/12 10:00	
DRILLING COMPANY: Tidewater, Inc.	LOGGED BY: Lara Bennett	
DRILLING METHOD: Geoprobe Direct-Push	PROJECT MANAGER: Nancy Love	
SAMPLING METHOD: Continuous Macrocore	BORING DIAMETER: 2"	BORING DEPTH: 36' BG
DEPTH TO GW (ft) FROM GRADE: 26.97'	DATE: 07/11/12	NOTES: VMP-07 installed to a depth of 7.5' BG on 07/11/12


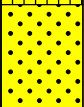

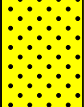


DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------

0.0	--				Brown (7.5YR5/3), dry, soft SILT, little Organics (roots/grass).	5" Flushmount Surface Completion
-2.0	0 0 0 0 0 0	75%	OL / ML		Strong brown (7.5YR5/6), dry, hard SILT, trace fine Sand, trace fine Gravel.	Bentonite Seal 0-6' BG.  #1 Silica Sand 6-7.5' BG.  VMP Screen 7-7.5' BG.
-4.0	0 0 0 0 0 0	100%	SP		Brownish yellow (10YR6/8), damp to moist, loose, fine SAND, little Silt.	Temporary piezometer installed to 36' BG on 07/10/12, gauged and removed on 07/11/12. 1" PVC riser 0-6' BG. 1" PVC 0.010-slot screen 6-36' BG. VMP installed to a depth of 7.5' BG following removal of piezometer on 07/11/12, adjacent to piezometer boring location. Approximate depth of basement floor is 4.5' BG.
-6.0	0 0 0 0 0 0	100%	ML / CL		Reddish yellow and light gray (7.5YR7/8), mottled with red and light brown, dry, stiff SILT & CLAY, trace fine to coarse quartzite Gravel.  Color change 7.4-8': light gray.	Bottom of VMP = 7.5' BG  Run-up 8-8.4' BG.
-8.0	0 0 0 0 0 0	100%	ML / CL		Light gray (7.5YR7/1), mottled with brown, dry, very stiff SILT & CLAY.	
-10.0	0 0 0 0 0 0	100%	ML / CL		Very light gray (7.5YR7/1), moist, stiff SILT & CLAY.	No odors present 0-36' BG.
-12.0	0 0 0 0 0 0		OL		Brown, dry, hard SILT, some Organics (roots).  Damp 13.2-16' BG.	

DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------

-14.0	0	100%	ML		Light gray, damp, soft Clayey SILT, trace fine Sand.		
	0						
	0						
-16.0	0					Light gray, damp, stiff Clayey SILT, trace fine Sand.	
	0						
	0						
-18.0	0	100%					
	0						
	0						
	0						
-20.0	0				Damp 20-21.1' BG. Light gray, damp, soft Clayey SILT, little fine Sand.		
	0						
	0						
	0						
-22.0	0	100%			Light gray, moist to dry, stiff Clayey SILT, trace fine Sand.		
	0						
	0						
	0						
-24.0	0		ML / CL		Damp to wet 24-24.9' BG. Light gray, mottled with tan, damp to wet, slightly soft SILT & CLAY.		
	0						
	0						
	0						
-26.0	0	100%	SM		Saturated 24.9-26.4' BG. Light gray, mottled with tan, saturated, loose, fine to medium SAND, some Silt.	12:10 Soil sample collected at 24.75' BG.	
	0						
	0						
	0						
-28.0	--		ML		Saturated 28-31.9' BG.		
	0						
	0						
	0						
-30.0	0	92%	SM		Light gray, mottled with tan, saturated, loose, fine to medium SAND, some Silt.		
	0						
	0						
	0						

PROJECT		SOIL BORING LOG			VMP-07 (SB-02)		PAGE 3 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES		

	0		ML		Light gray, wet, soft Clayey SILT, little fine Sand.	
-32.0	0				Saturated 32-36' BG.	Macrocore sleeve stuck in liner 32-36' BG. Soil recovered placed in bowl.
	0				Light gray, saturated, loose, fine SAND, little Silt.	
-34.0	0	N/A	SP / SW			
	0				Light gray, saturated, loose, fine to medium SAND, little Silt.	12:40 Groundwater sample collected.
-36.0	0					End of boring at 36' BG.

<b>PROJECT</b> CG-09-0491.09		<b>VMP LOG</b> VMP-08		<b>PAGE 1 OF 1</b>			
PROJECT: Midway Site			DATE/TIME STARTED: 07/11/12 08:43				
LOCATION: 6911 5th Avenue, Dundalk, MD 21222			DATE/TIME COMPLETED: 07/11/12 10:50				
DRILLING COMPANY: Chesapeake GeoSciences, Inc.			LOGGED BY: Devin Glancey				
DRILLING METHOD: Hand Auger			PROJECT MANAGER: Nancy Love				
SAMPLING METHOD: NA			BORING DIAMETER: 2"		BORING DEPTH: 4.9' BG		
DEPTH TO GW (ft) FROM GRADENA			DATE: NA		NOTES: VMP-08 installed to a depth of 4.9' BG on 07/11/12		
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	DEPTH (ft)



0.0						5" Flushmount Cover Surface Completion	0
	2.2				Light brown, dry, dense, very fine to fine SAND, some Organics (roots/grass), trace Gravel.		
					Yellowish brown, dry, dense, fine SAND, some Gravel, trace Organics.	First two attempted hand auger locations hit refusal at 3.4' and 2.8' BG.	
-2.0						Bentonite Seal 0-3.5' BG	
	2.3					No odors present 0-4.9' BG.	
	2.5					#1 Silica Sand 3.5-4.9' BG	
	7.9	100%	SP		Light yellowish brown, dry, dense, fine SAND, little fine to coarse Gravel.	VMP Screen 4.4-4.9' BG	
	4.1				Light yellowish brown, dry, dense, fine SAND, little medium to coarse Gravel.	Hand auger refusal at 4.9' BG.	
-4.0						Bottom of VMP = 4.9' BG	-4
	1.3						
	0						

<b>PROJECT</b> CG-09-0491.09		<b>VMP SOIL BORING LOG</b> VMP-09 (SB-03)		<b>PAGE 1 OF 2</b>		
PROJECT: Midway Site			DATE STARTED: 10/01/12 9:10			
LOCATION: 6907 5th Avnue, Dundalk, MD			DATE/TIME COMPLETED: 10/08/12 11:30			
DRILLING COMPANY: Tidewater, Inc.			LOGGED BY: Lara Bennett			
DRILLING METHOD: Geoprobe Direct-Push			PROJECT MANAGER: Nancy Love			
SAMPLING METHOD: Continuous Macrocore			BORING DIAMETER: 2"		BORING DEPTH: 28' BG	
DEPTH TO GW (ft) FROM GRADE: 21.41'		DATE: 10/08/12		NOTES: VMP-09 installed to a depth of 5' BG on 10/08/12		
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES

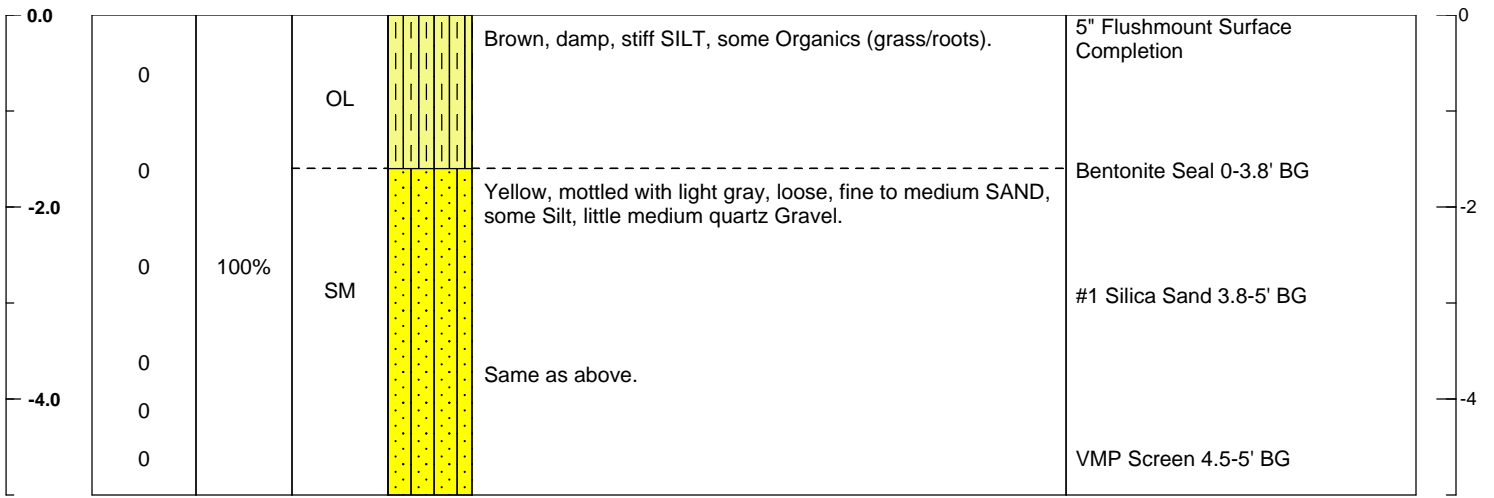



0.0	--				Brown (10YR4/3), damp, stiff SILT, some Organics (grass/roots), little fine Sand.	10/08/12 - Depth to LPH was 20.23' BG in piezometer prior to removal.	0
	--		OL / ML			5" Flushmount Surface Completion Bentonite Seal 0-3.5' BG.	
4.7		68%					
6.4							
-2.0							
7.8					Yellowish brown (10YR5/8), moist, dense Clayey SILT, some fine to medium Sand.	#1 Silica Sand 3.5-5' BG.	
12.7			ML		Damp 3.2-4' BG.	VMP Screen 4.5-5' BG.	
14.4							
16.2							
-4.0							
19.3					Yellowish brown (10YR5/8), moist, dense Clayey SILT, some fine to medium Sand.		
16.1							
21.8		100%			Yellowish brown (10YR5/8), damp, dense SILT, and fine to medium Sand.	Bottom of VMP = 5' BG	
23.8			ML / SM		Color change at 5.6' BG: brownish yellow (10YR6/6).	Temporary piezometer installed to 28.6' BG on 10/01/12, gauged and removed on 10/08/12.	
25.2					2" layer of wet, fine to medium SAND, little Silt.	1" PVC riser 0-4.6' BG.	
26.5						1" PVC 0.010-slot screen 4.6-28.6' BG.	
27.5						VMP installed to a depth of 5' BG following removal of piezometer on 10/08/12, adjacent to the piezometer boring location.	
-6.0							
23.5					Yellowish brown (10YR5/8), moist, loose, fine to medium SAND, trace Silt.		
24.3			SW		Saturated 8-9.2' BG.	Perched Water at 8' BG.	
26.3					Brownish yellow, saturated, dense, fine to medium SAND, little Silt.		
28.5							
-8.0							
29.5		100%			Very pale brown (10YR7/3), damp, stiff SILT & CLAY, trace very fine Sand.		
26.5			ML / CL			10:20 Soil sample collected at 9.75' BG.	
29.3							
27.7					Mottled with red 11-11.3' BG.		
-10.0							
22.0							
-12.0							
4.7					Yellow (10YR7/8), saturated, loose, fine to medium SAND, trace Silt.		
4.2			SW		Saturated 12-13.9' BG.		
2.4							
1.3							

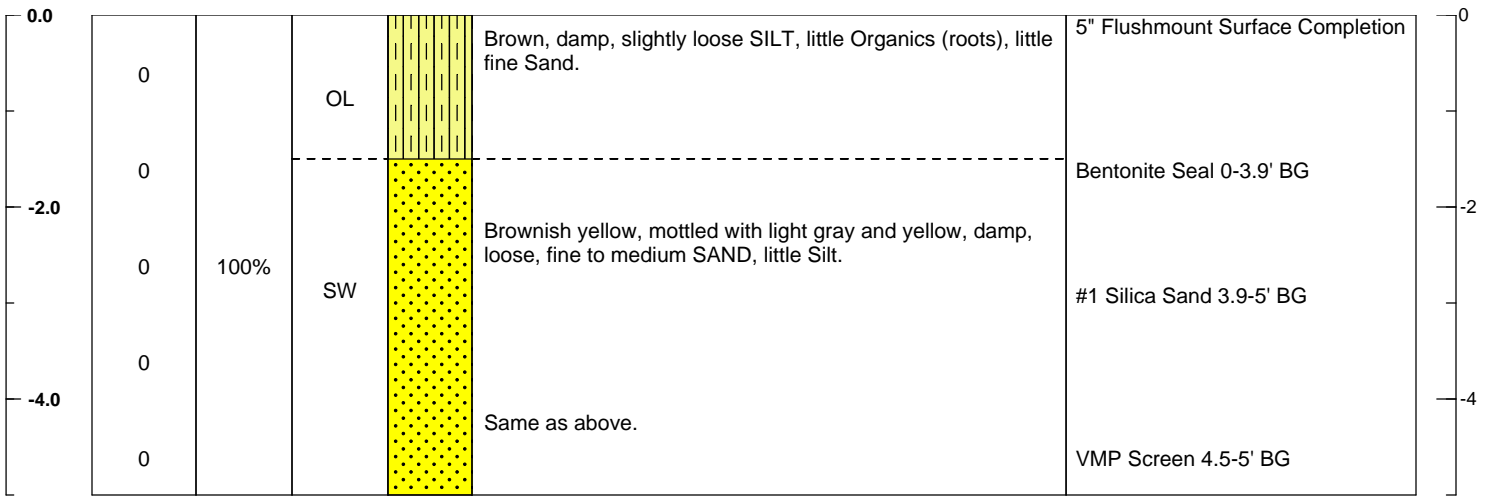
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------

-14.0	1.5	100%	ML / CL		Very pale brown (10YR8/2), damp, stiff Clayey SILT.		
	1.4				SILT & CLAY 15-16' BG. Mottled with red 15.5-16' BG		
	1.3						
	1.0						
-16.0	--		ML		Yellow (10YR7/8), saturated, loose Silt, some fine Sand.		
	--						
	--						
	--						
-18.0	1.4	58%				No odors present 0-28' BG.	
	1.3						
	1.5						
-20.0	1.4		ML / SM		Very pale brown (10YR8/2), mottled with yellow, damp, stiff Clayey SILT.		
	--				Very pale brown (10YR8/2), wet to saturated, stiff SILT, and very fine to medium SAND.		
	--				Mottled with red and yellow 21-24' BG.		
	--						
	--						
-22.0	2.1	38%					
	3.4						
	4.6						
-24.0	--		ML		Yellow (10YR7/6), mottled with very pale brown, saturated, soft Clayey SILT, little fine Sand.		
	--						
	--						
	0.3	73%					
	2.8						
	2.3						
	1.2				Color change at 27' BG: white (10YR8/1) and very pale brown (10YR8/2). Wet 27.5-28' BG.	Groundwater was not sampled due to the presence of LPH.	
-28.0	1.4					End of boring at 28' BG.	


<b>PROJECT</b> CG-09-0491.09		<b>VMP LOG</b> VMP-10		<b>PAGE 1 OF 1</b>			
PROJECT: Midway Site			DATE/TIME STARTED: 10/08/12 10:30				
LOCATION: 6907 5th Avenue, Dundalk, MD			DATE/TIME COMPLETED: 10/08/12 12:15				
DRILLING COMPANY: Chesapeake GeoSciences, Inc.			LOGGED BY: Lara Bennett				
DRILLING METHOD: Hand Auger			PROJECT MANAGER: Nancy Love				
SAMPLING METHOD: NA			BORING DIAMETER: 4"		BORING DEPTH: 5' BG		
DEPTH TO GW (ft) FROM GRADENA DATE: NA			NOTES: VMP-10 installed to a depth of 5' BG on 10/08/12				
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	DEPTH (ft)



PROJECT		VMP LOG		PAGE 1 OF 1			
PROJECT: Midway Site		DATE/TIME STARTED: 10/08/12 7:40					
LOCATION: 6900 5th Avenue, Dundalk, MD		DATE/TIME COMPLETED: 10/08/12 8:30					
DRILLING COMPANY: Chesapeake GeoSciences, Inc.		LOGGED BY: Lara Bennett					
DRILLING METHOD: Hand Auger		PROJECT MANAGER: Nancy Love					
SAMPLING METHOD: NA		BORING DIAMETER: 4"		BORING DEPTH: 5' BG			
DEPTH TO GW (ft) FROM GRADENA		DATE: NA		NOTES: VMP-11 installed to a depth of 5' BG on 10/08/12			
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	DEPTH (ft)



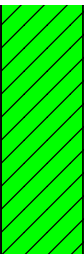


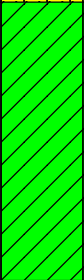
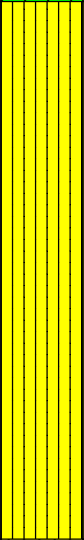
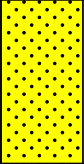
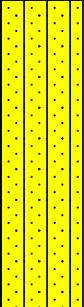


PROJECT: Midway Site	DATE STARTED: 10/01/12 11:30	
LOCATION: 6900 5th Avenue, Dundalk, MD 21222	DATE/TIME COMPLETED: 10/08/12 08:30	
DRILLING COMPANY: Tidewater, Inc.	LOGGED BY: Lara Bennett	
DRILLING METHOD: Geoprobe Direct-Push	PROJECT MANAGER: Nancy Love	
SAMPLING METHOD: Continuous Macrocore	BORING DIAMETER: 2"	BORING DEPTH: 36' BG
DEPTH TO GW (ft) FROM GRADE: 24.59'	DATE: 10/08/12	NOTES: VMP-12 installed to a depth of 5' BG on 10/08/12


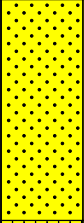
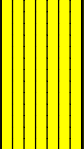
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------


0.0	--				Brownish yellow (10YR6/8), moist to damp, dense, fine to medium SAND, and Silt, little fine rounded Gravel, little Organics (grass) 0-1.8' BG.	Soil removed from the bore hole with an air lance in order to clear utilities 0-8' BG. 5" Flushmount Surface Completion Bentonite Seal 0-4' BG.
-2.0	2.9 0.2 0.7 0.4 0.3	70%				#1 Silica Sand 4-5' BG. VMP Screen 4.5-5' BG.
-4.0	0.2		SM / ML		Brownish yellow (10YR6/8), damp, very dense SILT, and very fine to fine Sand. Little fine rounded Gravel 4.3-4.6' BG.	Bottom of VMP = 5' BG
-6.0	0.1 0.2 0.1 0.4 0.1 0.3	100%				Temporary piezometer installed to 30.2' BG on 10/01/12, gauged and removed on 10/08/12. 1" PVC riser 0-5' BG. 1" PVC 0.010-slot screen 5-30' BG. VMP installed to a depth of 5' BG following removal of piezometer on 10/08/12, adjacent to piezometer boring.
-8.0	0.1				Yellowish brown (10YR5/8), mottled with red 8.5-8.9' BG, damp, dense SILT, little very fine Sand, little angular fine to medium Gravel 8.5-8.7' BG.	
-10.0	0.9 0.2 0.1 0.2 0.1 0.1 0.1	100%	ML		Color change at 9.1': Very pale brown (10YR7/3). Very dense 9.1-12' BG. Red (2.5YR4/8), dry, stiff Clayey SILT, trace very fine Sand. Increase in Clay to SILT & CLAY; very stiff.	
-12.0	0.1				Yellowish brown (10YR5/8), damp to moist, dense SILT, some fine Sand.	Run-up 12-13.6'.
	0.5 0.3 0.8 0.2					

DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------

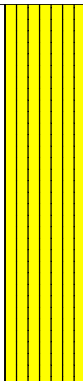
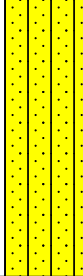


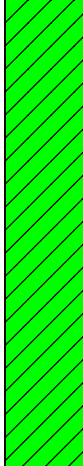

-14.0	0.2	100%	CL		Red (2.5YR4/8), mottled with very pale brown and light gray, dry, stiff, slightly plastic Silty CLAY.			
	0.3							
	0.2							
-16.0	0.2							
	5.6	95%	ML		Yellowish brown (10YR5/6), damp, loose SILT, little fine Sand, little Organics (roots).			
	0.8		SM		Strong brown (7.5YR5/8), damp, loose, fine to medium Sand, some Silt.			
	1.8							
-18.0	0.6	93%	ML / CL		Light gray (7.5YR7/1), moist, very dense SILT, some very fine Sand.	No odors present 0-36' BG.		
	0.8							
	0.9				Light gray (7.5YR7/1), dry, stiff SILT & CLAY.			
	0.6				Color change to (2.5YR4/8) red at 19.2-20' BG.			
-20.0	0.5	60%	ML					
	5.8							
	10.4						Light gray (7.5YR7/1), moist, very dense SILT, some very fine Sand.	
	3.4							
-22.0	4.2							
	3.6							
	4.4							
	8.2				Moist to wet 23.4-24' BG.			
-24.0	6.2	38%	SW		Light gray (7.5YR7/1), moist, very dense SILT, and fine Sand.			
	--							
	--							
	--							
-26.0	7.4							
	9.0				Pink (7.5YR7/3) and very pale brown, wet to moist, dense, fine to medium SAND, little Silt.			
	4.9							
	2.4							
-28.0	2.1	38%	ML / SM		Light brown (7.5YR6/4), mottled with red and light gray, saturated, dense Clayey SILT, and fine to medium Sand.	Macrocore stuck in liner 28-32' BG.		
	--							
	--							
	--							
-30.0	8.7							
	13.3					12:40 Soil sample collected at 31' BG.		

PROJECT		CG-09-0491.12		SOIL BORING LOG		VMP-12 (SB-04)		PAGE 3 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES			

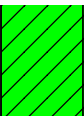

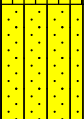
-32.0	25.2 23.4		ML / SM								
	10.1 7.2 5.1		SW		Saturated 32-26' BG. Light gray (10YR7/1) and dark gray, saturated, dense, fine to medium SAND, trace Silt.						
-34.0	13.1 16.0	100%			Color change at 33.3': reddish yellow (7.5YR7/6).						
	20.2 3.4		ML / SM		Reddish yellow (7.5YR7/6), saturated, soft Clayey SILT, and very fine Sand.						13:10 Groundwater sample collected.
-36.0	5.8										End of boring at 36' BG.

PROJECT: Midway Site	DATE STARTED: 10/01/12 13:40	
LOCATION: 6910 5th Avenue, Dundalk, MD 21222	DATE/TIME COMPLETED: 10/08/12 09:00	
DRILLING COMPANY: Tidewater, Inc.	LOGGED BY: Lara Bennett	
DRILLING METHOD: Geoprobe Direct-Push	PROJECT MANAGER: Nancy Love	
SAMPLING METHOD: Continuous Macrocore	BORING DIAMETER: 2"	BORING DEPTH: 36' BG
DEPTH TO GW (ft) FROM GRADE: 26.53'	DATE: 10/08/12	NOTES: VMP-13 installed to a depth of 5' BG on 10/08/12

DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------


0.0	--				Light yellowish brown (10YR6/4) and yellowish brown (10YR5/8), damp, dense SILT, some fine to medium Sand, little Organics (grass/roots) 0-2.4', little fine to coarse rounded quartz Gravel.	Soil removed from the bore hole with an air lance in order to clear utilities 0-8' BG. 5" Flushmount Surface Completion Bentonite Seal 0-3.5' BG.
-2.0	5.2	45%	OL / ML			#1 Silica Sand 3.5-5' BG. VMP Screen 4.5-5' BG.
-4.0	18.3	100%	SM / ML		Brownish yellow (10YR6/6), damp, dense, fine to medium SAND, and Silt, little fine to medium angular quartz Gravel (4-4.6').	Bottom of VMP = 5' BG Temporary piezometer installed to 36.1' BG on 10/01/12, gauged and removed on 10/08/12. 1" PVC riser 0-6' BG. 1" PVC 0.010-slot screen 6-36' BG. VMP installed to a depth of 5' BG following removal of piezometer on 10/08/12, adjacent to the piezometer location.
-6.0	16.8	100%	ML		Light gray (10YR7/1), dry, hard Clayey SILT, trace fine Sand. Color change at 7.5': red (2.5YR4/8).	
-8.0	15.9	100%	OL		2" layer of brown, dry, soft SILT, some Organics (roots).	Possibly run-up 8.5-8.7' BG.
-10.0	10.4	100%	ML / CL		Light gray (10YR7/1), damp to dry, very stiff SILT & CLAY, trace fine Sand. Color change at 9.4': red (2.5YR5/6).	
-12.0	5.6	100%	ML / CL		Light gray (10YR7/1), damp, stiff Clayey SILT, little fine Sand. Color change at 13.1': red (2.5YR5/6). Increased Clay content to very stiff SILT & CLAY.	

PROJECT CG-09-0491.12		SOIL BORING LOG		VMP-13 (SB-05)		PAGE 2 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	

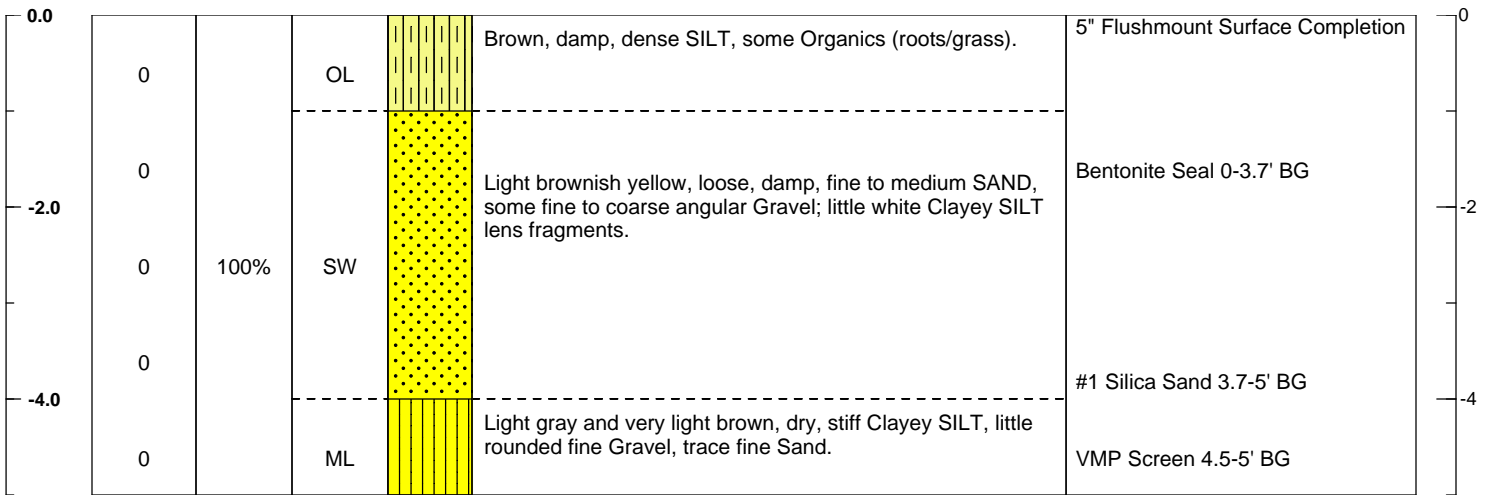
-14.0	12.8	100%	ML / CL		Red (2.5YR5/6), dry, very stiff, slightly plastic SILT & CLAY.		-14
	3.4						
	3.9				Light gray (7.5YR7/1), moist, soft SILT, little fine Sand.		
-16.0	2.6						-16
	23.1				Light reddish brown (2.5YR6/4) and light gray, mottled with dark red, damp, very stiff Clayey SILT, little fine Sand.		
	6.1						
	8.2						
-18.0	6.5	100%					-18
	8.5						
	7.6						
	6.1				Color change at 19.3': reddish brown (2.5YR5/4).		
-20.0	5.3		ML				-20
	17.6				Red (2.5YR4/8), mottled with light gray, damp, stiff Clayey SILT, trace fine Sand.		
	27.1						
	8.5						
-22.0	8.5	100%					-22
	7.6						
	6.3						
	4.8						
-24.0	4.1						-24
	11.2				Light reddish brown (2.5YR6/3), mottled with light gray and brown, damp, stiff Clayey SILT.		
	7.2						
	16.1						
-26.0	2.5	100%					-26
	7.0						
	3.3				Color change at 26.5': pinkish red (2.5YR7/2).		
	6.0		ML / SM		Pale red (2.5YR7/2), wet, dense SILT, and fine Sand.		
-28.0	9.1						-28
	14.9		ML		Light reddish brown (2.5YR6/3), mottled with light gray, moist, very stiff Clayey SILT.	Strong odor 28-32' BG.	
	17.2						
	122						
-30.0	2,769	100%					-30
	2,918		ML / SM		Pale red (2.5YR7/2), mottled with red and light gray, dense SILT, and fine Sand.		
	835						

PROJECT CG-09-0491.12		SOIL BORING LOG		VMP-13 (SB-05)		PAGE 3 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	

-32.0	876 1,176				Saturated 32-26' BG.	Very strong fuel odor 32-36' BG.	-32
	1,709				Pinkish gray (5YR7/2), mottled with yellowish brown and red, saturated, loose, fine to coarse SAND, and Silt.		
-34.0	1,367 1,113 1,034	93%	SM / ML		Mottled with pink and dark purple 34-35.2' BG.	14:50 Soil sample collected at 35.25' BG. Duplicate sample collected.	-34
	2,241				Wet 34-36' BG.	15:30 Groundwater sample collected. Duplicate sample collected.	
-36.0	1,405 4,090 2,353					End of boring at 36' BG.	-36

PROJECT: Midway Site	DATE/TIME STARTED: 10/08/12 8:30	
LOCATION: 6910 5th Avenue, Dundalk, MD	DATE/TIME COMPLETED: 10/08/12 9:20	
DRILLING COMPANY: Chesapeake GeoSciences, Inc.	LOGGED BY: Lara Bennett	
DRILLING METHOD: Hand Auger	PROJECT MANAGER: Nancy Love	
SAMPLING METHOD: NA	BORING DIAMETER: 4"	BORING DEPTH: 5' BG
DEPTH TO GW (ft) FROM GRADENA	DATE: NA	NOTES: VMP-14 installed to a depth of 5' BG on 10/08/12

DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	DEPTH (ft)
------------	--------------------	--------------	------------	-------------	-------------------------------	-------	------------



<b>PROJECT</b> CG-09-0491.12		<b>VMP SOIL BORING LOG</b> VMP-15 (SB-06)		<b>PAGE 1 OF 3</b>		
PROJECT: Midway Site			DATE STARTED: 10/01/12 15:45			
LOCATION: 6912 5th Avenue, Dundalk, MD 21222			DATE/TIME COMPLETED: 10/08/12 09:30			
DRILLING COMPANY: Tidewater, Inc.			LOGGED BY: Lara Bennett			
DRILLING METHOD: Geoprobe Direct-Push			PROJECT MANAGER: Nancy Love			
SAMPLING METHOD: Continuous Macrocore			BORING DIAMETER: 2"		BORING DEPTH: 36' BG	
DEPTH TO GW (ft) FROM GRADE: 17.06'		DATE: 10/08/12		NOTES: VMP-15 installed to a depth of 5' BG on 10/08/12		
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES




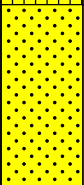
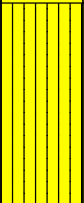
0.0	--				Brown (7.5YR5/3), dry, soft SILT, some Organics (grass/roots).	Soil removed from the bore hole with an air lance in order to clear utilities 0-8' BG. 5" Flushmount Surface Completion Bentonite Seal 0-3.5' BG.	0
-2.0	8.0	60%	OL				-2
	3.9						
	2.5		SM		Strong brown (7.5YR5/8), damp, dense, fine to medium SAND, some Silt.	#1 Silica Sand 3.5-5' BG. VMP Screen 4.5-5' BG.	
	2.8				Color change at 3.3' BG: yellowish red (5YR5/8). Little fine to medium angular quartz Gravel.		
-4.0	2.1						-4
	4.1		ML		Brown, tan, and yellowish brown, dry, dense SILT, some fine to medium Sand.		
	3.4						
	75.5					Bottom of VMP = 5' BG Temporary piezometer installed to 34.3' BG on 10/01/12, gauged and removed on 10/08/12.	
-6.0	59.7	100%			Light gray (7.5YR7/1), mottled with reddish yellow, dry, hard, slightly plastic SILT & CLAY, trace fine Sand.	1" PVC riser 0-4.3' BG. 1" PVC 0.010-slot screen 4.3-34.3' BG. VMP installed to a depth of 5' BG following removal of piezometer on 10/08/12, at a location 2' north of SB-06.	-6
	42.1						
	35.1						
	25.3						
-8.0	40.4		ML / CL		Same as above.		-8
	60.1						
	38.8						
	37.6						
-10.0	3.3	100%					-10
	57.7						
	108		ML		Light gray (7.5YR7/1), mottled with very pale brown, damp, dense SILT, little fine Sand. Moist to wet 10.7-10.9' BG.	16:25 Soil sample collected at 10.75' BG.	
	32.6						
-12.0	51.2						-12
	94.5						
	29.8		SW		Dark brown, wet, dense, fine to medium SAND, little Silt. Color change at 12.8' BG: reddish yellow (7.5YR7/6).		
	22.2						
	10.3						




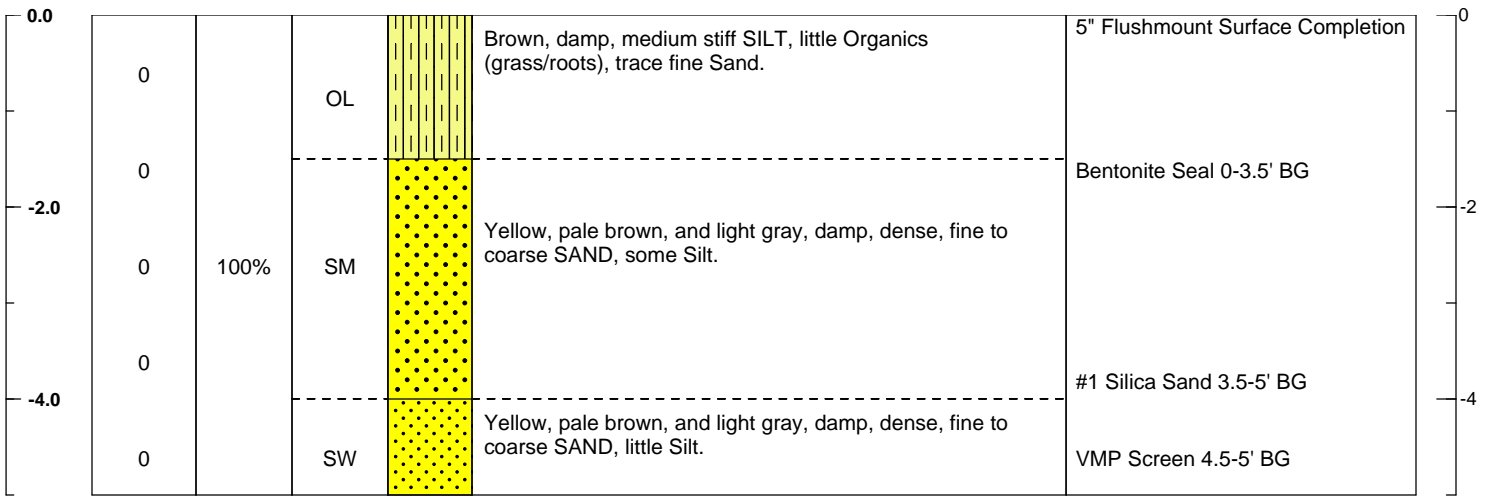
PROJECT CG-09-0491.12		SOIL BORING LOG		VMP-15 (SB-06)		PAGE 2 OF 3	
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	

-14.0	12.6	100%	ML		Light gray (7.5YR7/1), dry, hard Clayey SILT, little fine Sand.		-14			
	11.4									
	10.6									
-16.0	10.8								-16	
	9.7	100%	SM / ML		Light gray (7.5YR7/1), mottled with tan, moist, dense Clayey SILT, some fine Sand.	No odors present 0-36' BG.	-18			
	12.1									
	11.6									
-18.0	18.5									-18
	18.9				Moist to wet 17-17.6' BG.					
	9.1				Pink (7.5YR7/4), very wet, loose, fine to medium SAND, some Silt.					
	14.3				Light gray (7.5YR7/1), moist, very dense SILT, and very fine Sand.					
-20.0	8.8						-20			
	1.7	93%	ML / CL		Light gray (7.5YR7/1), wet, stiff Clayey SILT, little fine Sand.		-22			
	9.8									
	10.3								Saturated 21-21.7' BG.	
-22.0	14.8								Pale gray (7.5YR7/2), dry, hard SILT & CLAY, trace fine Sand.	
	8.6									
	23.1				Mottled with red 22.8-24' BG.					
	10.8									
-24.0	15.6						-24			
	--	83%	ML / SM		Pink (5YR7/4), mottled with light gray and red, moist to wet, stiff Clayey SILT, little fine Sand.		-26			
	14.9									
	15.5									
-26.0	15.1								Light gray (7.5YR7/1) and pinkish gray (7.5YR6/2), saturated, dense SILT, and fine Sand.	
	19.3									
	14.9				Moist 26.8-28' BG.					
	16.1									
-28.0	1.0				Mottled with red and brownish yellow at 27.5' BG.		-28			
		100%	ML		Saturated 28-32' BG.		-30			
	In Ziplock:									
-30.0	11.2				Yellowish red (5YR5/8), saturated, loose SILT, some fine Sand.		-30			
					Color change at 30' BG: light gray (7.5YR7/1), mottled with yellowish red.					

DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES
------------	--------------------	--------------	------------	-------------	-------------------------------	-------

	0.9		ML			
-32.0	8.5					
	0.7		SW		Reddish yellow (5YR6/6), saturated, loose, fine to medium SAND, little Silt.	
	0.7					
	2.4					
-34.0	5.1	100%				
	5.2		ML		Light gray (5YR7/1), mottled with red, moist, stiff Clayey SILT, and fine Sand.	
	6.7					
	8.9					17:05 Groundwater sample collected.
-36.0	6.8					End of boring at 36' BG.

PROJECT		VMP LOG		PAGE 1 OF 1			
CG-09-0491.12		VMP-16					
PROJECT: Midway Site			DATE/TIME STARTED: 10/08/12 9:20				
LOCATION: 6912 5th Avenue, Dundalk, MD			DATE/TIME COMPLETED: 10/08/12 10:30				
DRILLING COMPANY: Chesapeake GeoSciences, Inc.			LOGGED BY: Lara Bennett				
DRILLING METHOD: Hand Auger			PROJECT MANAGER: Nancy Love				
SAMPLING METHOD: NA			BORING DIAMETER: 4"		BORING DEPTH: 5' BG		
DEPTH TO GW (ft) FROM GRADENA			DATE: NA		NOTES: VMP-16 installed to a depth of 5' BG on 10/08/12		
DEPTH (ft)	PID READINGS (PPM)	RECOVERY (%)	SOIL CLASS	GRAPHIC LOG	OVERBURDEN / ROCK DESCRIPTION	NOTES	DEPTH (ft)



**ATTACHMENT B**

**FULL LABORATORY ANALYTICAL DATA TABLES**

**Table B-1**  
**Midway Site (MDE-OCP Case No. 9-0037BA)**  
**6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222**  
**CGS Project No. CG-09-0491.09 and .12**

**Off-Site Subsurface Soil Sample Analytical Results**  
**July 10 and October 1, 2012**  
**Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbons (TPH)**

Sample ID (Sample Depth)	SB-01 (26.8')	SB-01 (26.8') [SB-Dupe]	SB-02 (24.75')	SB-03 (9.75')	SB-04 (31')	SB-05 (35.25')	SB-05 (35.25') [SB-Dupe]	SB-06 (10.75')	MDE Residential Soil Standard
Sample Location	6905 5th Ave.	6905 5th Ave.	6911 5th Ave.	6907 5th Ave.	6900 5th Ave.	6910 5th Ave.	6910 5th Ave.	6912 5th Ave.	
Co-located Boring/VMP	SB-01/VMP-06	SB-01/VMP-06	SB-02/VMP-07	SB-03/VMP-09	SB-04/VMP-12	SB-05/VMP-13	SB-05/VMP-13	SB-06/VMP-15	
VOCs	Concentration (mg/kg)								
1,1,1,2-Tetrachloroethane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
1,1,1-Trichloroethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.6E+04
1,1,2,2-Tetrachloroethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	3.2E+00
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0023 U	0.0022 U	0.0023 U	NR	NR	NR	NR	NR	na
1,1,2-Trichloroethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.1E+01
1,1-Dichloroethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.6E+03
1,1-Dichloroethene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	3.9E+02
1,1-Dichloropropene	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
1,2,3-Trichlorobenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
1,2,3-Trichloropropane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
1,2,4-Trichlorobenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.8E+01
1,2,4-Trimethylbenzene	NR	NR	NR	0.0577 U	0.0538 U	264	246	0.0582 U	na
1,2-Dibromo-3-chloropropane (DBCP)	0.018 U	0.018 U	0.019 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	2.0E-01
1,2-Dibromoethane (EDB)	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	3.2E-01
1,2-Dichlorobenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.0E+02
1,2-Dichloroethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.0E+00
1,2-Dichloropropane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	9.4E+00
1,3,5-Trimethylbenzene	NR	NR	NR	0.0577 U	0.0538 U	90.8	83.9	0.0582 U	na
1,3-Dichlorobenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	2.3E+01
1,3-Dichloropropane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
1,4-Dichlorobenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	2.7E+01
2,2-Dichloropropane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
2-Butanone (MEK)	0.0090 U	0.0088 U	0.0093 U	0.231 U	0.215 U	0.234 U	0.233 U	0.233 U	4.7E+03
2-Chlorotoluene	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
2-Hexanone (MBK)	0.0090 U	0.0088 U	0.0093 U	0.231 U	0.215 U	0.234 U	0.233 U	0.233 U	na
4-Chlorotoluene	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
4-Methyl-2-pentanone (MIBK)	0.0090 U	0.0088 U	0.0093 U	0.231 U	0.215 U	0.234 U	0.233 U	0.233 U	na
Acetone	0.0090 U	0.0088 U	0.016 J	0.231 U	0.215 U	0.234 U	0.233 U	0.399	7.0E+03
Benzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	8.03	7.34	0.0582 U	1.2E+01
Bromobenzene	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Bromochloromethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Bromodichloromethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.0E+01
Bromoform	0.0023 U	0.0022 U	0.0023 U	0.231 U	0.215 U	0.234 U	0.233 U	0.233 U	8.1E+01
Bromomethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.1E+01
Carbon disulfide	0.0045 U	0.0044 U	0.0047 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.8E+02
Carbon tetrachloride	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	4.9E+00
Chlorobenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.6E+02
Chloroethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	2.2E+02
Chloroform	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.8E+01
Chloromethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
cis-1,2-Dichloroethene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.8E+01
cis-1,3-Dichloropropene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	6.4E+00
Cyclohexane	0.0090 U	0.0088 U	0.0093 U	NR	NR	NR	NR	NR	na
Dibromochloromethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	7.6E+00
Dibromomethane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Dichlorodifluoromethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Di-isopropyl ether (DIPE)	0.0045 U	0.0044 U	0.0047 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Ethylbenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	152	140	0.0582 U	7.8E+02
Ethyl-t-butyl ether (ETBE)	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Iodomethane	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0624	0.0582 U	na
Isopropylbenzene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	19.3	18.7	0.0582 U	7.8E+02
m,p-Xylenes	0.0045 U	0.0044 U	0.0047 U	0.0577 U	0.0538 U	547	501	0.0582 U	1.6E+03
Methyl acetate	0.0090 U	0.0088 U	0.0093 U	NR	NR	NR	NR	NR	na
Methylcyclohexane	0.0090 U	0.0088 U	0.0093 U	NR	NR	NR	NR	NR	na
Methylene chloride	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	8.5E+01
Methyl-t-butyl ether (MTBE)	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.6E+02
Naphthalene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	34.9	30.0	0.0582 U	1.6E+02
n-Butylbenzene	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
n-Propylbenzene	NR	NR	NR	0.0577 U	0.0538 U	71.7	66.6	0.0582 U	na
o-Xylene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	218	193	0.0582 U	1.6E+03
p-Isopropyltoluene	NR	NR	NR	0.0577 U	0.0538 U	3.24	3.25	0.0582 U	na
sec-Butylbenzene	NR	NR	NR	0.0577 U	0.0538 U	5.07	5.06	0.0582 U	na
Styrene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	4.85	4.20	0.0582 U	1.6E+03
tert-Amyl alcohol (TAA)	0.018 U	0.018 U	0.019 U	NR	NR	NR	NR	NR	na
tert-Amyl ethyl ether (TAEE)	0.018 U	0.018 U	0.019 U	NR	NR	NR	NR	NR	na
tert-Amyl methyl ether (TAME)	0.018 U	0.018 U	0.019 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
tert-Butyl alcohol (TBA)	0.018 U	0.018 U	0.019 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
tert-Butyl ethyl ether (TBEE)	0.0045 U	0.0044 U	0.0047 U	NR	NR	NR	NR	NR	na
tert-Butylbenzene	NR	NR	NR	0.0577 U	0.0538 U	0.205	0.204	0.0582 U	na
Tetrachloroethene (PCE)	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.2E+00
Toluene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	289	272	0.0582 U	6.3E+02
trans-1,2-Dichloroethene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.6E+02
trans-1,3-Dichloropropene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	6.4E+00
Trichloroethene	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	1.6E+00
Trichlorofluoromethane	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Vinyl acetate	NR	NR	NR	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	na
Vinyl chloride	0.0023 U	0.0022 U	0.0023 U	0.0577 U	0.0538 U	0.0586 U	0.0582 U	0.0582 U	9.0E-02
Xylenes, Total	0.0068 U	0.0066 U	0.0070 U	0.0577 U	0.0538 U	765	693	0.0582 U	1.6E+03
<b>TPH</b>	<b>Concentration (mg/kg)</b>								
Diesel Range Organics (TPH-DRO)	4.6 U	4.6 U	4.5 U	11.5 U	10.8 U	1,270	2,240	11.6 U	2.3E+02
Gasoline Range Organics (TPH-GRO)	0.058 U	0.058 U	0.056 U	5.8 U	5.4 U	6,520	6,480	5.8 U	2.3E+02

**Table Notes:**

VOCs Analytical Method: EPA Method 8260B

TPH Analytical Method: EPA Method 8015C

MDE Residential Soil Clean-up Standard (June 2008)

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

U - Analyte not detected above specified Limit of Detection (LOD) (shown as a gray tone).

J - The reported concentration is less than the Limit of Quantitation (LOQ) but greater than the LOD. The concentration is considered to be estimated.

NR - Not Reported. Differing analyte lists from the two labs were merged.

na - not applicable

**Bold** - Detected analyte concentration

**Additional Screening Level Notes**

**Analyte**                      **MDE Residential Soil Standard**

m,p-Xylenes                  Total Xylenes

o-Xylene                        Total Xylenes

Xylenes, Total                Total Xylenes

**Table B-2**  
**Midway Site (MDE-OC Case No. 9-0037BA)**  
**6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222**  
**CGS Project No. CG-09-0491.09 and .12**

**Off-Site Groundwater Sample Analytical Results**  
**July 10 and October 1, 2012**  
**Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbons (TPH)**

Sample ID	SB-01 (GW)	SB-01 (GW) [SB-Dupe (GW)]	SB-02 (GW)	SB-04 (GW)	SB-05 (GW)	SB-05 (GW) [SB-Dupe (GW)]	SB-06 (GW)	MDE Groundwater Standard
Sample Location	6905 5th Ave.	6905 5th Ave.	6911 5th Ave.	6900 5th Ave.	6910 5th Ave.	6910 5th Ave.	6912 5th Ave.	
Co-located Boring/VMP	SB-01/VMP-06	SB-01/VMP-06	SB-02/VMP-07	SB-04/VMP-12	SB-05/VMP-13	SB-05/VMP-13	SB-06/VMP-15	
VOCs	Concentration (ug/L)							
1,1,1,2-Tetrachloroethane	NR	NR	NR	0.4 U	0.4 U	0.4 U	0.4 U	na
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.7 U	0.7 U	0.7 U	0.7 U	2.0E+02
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	5.3E-02
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	NR	NR	NR	NR	na
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0E+00
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	9.0E+01
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U	0.3 U	0.3 U	0.3 U	7.0E+00
1,1-Dichloropropene	NR	NR	NR	0.2 U	<b>0.3 J</b>	0.2 U	0.2 U	na
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	na
1,2,3-Trichloropropane	NR	NR	NR	0.2 U	0.2 U	0.2 U	0.2 U	na
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.2 U	<b>0.3 J</b>	0.2 U	0.2 U	7.0E+01
1,2,4-Trimethylbenzene	NR	NR	NR	<b>12.3</b>	<b>1,670</b>	<b>1,520</b>	0.5 U	na
1,2-Dibromo-3-chloropropane (DBCP)	5 U	5 U	5 U	0.8 U	0.8 U	0.8 U	0.8 U	2.0E-01
1,2-Dibromoethane (EDB)	0.5 U	0.5 U	0.5 U	0.3 U	<b>31.0</b>	<b>27.2</b>	0.3 U	5.0E-02
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	6.0E+02
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.9 U	0.9 U	<b>1.1</b>	0.9 U	5.0E+00
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.6 U	0.6 U	0.6 U	0.6 U	5.0E+00
1,3,5-Trimethylbenzene	NR	NR	NR	<b>3.5</b>	<b>487</b>	<b>416</b>	0.2 U	na
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.2 U	<b>0.2 J</b>	0.2 U	0.2 U	1.8E+00
1,3-Dichloropropane	NR	NR	NR	0.2 U	<b>0.3 J</b>	0.2 U	0.2 U	na
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	7.5E+01
2,2-Dichloropropane	NR	NR	NR	0.6 U	0.6 U	0.6 U	0.6 U	na
2-Butanone (MEK)	5 U	5 U	5 U	<b>6.2 J</b>	<b>256</b>	<b>138</b>	0.6 U	7.0E+02
2-Chlorotoluene	NR	NR	NR	0.6 U	0.6 U	0.6 U	0.6 U	na
2-Hexanone (MBK)	5 U	5 U	5 U	0.4 U	0.4 U	0.4 U	0.4 U	na
4-Chlorotoluene	NR	NR	NR	0.7 U	0.7 U	0.7 U	0.7 U	na
4-Methyl-2-pentanone (MIBK)	2.5 U	2.5 U	2.5 U	0.3 U	0.3 U	0.3 U	0.3 U	6.3E+02
Acetone	5 U	5 U	5 U	<b>51.3</b>	7 U	7 U	7 U	5.5E+02
Benzene	0.5 U	0.5 U	0.5 U	<b>22.6</b>	<b>2,860</b>	<b>2,120</b>	0.3 U	5.0E+00
Bromobenzene	NR	NR	NR	0.5 U	0.5 U	0.5 U	0.5 U	na
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	na
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U	0.3 U	0.3 U	0.3 U	8.0E+01
Bromoform	2.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0E+01
Bromomethane	0.5 U	0.5 U	0.5 U	0.3 U	<b>0.4 J</b>	0.3 U	0.3 U	8.5E-01
Carbon disulfide	5 U	5 U	5 U	0.6 U	0.6 U	0.6 U	0.6 U	1.0E+02
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	5.0E+00
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	1.0E+02
Chloroethane	0.5 U	0.5 U	0.5 U	0.4 U	<b>2.9</b>	<b>0.5 J</b>	0.4 U	3.6E+00
Chloroform	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	8.0E+01
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	<b>1.0</b>	0.5 U	1.9E+01
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	7.0E+01
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	4.4E-01
Cyclohexane	5 U	5 U	5 U	NR	NR	NR	NR	na
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.7 U	0.7 U	0.7 U	0.7 U	8.0E+01
Dibromomethane	NR	NR	NR	0.4 U	0.4 U	0.4 U	0.4 U	na
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Di-isopropyl ether (DIPE)	5 U	5 U	5 U	0.3 U	<b>0.5 J</b>	<b>0.7 J</b>	0.3 U	na
Ethylbenzene	0.5 U	0.5 U	0.5 U	<b>14.3</b>	<b>2,770</b>	<b>2,100</b>	0.2 U	7.0E+02
Ethyl-t-butyl ether (ETBE)	NR	NR	NR	0.4 U	0.4 U	0.4 U	0.4 U	na
Iodomethane	NR	NR	NR	0.1 U	0.1 U	0.1 U	0.1 U	na
Isopropylbenzene	0.5 U	0.5 U	0.5 U	<b>1.0 J1</b>	<b>124</b>	<b>132</b>	0.2 U	6.6E+01
m,p-Xylenes	1 U	1 U	1 U	<b>50.7</b>	<b>9,070</b>	<b>6,970</b>	0.5 U	1.0E+04
Methyl acetate	5 U	5 U	5 U	NR	NR	NR	NR	na
Methylcyclohexane	5 U	5 U	5 U	NR	NR	NR	NR	na
Methylene chloride	0.5 U	0.5 U	0.5 U	1.0 U	<b>4.7</b>	1.0 U	1.0 U	5.0E+00
Methyl-t-butyl ether (MTBE)	0.5 U	0.5 U	0.5 U	<b>4.6</b>	<b>5.8</b>	<b>2.6</b>	<b>2.6</b>	2.0E+01
Naphthalene	0.5 U	0.5 U	0.5 U	<b>3.2</b>	<b>508</b>	<b>394</b>	<b>0.7 J</b>	6.5E-01
n-Butylbenzene	NR	NR	NR	0.3 U	0.3 U	0.3 U	0.3 U	na
n-Propylbenzene	NR	NR	NR	<b>1.7</b>	<b>328</b>	<b>344</b>	0.2 U	na
o-Xylene	0.5 U	0.5 U	0.5 U	<b>27.6</b>	<b>4,270</b>	<b>3,400</b>	0.5 U	1.0E+04
p-Isopropyltoluene	NR	NR	NR	0.2 U	<b>11.1</b>	<b>18.3</b>	0.2 U	na
sec-Butylbenzene	NR	NR	NR	0.4 U	<b>17.1</b>	<b>28.3</b>	0.4 U	na
Styrene	0.5 U	0.5 U	0.5 U	<b>0.6 J</b>	<b>117</b>	<b>89.9</b>	0.2 U	1.0E+02
tert-Amyl alcohol (TAA)	10 U	10 U	10 U	NR	NR	NR	NR	na
tert-Amyl ethyl ether (TAEE)	5 U	5 U	5 U	NR	NR	NR	NR	na
tert-Amyl methyl ether (TAME)	5 U	5 U	5 U	<b>1.7 J</b>	0.3 U	0.3 U	0.3 U	na
tert-Butyl alcohol (TBA)	10 U	10 U	10 U	<b>22.6 J</b>	2.6 U	2.6 U	2.6 U	na
tert-Butyl ethyl ether (TBEE)	5 U	5 U	5 U	NR	NR	NR	NR	na
tert-Butylbenzene	NR	NR	NR	0.1 U	0.1 U	0.1 U	0.1 U	na
Tetrachloroethene (PCE)	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	5.0E+00
Toluene	0.5 U	0.5 U	0.5 U	<b>39.7</b>	<b>19,200</b>	<b>19,000</b>	0.4 U	1.0E+03
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	1.0E+02
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.4E-01
Trichloroethene	0.5 U	0.5 U	0.5 U	0.3 U	0.3 U	0.3 U	0.3 U	5.0E+00
Trichlorofluoromethane	2.5 U	2.5 U	2.5 U	0.4 U	0.4 U	0.4 U	0.4 U	na
Vinyl acetate	NR	NR	NR	0.9 U	0.9 U	0.9 U	0.9 U	na
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.3 U	0.3 U	0.3 U	0.3 U	2.0E+00
Xylenes, Total	1.5 U	1.5 U	1.5 U	<b>78.4</b>	<b>13,300</b>	<b>10,400</b>	<b>0.6 J</b>	1.0E+04
TPH	Concentration (ug/L)							
Diesel Range Organics (TPH-DRO)	<b>160</b>	<b>160</b>	<b>170</b>	300 U	<b>30,100</b>	<b>7,600</b>	300 U	4.7E+01
Gasoline Range Organics (TPH-GRO)	50 U	50 U	50 U	500 U	<b>40,400</b>	<b>40,400</b>	500 U	4.7E+01

**Table Notes:**

VOCs Analytical Method: EPA Method 8260B  
TPH Analytical Method: EPA Method 8015C  
MDE Groundwater Standards Type I and II Aquifers (June 2008)  
ug/L - micrograms per liter or parts per billion (ppb)  
U - Analyte not detected above specified Limit of Detection (LOD) (shown as a gray tone).  
J - The reported concentration is less than the Limit of Quantitation (LOQ) but greater than the LOD. The concentration is considered to be estimated.  
J1 - The reported concentration had been rounded up to the LOQ due to EPA rounding rules. The concentration is considered to be estimated.  
NR - Not Reported. Differing analyte lists from the two labs were merged.  
na - not applicable  
**Bold** - Detected analyte concentration

**Additional Screening Level Notes**

<b>Analyte</b>	<b>MDE Groundwater Standard</b>
m,p-Xylenes	Total Xylenes
o-Xylene	Total Xylenes
Xylenes, Total	Total Xylenes

Table B-3  
Midway Site (MDE-OC Case No. 9-0037BA)  
6910 Holabird Avenue, Tolson Avenue and 5th Avenue, Dundalk, Baltimore County, MD 21222  
CGS Project No. CG-09-0491.09 and .12

Off-Site Soil Vapor Sample Analytical Results  
July 17-18 and October 10-11, 2012  
Volatile Organic Compounds (VOCs)

Sample ID	VMP-05	VMP-06	VMP-06 [VMP-dupe]	VMP-07	VMP-08	VMP-09	VMP-09 [VMP-DUPE]	VMP-10	VMP-11	VMP-12	VMP-13	VMP-14	VMP-15	VMP-16	MDE Target Residential Soil Gas Tier 1 RG	MDE Target Residential Soil Gas Tier 2 RG
Sample Location	6905 5th Ave.	6905 5th Ave.	6905 5th Ave.	6911 5th Ave.	6911 5th Ave.	6907 5th Ave.	6907 5th Ave.	6907 5th Ave.	6900 5th Ave.	6900 5th Ave.	6910 5th Ave.	6910 5th Ave.	6912 5th Ave.	6912 5th Ave.		
Co-located Boring/VMP	na	SB-01/VMP-06	SB-01/VMP-06	SB-02/VMP-07	na	SB-03/VMP-09	SB-03/VMP-09	na	na	SB-04/VMP-12	SB-05/VMP-13	na	SB-06/VMP-15	na		
Dilution Factor	2	1	4	4	2	4	4	1	115	1	20	1	1	1.875		
VOCs	Concentration (ug/m <sup>3</sup> )															
Propene	0.73 U	0.37 U	1.47 U	1.47 U	0.73 U	<b>17.00</b>	<b>16.73</b>	0.37 U	42.17 U	<b>28.74</b>	<b>41.65</b>	0.37 U	<b>31.84</b>	0.69 U	6.40E+04	3.20E+05
Dichlorodifluoromethane (Freon 12)	3.26 U	<b>3.12</b>	6.53 U	6.53 U	<b>3.26 J</b>	6.53 U	6.53 U	<b>2.37 J</b>	187.90 U	<b>2.27 J</b>	32.64 U	<b>2.23 J</b>	<b>2.32 J</b>	3.06 U	4.20E+03	2.10E+04
Chloromethane	1.55 U	<b>2.62</b>	3.10 U	3.10 U	1.55 U	3.10 U	3.10 U	0.77 U	89.02 U	0.77 U	15.49 U	0.77 U	0.77 U	1.45 U	1.88E+03	9.40E+03
1,2-Dichlorotetrafluoroethane (Freon 114)	5.10 U	2.55 U	10.21 U	10.21 U	5.10 U	10.21 U	10.21 U	2.55 U	293.57 U	2.55 U	51.03 U	2.55 U	2.55 U	4.78 U	na	na
Vinyl chloride	2.01 U	1.01 U	4.04 U	4.04 U	2.01 U	4.04 U	4.04 U	1.01 U	115.80 U	1.01 U	20.14 U	1.01 U	1.01 U	1.89 U	3.40E+01	1.70E+02
1,3-Butadiene	1.67 U	0.83 U	3.33 U	3.33 U	1.67 U	3.33 U	3.33 U	0.83 U	95.85 U	0.83 U	16.65 U	0.83 U	0.83 U	1.56 U	1.64E+01	8.20E+01
Bromomethane	2.31 U	1.16 U	4.62 U	4.62 U	2.31 U	4.62 U	4.62 U	1.16 U	133.13 U	1.16 U	23.13 U	1.16 U	1.16 U	2.17 U	1.06E+02	5.30E+02
Chloroethane	2.36 U	1.18 U	4.72 U	4.72 U	2.36 U	4.72 U	4.72 U	1.18 U	135.86 U	1.18 U	23.64 U	1.18 U	1.18 U	2.22 U	2.20E+05	1.10E+06
Acetone	<b>103.84</b>	1.06 U	<b>121.43</b>	<b>122.38</b>	<b>107.41</b>	4.23 U	4.23 U	<b>35.17</b>	121.67 U	<b>35.17</b>	21.15 U	<b>19.39</b>	<b>23.62</b>	<b>88.64</b>	6.60E+05	3.30E+06
Trichlorofluoromethane (Freon 11)	5.02 U	2.51 U	10.06 U	10.06 U	5.02 U	10.06 U	10.06 U	2.51 U	288.85 U	2.51 U	50.24 U	2.51 U	2.51 U	4.71 U	1.46E+04	7.30E+04
Ethanol	<b>9.99</b>	<b>24.13</b>	<b>16.52</b>	<b>19.80</b>	<b>18.03</b>	3.05 U	<b>10.26</b>	<b>6.79</b>	87.67 U	<b>4.43</b>	15.23 U	<b>7.60</b>	<b>5.81</b>	<b>37.33</b>	na	na
Acrylonitrile	1.66 U	0.83 U	3.32 U	3.32 U	1.66 U	3.32 U	3.32 U	0.83 U	95.38 U	0.83 U	16.60 U	0.83 U	0.83 U	1.56 U	7.20E+00	3.60E+01
1,1-Dichloroethene	2.96 U	1.48 U	5.91 U	5.91 U	2.96 U	5.91 U	5.91 U	1.48 U	170.20 U	1.48 U	29.60 U	1.48 U	1.48 U	2.77 U	4.20E+03	2.10E+04
Methylene chloride	3.08 U	1.54 U	6.15 U	6.15 U	3.08 U	6.15 U	6.15 U	1.54 U	176.74 U	1.54 U	30.77 U	1.54 U	1.54 U	2.89 U	1.26E+04	6.30E+04
1,1,2-Trichlorotrifluoroethane (Freon 113)	5.66 U	2.83 U	11.34 U	11.34 U	5.66 U	11.34 U	11.34 U	2.83 U	324.98 U	2.83 U	56.56 U	2.83 U	2.83 U	5.30 U	6.40E+05	3.20E+06
Carbon disulfide	<b>25.09</b>	<b>27.51</b>	<b>23.16</b>	<b>60.69</b>	<b>42.02</b>	<b>21.04</b>	<b>20.54</b>	<b>28.79</b>	133.21 U	<b>132.59</b>	23.16 U	<b>35.48</b>	<b>8.87</b>	<b>3.09</b>	1.46E+04	7.30E+04
trans-1,2-Dichloroethene	1.69 U	0.84 U	3.38 U	3.38 U	1.69 U	3.38 U	3.38 U	0.84 U	97.15 U	0.84 U	16.89 U	0.84 U	0.84 U	1.58 U	1.26E+03	6.30E+03
1,1-Dichloroethane	1.62 U	0.81 U	3.24 U	3.24 U	1.62 U	3.24 U	3.24 U	0.81 U	93.13 U	0.81 U	16.20 U	0.81 U	0.81 U	1.52 U	3.20E+02	1.60E+03
Methyl tert-butyl ether	1.22 U	<b>16.38</b>	<b>15.15</b>	2.44 U	<b>7.29</b>	2.44 U	2.44 U	0.61 U	69.98 U	0.61 U	12.19 U	0.61 U	0.61 U	1.14 U	1.88E+03	9.40E+03
Isopropyl alcohol	<b>2.16 J</b>	<b>10.38</b>	<b>4.71 J</b>	<b>5.99</b>	<b>3.63</b>	2.24 U	2.24 U	<b>0.56 J</b>	64.29 U	<b>0.79 J</b>	11.19 U	<b>1.45</b>	<b>1.10 J</b>	<b>3.63</b>	na	na
2-Butanone (MEK)	<b>8.49</b>	<b>21.03</b>	<b>19.23</b>	<b>14.63</b>	<b>14.10</b>	4.22 U	<b>10.62</b>	<b>36.27</b>	121.49 U	<b>11.82</b>	21.11 U	<b>11.82</b>	<b>14.01</b>	<b>31.26</b>	1.06E+05	5.30E+05
cis-1,2-Dichloroethene	1.29 U	0.65 U	2.59 U	2.59 U	1.29 U	2.59 U	2.59 U	0.65 U	74.15 U	0.65 U	12.93 U	0.65 U	0.65 U	1.21 U	na	na
Hexane	1.53 U	<b>7.40</b>	<b>4.94 J</b>	<b>4.65 J</b>	<b>1.69 J</b>	<b>511.21</b>	<b>518.26</b>	<b>2.68</b>	88.14 U	<b>7.62</b>	<b>3,631.33</b>	<b>9.31</b>	<b>5.50</b>	<b>15.48</b>	1.46E+04	7.30E+04
Ethyl acetate	1.98 U	<b>6.63</b>	<b>7.35</b>	<b>6.77 J</b>	<b>4.18</b>	3.96 U	3.96 U	<b>5.12</b>	113.86 U	0.99 U	19.82 U	<b>3.46</b>	<b>4.68</b>	<b>30.95</b>	na	na
Chloroform	<b>3.80 J</b>	<b>2.19 J</b>	5.55 U	5.55 U	<b>5.35</b>	5.55 U	5.55 U	<b>12.46</b>	159.15 U	<b>5.45</b>	27.64 U	<b>3.99</b>	<b>30.22</b>	2.59 U	2.20E+01	1.10E+02
Tetrahydrofuran	1.30 U	<b>9.29</b>	<b>7.08</b>	2.60 U	<b>31.85</b>	2.60 U	2.60 U	<b>53.37</b>	74.61 U	0.65 U	12.98 U	<b>4.78</b>	0.65 U	1.21 U	4.20E+04	2.10E+05
1,2-Dichloroethane	2.06 U	1.03 U	4.13 U	4.13 U	2.06 U	4.13 U	4.13 U	1.03 U	118.23 U	1.03 U	20.57 U	1.03 U	1.03 U	1.93 U	1.88E+01	9.40E+01
1,1,1-Trichloroethane	2.14 U	1.07 U	4.28 U	4.28 U	2.14 U	4.28 U	4.28 U	1.07 U	122.76 U	1.07 U	21.39 U	1.07 U	1.07 U	2.01 U	1.06E+05	5.30E+05
Benzene	1.03 U	<b>2.27</b>	<b>2.17 J</b>	<b>3.70 J</b>	<b>1.66 J</b>	<b>9.44</b>	<b>9.19</b>	<b>0.73 J</b>	59.02 U	<b>6.92</b>	10.27 U	0.51 U	<b>4.63</b>	<b>1.08 J</b>	6.40E+01	3.20E+02
Carbon tetrachloride	2.62 U	1.31 U	5.23 U	5.23 U	2.62 U	5.23 U	5.23 U	1.31 U	150.34 U	1.31 U	26.17 U	1.31 U	1.31 U	2.45 U	8.20E+01	4.10E+02
Cyclohexane	1.20 U	<b>5.30</b>	<b>4.13 J</b>	2.41 U	1.20 U	<b>150.08</b>	<b>153.52</b>	0.60 U	<b>6,126.99</b>	<b>0.69 J</b>	<b>1,659.11</b>	0.60 U	0.60 U	1.13 U	1.26E+05	6.30E+05
1,2-Dichloropropane	1.81 U	0.91 U	3.62 U	3.62 U	1.81 U	3.62 U	3.62 U	0.91 U	103.99 U	0.91 U	18.12 U	0.91 U	0.91 U	1.70 U	5.00E+01	2.50E+02
Bromodichloromethane	2.83 U	1.41 U	5.65 U	5.65 U	2.83 U	5.65 U	5.65 U	1.41 U	162.80 U	1.41 U	28.27 U	1.41 U	1.41 U	2.65 U	1.32E+01	6.60E+01
Trichloroethene	<b>5.59</b>	0.96 U	3.83 U	3.83 U	1.91 U	3.83 U	3.83 U	0.96 U	110.17 U	0.96 U	19.13 U	0.96 U	0.96 U	1.79 U	3.60E+01	1.80E+02
1,4-Dioxane	1.91 U	0.95 U	3.82 U	3.82 U	1.91 U	3.82 U	3.82 U	0.95 U	109.78 U	0.95 U	19.08 U	0.95 U	0.95 U	1.79 U	na	na
n-Heptane	1.50 U	<b>1.84 J</b>	3.00 U	3.00 U	1.50 U	<b>202.86</b>	<b>197.94</b>	0.75 U	86.06 U	<b>2.46</b>	<b>127.04</b>	0.75 U	<b>0.98 J</b>	1.41 U	na	na
4-Methyl-2-pentanone (MIBK)	2.05 U	<b>1.31 J</b>	4.10 U	4.10 U	2.05 U	4.10 U	4.10 U	1.02 U	118.03 U	<b>1.23 J</b>	20.49 U	1.02 U	1.02 U	1.92 U	6.40E+04	3.20E+05
cis-1,3-Dichloropropene	1.54 U	0.77 U	3.09 U	3.09 U	1.54 U	3.09 U	3.09 U	0.77 U	88.98 U	0.77 U	15.44 U	0.77 U	0.77 U	1.45 U	na	na
trans-1,3-Dichloropropene	1.35 U	0.68 U	2.71 U	2.71 U	1.35 U	2.71 U	2.71 U	0.68 U	77.63 U	0.68 U	13.53 U	0.68 U	0.68 U	1.27 U	na	na
1,1,2-Trichloroethane	2.86 U	1.43 U	5.73 U	5.73 U	2.86 U	5.73 U	5.73 U	1.43 U	164.23 U	1.43 U	28.59 U	1.43 U	1.43 U	2.68 U	4.20E+00	2.10E+01
Toluene	<b>5.49</b>	<b>12.57</b>	<b>17.31</b>	<b>20.02</b>	<b>19.57</b>	<b>129.44</b>	<b>121.54</b>	<b>2.45</b>	81.65 U	<b>18.96</b>	<b>17.31 J</b>	<b>1.47 J</b>	<b>6.74</b>	<b>9.37</b>	1.06E+05	5.30E+05
2-Hexanone (MBK)	1.26 U	<b>1.35 J</b>	2.52 U	2.52 U	1.26 U	2.52 U	2.52 U	0.63 U	72.54 U	<b>1.15 J</b>	12.62 U	0.63 U	0.63 U	1.18 U	6.40E+02	3.20E+03
Dibromochloromethane	3.14 U	1.57 U	6.27 U	6.27 U	3.14 U	6.27 U	6.27 U	1.57 U	180.61 U	1.57 U	31.35 U	1.57 U	1.57 U	2.94 U	1.82E+01	9.10E+01
1,2-Dibromoethane (EDB)	4.69 U	2.34 U	9.38 U	9.38 U	4.69 U	9.38 U	9.38 U	2.34 U	269.75 U	2.34 U	46.88 U	2.34 U	2.34 U	4.40 U	8.20E+01	4.10E+00
Tetrachloroethene	2.73 U	<b>36.08</b>	5.45 U	5.45 U	2.73 U	5.45 U	5.45 U	1.36 U	156.65 U	1.36 U	27.26 U	1.36 U	1.36 U	2.56 U	8.40E+02	4.20E+03
Chlorobenzene	2.67 U	1.34 U	5.34 U	5.34 U	2.67 U	5.34 U	5.34 U	1.34 U	153.82 U	1.34 U	26.71 U	1.34 U	1.34 U	2.51 U	1.06E+03	5.30E+03
1,1,1,2-Tetrachloroethane	3.12 U	1.56 U	6.24 U	6.24 U	3.12 U	6.24 U	6.24 U	1.56 U	179.34 U	1.56 U	31.20 U	1.56 U	1.56 U	2.93 U	6.60E+01	3.30E+02
Ethylbenzene	1.69 U	<b>6.59</b>	<b>10.75</b>	3.38 U	<b>15.00</b>	<b>81.94</b>	<b>78.90</b>	0.85 U	97.11 U	<b>2.77</b>	16.91 U	0.85 U	<b>1.73 J</b>	1.59 U	2.00E+02	1.00E+03
m,p-Xylene	4.28 U	<b>9.88</b>	<b>20.81</b>	<b>10.40 J</b>	<b>64.60</b>	<b>419.23</b>	<b>391.48</b>	2.14 U	246.25 U	<b>7.07</b>	42.83 U	2.14 U	<b>5.20</b>	<b>4.14 J</b>	2.20E+03	1.10E+04
Bromoform	4.59 U	2.29 U	9.18 U	9.18 U	4.59 U	9.18 U	9.18 U	2.29 U	263.55 U	2.29 U	45.89 U	2.29 U	2.29 U	4.30 U	na	na
Styrene	2.10 U	1.05 U	4.20 U	4.20 U	2.10 U	4.20 U	4.20 U	1.05 U	120.80 U	1.05 U	21.01 U	1.05 U	1.05 U	1.97 U	2.20E+04	1.10E+05
o-Xylene	2.64 U	<b>4.08</b>	<b>14.91</b>	5.29 U	<b>30.26</b>	<b>182.09</b>	<b>166.48</b>	1.32 U	152.17 U	<b>3.12</b>	26.45 U	1.32 U	<b>2.38</b>	2.48 U	2.20E+03	1.10E+04
1,1,2,2-Tetrachloroethane	3.75 U	1.87 U	7.49 U	7.49 U	3.75 U	7.49 U	7.49 U	1.87 U	215.63 U	1.87 U	37.49 U	1.87 U	1.87 U	3.52 U	8.40E+00	4.20E+01
Isopropyl																

**ATTACHMENT C**

**LABORATORY ANALYTICAL REPORTS  
SOIL AND GROUNDWATER SAMPLES**



**Analytical Report for**  
**Chesapeake GeoSciences, Inc.**  
**Certificate of Analysis No.: 12071207**

**Project Manager: Sean Daniel**

**Project Name : Midway**

**Project ID : CG-09-0491.09**



**July 31, 2012**  
**Phase Separation Science, Inc.**  
**6630 Baltimore National Pike**  
**Baltimore, MD 21228**  
**Phone: (410) 747-8770**  
**Fax: (410) 788-8723**

OFFICES:  
6630 BALTIMORE NATIONAL PIKE  
ROUTE 40 WEST  
BALTIMORE, MD 21228  
410-747-8770  
800-932-9047  
FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



July 31, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12071207**

Project Name: Midway

Project ID.: CG-09-0491.09

Dear Sean Daniel :

This report includes 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 **12071207**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. 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 August 16, 2012. 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 5 years, after which time it will be disposed of 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).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



# Sample Summary

**Client Name: Chesapeake GeoSciences, Inc.**  
**Project Name: Midway**

**Project ID: CG-09-0491.09**

**Work Order Number: 12071207**

The following samples were received under chain of custody by Phase Separation Science (PSS) on 07/12/2012 at 11:50 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12071207-001	SB-1 (26.8')	SOIL	07/10/2012 10:54
12071207-002	SB-2 (24.75')	SOIL	07/10/2012 12:10
12071207-003	SB-Dupe	SOIL	07/10/2012 00:00
12071207-004	SB-1 (GW)	WATER	07/10/2012 13:55
12071207-005	SB-2 (GW)	WATER	07/10/2012 12:40
12071207-006	SB-Dupe (GW)	WATER	07/10/2012 00:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

**Notes:**

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].

**Standard Flags/Abbreviations:**

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Midway

Project ID: CG-09-0491.09

Work Order Number: 12071207

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

**Sample Receipt:**

All sample receipt conditions were acceptable.

**General Comments:**

Revised report to include LOD per client request.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

**Chesapeake GeoSciences, Inc., Columbia, MD**

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-1 (26.8')</b>	<b>Date/Time Sampled: 07/10/2012 10:54</b>	<b>PSS Sample ID: 12071207-001</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 85</b>

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW-846 8015 C

Preparation Method: 3550

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.6		1	4.6	07/19/12	07/19/12 16:40	1040

Total Petroleum Hydrocarbons-GRO

Analytical Method: SW-846 8015C

Preparation Method: 5030

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	120		1	58	07/13/12	07/14/12 01:06	1035

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-1 (26.8')</b>	<b>Date/Time Sampled: 07/10/2012 10:54</b>	<b>PSS Sample ID: 12071207-001</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 85</b>

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Chloromethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Vinyl Chloride	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
tert-Butyl alcohol	ND	ug/kg	36		1	18	07/12/12	07/12/12 18:52	1011
Bromomethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Chloroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Acetone	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
Cyclohexane	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
Trichlorofluoromethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,1-Dichloroethene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Methylene Chloride	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Methyl-t-butyl ether	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,1-Dichloroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
2-Butanone (MEK)	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Bromochloromethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Chloroform	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,1,1-Trichloroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,2-Dichloroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Carbon Tetrachloride	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Benzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,2-Dichloropropane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Carbon Disulfide	ND	ug/kg	9		1	4.5	07/12/12	07/12/12 18:52	1011
Methylcyclohexane	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
Trichloroethene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Methyl Acetate	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
Bromodichloromethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-1 (26.8')</b>	<b>Date/Time Sampled: 07/10/2012 10:54</b>	<b>PSS Sample ID: 12071207-001</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 85</b>

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
4-Methyl-2-Pentanone	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,1,2-Trichloroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Toluene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
2-Hexanone	ND	ug/kg	18		1	9	07/12/12	07/12/12 18:52	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Dibromochloromethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
tert-Butyl ethyl ether	ND	ug/kg	9		1	4.5	07/12/12	07/12/12 18:52	1011
tert-Amyl methyl ether	ND	ug/kg	36		1	18	07/12/12	07/12/12 18:52	1011
Diisopropyl ether	ND	ug/kg	9		1	4.5	07/12/12	07/12/12 18:52	1011
tert-Amyl ethyl ether	ND	ug/kg	36		1	18	07/12/12	07/12/12 18:52	1011
tert-Amyl alcohol	ND	ug/kg	36		1	18	07/12/12	07/12/12 18:52	1011
Bromoform	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Tetrachloroethene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Chlorobenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Ethylbenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
m,p-Xylenes	ND	ug/kg	9		1	4.5	07/12/12	07/12/12 18:52	1011
Styrene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
o-Xylene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Isopropylbenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,3-Dichlorobenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,4-Dichlorobenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,2-Dichlorobenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	36		1	18	07/12/12	07/12/12 18:52	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
Naphthalene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.5		1	2.3	07/12/12	07/12/12 18:52	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

**Chesapeake GeoSciences, Inc., Columbia, MD**

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-2 (24.75')</b>	<b>Date/Time Sampled: 07/10/2012 12:10</b>	<b>PSS Sample ID: 12071207-002</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 87</b>

Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C	Preparation Method: 3550
------------------------------------	----------------------------------	--------------------------

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.5		1	4.5	07/19/12	07/20/12 10:19	1040

Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C	Preparation Method: 5030
----------------------------------	---------------------------------	--------------------------

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	110		1	56	07/13/12	07/14/12 01:33	1035



OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-2 (24.75')</b>	<b>Date/Time Sampled: 07/10/2012 12:10</b>	<b>PSS Sample ID: 12071207-002</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 87</b>

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Chloromethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Vinyl Chloride	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
tert-Butyl alcohol	ND	ug/kg	37		1	19	07/12/12	07/12/12 19:20	1011
Bromomethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Chloroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Acetone	<b>16</b>	ug/kg	19	J	1	9.3	07/12/12	07/12/12 19:20	1011
Cyclohexane	ND	ug/kg	19		1	9.3	07/12/12	07/12/12 19:20	1011
Trichlorofluoromethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,1-Dichloroethene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Methylene Chloride	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Methyl-t-butyl ether	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,1-Dichloroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
2-Butanone (MEK)	ND	ug/kg	19		1	9.3	07/12/12	07/12/12 19:20	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Bromochloromethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Chloroform	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,1,1-Trichloroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,2-Dichloroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Carbon Tetrachloride	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Benzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,2-Dichloropropane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Carbon Disulfide	ND	ug/kg	9.3		1	4.7	07/12/12	07/12/12 19:20	1011
Methylcyclohexane	ND	ug/kg	19		1	9.3	07/12/12	07/12/12 19:20	1011
Trichloroethene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Methyl Acetate	ND	ug/kg	19		1	9.3	07/12/12	07/12/12 19:20	1011
Bromodichloromethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-2 (24.75')</b>	<b>Date/Time Sampled: 07/10/2012 12:10</b>	<b>PSS Sample ID: 12071207-002</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 87</b>

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
4-Methyl-2-Pentanone	ND	ug/kg	19		1	9.3	07/12/12	07/12/12 19:20	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,1,2-Trichloroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Toluene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
2-Hexanone	ND	ug/kg	19		1	9.3	07/12/12	07/12/12 19:20	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Dibromochloromethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
tert-Butyl ethyl ether	ND	ug/kg	9.3		1	4.7	07/12/12	07/12/12 19:20	1011
tert-Amyl methyl ether	ND	ug/kg	37		1	19	07/12/12	07/12/12 19:20	1011
Diisopropyl ether	ND	ug/kg	9.3		1	4.7	07/12/12	07/12/12 19:20	1011
tert-Amyl ethyl ether	ND	ug/kg	37		1	19	07/12/12	07/12/12 19:20	1011
tert-Amyl alcohol	ND	ug/kg	37		1	19	07/12/12	07/12/12 19:20	1011
Bromoform	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Tetrachloroethene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Chlorobenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Ethylbenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
m,p-Xylenes	ND	ug/kg	9.3		1	4.7	07/12/12	07/12/12 19:20	1011
Styrene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
o-Xylene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Isopropylbenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,3-Dichlorobenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,4-Dichlorobenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,2-Dichlorobenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	37		1	19	07/12/12	07/12/12 19:20	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
Naphthalene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.7		1	2.3	07/12/12	07/12/12 19:20	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

**Chesapeake GeoSciences, Inc., Columbia, MD**

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-Dupe</b>	<b>Date/Time Sampled: 07/10/2012 00:00</b>	<b>PSS Sample ID: 12071207-003</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 86</b>

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW-846 8015 C

Preparation Method: 3550

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.6		1	4.6	07/19/12	07/20/12 10:42	1040

Total Petroleum Hydrocarbons-GRO

Analytical Method: SW-846 8015C

Preparation Method: 5030

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	120		1	58	07/13/12	07/14/12 02:00	1035

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-Dupe</b>	<b>Date/Time Sampled: 07/10/2012 00:00</b>	<b>PSS Sample ID: 12071207-003</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 86</b>

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Chloromethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Vinyl Chloride	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
tert-Butyl alcohol	ND	ug/kg	35		1	18	07/12/12	07/12/12 19:49	1011
Bromomethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Chloroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Acetone	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
Cyclohexane	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
Trichlorofluoromethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,1-Dichloroethene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Methylene Chloride	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Methyl-t-butyl ether	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,1-Dichloroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
2-Butanone (MEK)	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Bromochloromethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Chloroform	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,1,1-Trichloroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,2-Dichloroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Carbon Tetrachloride	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Benzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,2-Dichloropropane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Carbon Disulfide	ND	ug/kg	8.8		1	4.4	07/12/12	07/12/12 19:49	1011
Methylcyclohexane	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
Trichloroethene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Methyl Acetate	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
Bromodichloromethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-Dupe</b>	<b>Date/Time Sampled: 07/10/2012 00:00</b>	<b>PSS Sample ID: 12071207-003</b>
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	<b>% Solids: 86</b>

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
4-Methyl-2-Pentanone	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,1,2-Trichloroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Toluene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
2-Hexanone	ND	ug/kg	18		1	8.8	07/12/12	07/12/12 19:49	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Dibromochloromethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
tert-Butyl ethyl ether	ND	ug/kg	8.8		1	4.4	07/12/12	07/12/12 19:49	1011
tert-Amyl methyl ether	ND	ug/kg	35		1	18	07/12/12	07/12/12 19:49	1011
Diisopropyl ether	ND	ug/kg	8.8		1	4.4	07/12/12	07/12/12 19:49	1011
tert-Amyl ethyl ether	ND	ug/kg	35		1	18	07/12/12	07/12/12 19:49	1011
tert-Amyl alcohol	ND	ug/kg	35		1	18	07/12/12	07/12/12 19:49	1011
Bromoform	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Tetrachloroethene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Chlorobenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Ethylbenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
m,p-Xylenes	ND	ug/kg	8.8		1	4.4	07/12/12	07/12/12 19:49	1011
Styrene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
o-Xylene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Isopropylbenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,3-Dichlorobenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,4-Dichlorobenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,2-Dichlorobenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	35		1	18	07/12/12	07/12/12 19:49	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
Naphthalene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.4		1	2.2	07/12/12	07/12/12 19:49	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

**Chesapeake GeoSciences, Inc., Columbia, MD**

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-1 (GW)</b>	<b>Date/Time Sampled: 07/10/2012 13:55</b>	<b>PSS Sample ID: 12071207-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW-846 8015 C

Preparation Method: 3510C

	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>LOD</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	<b>0.16</b>	mg/L	0.14		1	0.057	07/13/12	07/13/12 17:13	1040

Total Petroleum Hydrocarbons-GRO

Analytical Method: SW-846 8015 C

Preparation Method: 5030B

	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>LOD</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	50	07/12/12	07/12/12 15:40	1035

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-1 (GW)</b>	<b>Date/Time Sampled: 07/10/2012 13:55</b>	<b>PSS Sample ID: 12071207-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Chloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Vinyl Chloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
tert-Butyl alcohol	ND	ug/L	20		1	10	07/13/12	07/13/12 17:47	1011
Bromomethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Chloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Acetone	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
Cyclohexane	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
Trichlorofluoromethane	ND	ug/L	5		1	2.5	07/13/12	07/13/12 17:47	1011
1,1-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Methylene Chloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
trans-1,2-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Methyl-t-butyl ether	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,1-Dichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
2-Butanone (MEK)	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
cis-1,2-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Bromochloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Chloroform	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,1,1-Trichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,2-Dichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Carbon Tetrachloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Benzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,2-Dichloropropane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Methyl Acetate	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
Methylcyclohexane	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
Trichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Carbon Disulfide	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
Bromodichloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
cis-1,3-Dichloropropene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-1 (GW)</b>	<b>Date/Time Sampled: 07/10/2012 13:55</b>	<b>PSS Sample ID: 12071207-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
4-Methyl-2-Pentanone	ND	ug/L	5		1	2.5	07/13/12	07/13/12 17:47	1011
trans-1,3-Dichloropropene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,1,2-Trichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Toluene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
2-Hexanone	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Dibromochloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
tert-Amyl ethyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
tert-Butyl ethyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
Diisopropyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
tert-Amyl methyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
tert-Amyl alcohol	ND	ug/L	20		1	10	07/13/12	07/13/12 17:47	1011
Bromoform	ND	ug/L	5		1	2.5	07/13/12	07/13/12 17:47	1011
Tetrachloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Chlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Ethylbenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
m,p-Xylenes	ND	ug/L	2		1	1	07/13/12	07/13/12 17:47	1011
Styrene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
o-Xylene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Isopropylbenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,3-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,4-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,2-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	5	07/13/12	07/13/12 17:47	1011
1,2,4-Trichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
Naphthalene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011
1,2,3-Trichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 17:47	1011



OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

**Chesapeake GeoSciences, Inc., Columbia, MD**

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-2 (GW)</b>	<b>Date/Time Sampled: 07/10/2012 12:40</b>	<b>PSS Sample ID: 12071207-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

Total Petroleum Hydrocarbons - DRO      Analytical Method: SW-846 8015 C      Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	0.17	mg/L	0.12		1	0.049	07/13/12	07/13/12 18:01	1040

Total Petroleum Hydrocarbons-GRO      Analytical Method: SW-846 8015 C      Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	50	07/12/12	07/12/12 15:14	1035

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-2 (GW)</b>	<b>Date/Time Sampled: 07/10/2012 12:40</b>	<b>PSS Sample ID: 12071207-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Chloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Vinyl Chloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
tert-Butyl alcohol	ND	ug/L	20		1	10	07/13/12	07/13/12 18:16	1011
Bromomethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Chloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Acetone	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
Cyclohexane	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
Trichlorofluoromethane	ND	ug/L	5		1	2.5	07/13/12	07/13/12 18:16	1011
1,1-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Methylene Chloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
trans-1,2-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Methyl-t-butyl ether	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,1-Dichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
2-Butanone (MEK)	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
cis-1,2-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Bromochloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Chloroform	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,1,1-Trichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,2-Dichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Carbon Tetrachloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Benzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,2-Dichloropropane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Methyl Acetate	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
Methylcyclohexane	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
Trichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Carbon Disulfide	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
Bromodichloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
cis-1,3-Dichloropropene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-2 (GW)</b>	<b>Date/Time Sampled: 07/10/2012 12:40</b>	<b>PSS Sample ID: 12071207-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
4-Methyl-2-Pentanone	ND	ug/L	5		1	2.5	07/13/12	07/13/12 18:16	1011
trans-1,3-Dichloropropene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,1,2-Trichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Toluene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
2-Hexanone	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Dibromochloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
tert-Amyl ethyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
tert-Butyl ethyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
Diisopropyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
tert-Amyl methyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
tert-Amyl alcohol	ND	ug/L	20		1	10	07/13/12	07/13/12 18:16	1011
Bromoform	ND	ug/L	5		1	2.5	07/13/12	07/13/12 18:16	1011
Tetrachloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Chlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Ethylbenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
m,p-Xylenes	ND	ug/L	2		1	1	07/13/12	07/13/12 18:16	1011
Styrene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
o-Xylene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Isopropylbenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,3-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,4-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,2-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	5	07/13/12	07/13/12 18:16	1011
1,2,4-Trichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
Naphthalene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011
1,2,3-Trichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:16	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

**Chesapeake GeoSciences, Inc., Columbia, MD**

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-Dupe (GW)</b>	<b>Date/Time Sampled: 07/10/2012 00:00</b>	<b>PSS Sample ID: 12071207-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

Total Petroleum Hydrocarbons - DRO      Analytical Method: SW-846 8015 C      Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	0.16	mg/L	0.13		1	0.05	07/13/12	07/13/12 18:01	1040

Total Petroleum Hydrocarbons-GRO      Analytical Method: SW-846 8015 C      Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	50	07/12/12	07/12/12 16:05	1035

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-Dupe (GW)</b>	<b>Date/Time Sampled: 07/10/2012 00:00</b>	<b>PSS Sample ID: 12071207-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Chloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Vinyl Chloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
tert-Butyl alcohol	ND	ug/L	20		1	10	07/13/12	07/13/12 18:45	1011
Bromomethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Chloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Acetone	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
Cyclohexane	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
Trichlorofluoromethane	ND	ug/L	5		1	2.5	07/13/12	07/13/12 18:45	1011
1,1-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Methylene Chloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
trans-1,2-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Methyl-t-butyl ether	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,1-Dichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
2-Butanone (MEK)	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
cis-1,2-Dichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Bromochloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Chloroform	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,1,1-Trichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,2-Dichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Carbon Tetrachloride	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Benzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,2-Dichloropropane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Methyl Acetate	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
Methylcyclohexane	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
Trichloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Carbon Disulfide	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
Bromodichloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
cis-1,3-Dichloropropene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12071207

Chesapeake GeoSciences, Inc., Columbia, MD

July 31, 2012

Project Name: Midway

Project ID: CG-09-0491.09

<b>Sample ID: SB-Dupe (GW)</b>	<b>Date/Time Sampled: 07/10/2012 00:00</b>	<b>PSS Sample ID: 12071207-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 07/12/2012 11:50</b>	

TCL Volatiles plus Oxygenates

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	LOD	Prepared	Analyzed	Analyst
4-Methyl-2-Pentanone	ND	ug/L	5		1	2.5	07/13/12	07/13/12 18:45	1011
trans-1,3-Dichloropropene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,1,2-Trichloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Toluene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
2-Hexanone	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Dibromochloromethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
tert-Amyl ethyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
tert-Butyl ethyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
Diisopropyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
tert-Amyl methyl ether	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
tert-Amyl alcohol	ND	ug/L	20		1	10	07/13/12	07/13/12 18:45	1011
Bromoform	ND	ug/L	5		1	2.5	07/13/12	07/13/12 18:45	1011
Tetrachloroethene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Chlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Ethylbenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
m,p-Xylenes	ND	ug/L	2		1	1	07/13/12	07/13/12 18:45	1011
Styrene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
o-Xylene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Isopropylbenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,3-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,4-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,2-Dichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	5	07/13/12	07/13/12 18:45	1011
1,2,4-Trichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
Naphthalene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011
1,2,3-Trichlorobenzene	ND	ug/L	1		1	0.5	07/13/12	07/13/12 18:45	1011





# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12071207	<b>Received By</b>	Lynn Moran
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	07/12/2012 11:50:00 AM
<b>Project Name</b>	Midway	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-09-0491.09	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	08/16/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 6

Total No. of Containers Received 36

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### 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 which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 07/12/2012

Rachel Davis

PM Review and Approval:

Date: 07/13/2012

Lynn Moran





Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

---

---

### Analysis Detects Report

Client Name: Chesapeake Geosciences, Inc.  
Client Site ID: Midway (9-0037BA)  
Submitted To: Nancy Love

Date Issued: 10/17/2012

---

Laboratory Sample ID: **12100136-001**      Client Sample ID **SB-3 / (9.75')**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
Percent Moisture	SM18/2540G	13.3		0.1	0.1	1	%

Note that this report is not the "Certificate of Analysis". This report only lists the target analytes that displayed concentrations that exceeded the detection limit specified for that analyte. For a complete listing of all analytes requested and the results of the analysis see the "Certificate of Analysis".



2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

## Certificate of Analysis

### Final Report

### Laboratory Order ID 12100136

Client Name: Chesapeake Geosciences, Inc. Date Issued: October 17, 2012  
5405 Twin Knolls Rd.  
Suite 1  
Columbia, Maryland 21045

Submitted To: Nancy Love Project Number CG-09-0491.09  
Client Site I.D.: Midway (9-0037BA) Purchase Order NA

---

Laboratory Sample ID	Sample ID	Sample Date	Receive Date
12100136-001	SB-3 / (9.75')	October 01, 2012	October 03, 2012

On October 03, 2012, one soil sample was received via UPS for analysis in accordance with the attached Chain-Of-Custody. The sample was received with sample containers intact by Georgianna Wenrich (AWS). Any deviations, discrepancies or irregularities observed in sample condition, including holding times, temperature, containers or preservatives have been notated on the chain-of-custody.

The sample was prepared and analyzed in accordance with SW-846 methodology.

Results have been calculated on a dry weight basis.

Ted Soyars  
Laboratory Manager



Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 10/17/2012

**Client Sample ID** SB-3 / (9.75')      **Laboratory Sample ID** 12100136-001      **Sample Date** Date/Time Sampled: 10/01/12 10:20

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Percent Moisture	NA	SM18/2540G	10/16/12 16:25	10/16/12 16:25	13.3		0.1	0.1	1	%	KMW
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 15:33	10/12/12 15:33	BLOD		5.8	5.8	50	mg/kg	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 10/17/2012

**Client Sample ID** SB-3 / (9.75')      **Laboratory Sample ID** 12100136-001      **Sample Date** Date/Time Sampled: 10/01/12 10:20

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
2-Butanone (MEK)	78-93-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		231	231	1	ug/kg	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		231	231	1	ug/kg	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		231	231	1	ug/kg	MKD
Acetone	67-64-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		231	231	1	ug/kg	MKD
Benzene	71-43-2	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Bromobenzene	108-86-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Bromochloromethane	74-97-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Bromodichloromethane	75-27-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Bromoform	75-25-2	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		231	231	1	ug/kg	MKD
Bromomethane	74-83-9	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Carbon disulfide	75-15-0	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Chlorobenzene	108-90-7	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Chloroethane	75-00-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Chloroform	67-66-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Chloromethane	74-87-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Dibromochloromethane	124-48-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Dibromomethane	74-95-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 10/17/2012

**Client Sample ID:** SB-3 / (9.75')      **Laboratory Sample ID:** 12100136-001      **Sample Date:** Date/Time Sampled: 10/01/12 10:20

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Ethylbenzene	100-41-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Iodomethane	74-88-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Isopropylbenzene	98-82-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Methylene chloride	75-09-2	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
MTBE	1634-04-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Naphthalene	91-20-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
n-Butylbenzene	104-51-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
n-Propylbenzene	103-65-1	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
o-Xylene	95-47-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Styrene	100-42-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
TAME	994-05-8	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
TBA	75-65-0	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	288	1	ug/kg	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Toluene	108-88-3	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Trichloroethylene	79-01-6	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Vinyl acetate	108-05-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 10/17/2012

**Client Sample ID:** SB-3 / (9.75')      **Laboratory Sample ID:** 12100136-001      **Sample Date:** Date/Time Sampled: 10/01/12 10:20

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Vinyl chloride	75-01-4	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
Xylenes, Total	1330-20-7	SW8260B	10/11/12 16:19	10/11/12 16:19	BLOD		57.7	57.7	1	ug/kg	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/10/12 14:30	10/11/12 16:46	BLOD		11.5	11.5	1	mg/kg	JHV

**Summary of Analytical QC Batches**

QC Batch ID	Method	Sample List	
QC121011019	SW8015C	12100136-001	
QC121012006	SW8260B	12100136-001	
QC121015006	SW8015C	12100136-001	
QC ID	Parameter	Qualifier	Comments
MS	TPH-Volatiles (GRO)	M	Matrix interference
MSD	TPH-Volatiles (GRO)	M	Matrix interference
QC121017013	SM18/2540G	12100136-001	

**Qualifier Definitions**

Qualifier	Description
M	Matrix spike recovery is outside established acceptance limits.





Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

---

---

### Certificate of Analysis

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 10/17/2012

---

#### **End Notes:**

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the client.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements for holding times. These analyses should be performed in the field. The results of field analyses performed by the client are not included in the laboratory's fields of certification. All analyses performed in the laboratory are done so at the client's request and are not included in the laboratory's fields of certification unless audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced, except in full, without the expressed and written approval of an authorized representative of the laboratory.



### Analysis Certifications Report

Client Name: Chesapeake Geosciences, Inc.  
Client Site ID: Midway (9-0037BA)  
Submitted To: Nancy Love

Date Issued: 10/17/2012

Order ID: 12100136

Parameter	Method	NC	VA-SO	WVA
1,1,1,2-Tetrachloroethane	SW8260B	X	X	X
1,1,1-Trichloroethane	SW8260B	X	X	X
1,1,2,2-Tetrachloroethane	SW8260B	X	X	X
1,1,2-Trichloroethane	SW8260B	X	X	X
1,1-Dichloroethane	SW8260B	X	X	X
1,1-Dichloroethylene	SW8260B	X	X	X
1,1-Dichloropropene	SW8260B	X	X	X
1,2,3-Trichlorobenzene	SW8260B	X	X	X
1,2,3-Trichloropropane	SW8260B	X	X	X
1,2,4-Trichlorobenzene	SW8260B	X	X	X
1,2,4-Trimethylbenzene	SW8260B	X	X	X
1,2-Dibromo-3-chloropropane (DBCP)	SW8260B	X	X	X
1,2-Dibromoethane (EDB)	SW8260B	X	X	X
1,2-Dichlorobenzene	SW8260B	X	X	X
1,2-Dichloroethane	SW8260B	X	X	X
1,2-Dichloropropane	SW8260B	X	X	X
1,3,5-Trimethylbenzene	SW8260B	X	X	X
1,3-Dichlorobenzene	SW8260B	X	X	X
1,3-Dichloropropane	SW8260B	X	X	X
1,4-Dichlorobenzene	SW8260B	X	X	X
2,2-Dichloropropane	SW8260B	X	X	X
2-Butanone (MEK)	SW8260B	X	X	X
2-Chlorotoluene	SW8260B	X	X	X
2-Hexanone (MBK)	SW8260B	X	X	X
4-Chlorotoluene	SW8260B	X	X	X
4-Methyl-2-pentanone (MIBK)	SW8260B	X	X	X
Acetone	SW8260B	X	X	X
Benzene	SW8260B	X	X	X
Bromobenzene	SW8260B	X	X	X
Bromochloromethane	SW8260B	X	X	X
Bromodichloromethane	SW8260B	X	X	X
Bromoform	SW8260B	X	X	X
Bromomethane	SW8260B	X	X	X
Carbon disulfide	SW8260B	X	X	X
Carbon tetrachloride	SW8260B	X	X	X
Chlorobenzene	SW8260B	X	X	X





**Analysis Certifications Report**

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 10/17/2012

Order ID: 12100136

Parameter	Method	NC	VA-SO	WVA
Chloroethane	SW8260B	X	X	X
Chloroform	SW8260B	X	X	X
Chloromethane	SW8260B	X	X	X
cis-1,2-Dichloroethylene	SW8260B	X	X	X
cis-1,3-Dichloropropene	SW8260B	X	X	X
Dibromochloromethane	SW8260B	X	X	X
Dibromomethane	SW8260B	X	X	X
Dichlorodifluoromethane	SW8260B	X	X	X
Di-isopropyl ether (DIPE)	SW8260B	X	X	X
Ethylbenzene	SW8260B	X	X	X
Ethyl-t-butyl ether (ETBE)	SW8260B	X		X
Iodomethane	SW8260B	X	X	X
Isopropylbenzene	SW8260B	X	X	X
m,p-Xylenes	SW8260B	X	X	X
Methylene chloride	SW8260B	X	X	X
MTBE	SW8260B	X	X	X
Naphthalene	SW8260B	X	X	X
n-Butylbenzene	SW8260B	X	X	X
n-Propylbenzene	SW8260B	X	X	X
o-Xylene	SW8260B	X	X	X
p-Isopropyltoluene	SW8260B	X	X	X
sec-Butylbenzene	SW8260B	X	X	X
Styrene	SW8260B	X	X	X
TAME	SW8260B	X		X
TBA	SW8260B	X		X
tert-Butylbenzene	SW8260B	X	X	X
Tetrachloroethylene (PCE)	SW8260B	X	X	X
Toluene	SW8260B	X	X	X
TPH-Semi-Volatiles (DRO)	SW8015C	X	X	X
TPH-Volatiles (GRO)	SW8015C	X	X	X
trans-1,2-Dichloroethylene	SW8260B	X	X	X
trans-1,3-Dichloropropene	SW8260B	X	X	X
Trichloroethylene	SW8260B	X	X	X
Trichlorofluoromethane	SW8260B	X	X	X
Vinyl acetate	SW8260B	X	X	X
Vinyl chloride	SW8260B	X	X	X



Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

---

---

### **Analysis Certifications Report**

Client Name: Chesapeake Geosciences, Inc.  
Client Site ID: Midway (9-0037BA)  
Submitted To: Nancy Love

Date Issued: 10/17/2012

---

Order ID: 12100136

Parameter	Method	NC	VA-SO	WVA
Xylenes, Total	SW8260B	X	X	X

"X" denotes that the associated parameter is certified or accredited under the program indicated in the column header.

VA-SOLIDS = VELAP Solids: Virginia DGS Division of Consolidated Laboratory Services(460021); VA-SOLIDS = VELAP Solids: North Carolina(495); WVA: West Virginia Department of Environmental Protection(350); NC: North Carolina(495)

Company Name: Chesapeake GeoSciences, Inc.		Project Manager: Nancy Love		Parameters										<b>CHAIN-OF-CUSTODY RECORD</b>  Air, Water & Soil Laboratories, Inc. 2109A North Hamilton Street Richmond, VA 23230 (804) 358-8295					
Project Name: Midway (9-0037BA)		Project ID: CG-09-0491.09																	
Sampler(s): Lara Bennett		P.O. Number: CG090491NL																	
Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs via EPA 8260	TPH-GRO EPA 8015	TPH-DRO EPA 8015									Preservative/Remarks	Lab ID
SB-3 (9.75')	10/1/12	10:20		X		6	X	X	X									TerraCore Sampler Kit / (2) 4 oz Jars	
Relinquished by: (Signature) <i>Lara Bennett</i>	Date/Time 10/2/12 12:00	Received by: (Signature) UPS Next Day AirSaver	Relinquished by: (Signature)	Date/Time	Received by: (Signature)														
(Printed) Lara Bennett		(Printed)	(Printed)		(Printed)														
Relinquished by: (Signature) UPS	Date/Time 10/3/12 1100	Received by Laboratory: (Signature) <i>G Wearick</i>	Date/Time	Remarks: MDE Data Deliverable Package 1/Rates RMS 2008 Rates Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2/8260 Analyses. E-mail results to <a href="mailto:nlove@cgs.us.com">nlove@cgs.us.com</a>															
(Printed)		(Printed) G Wearick																	

Cooler temp 4.9°C





2109A North Hamilton Street • Richmond, Virginia 23230 • Tel : (804) 358-

CGI

12100136

Midway (9-0037BA)

DUE: 10 Days



Recd: 10/03/12

**Sample Conditions Checklist**

Opened by: (Initials)

AW

Lab ID No.:

Date Cooler Opened:

10/3/12

- |     |  | <u>YES</u>                          | <u>NO</u>                           | <u>N/A</u>                          |
|-----|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1.  | How were samples received?   |                                     |                                     |                                     |
|     | Fed Ex <input type="checkbox"/>  |                                     |                                     |                                     |
|     | UPS <input checked="" type="checkbox"/>  |                                     |                                     |                                     |
|     | Courier <input type="checkbox"/>   |                                     |                                     |                                     |
|     | Walk In <input type="checkbox"/>   |                                     |                                     |                                     |
| 2.  | Were custody seals used?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 3.  | If yes, are custody seals unbroken and intact at the date and time of arrival?                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 4.  | Are the custody papers filled out completely and correctly?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5.  | Do all bottle labels agree with custody papers?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6.  | Are the samples received on ice?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7.  | Is the temperature blank or representative sample within acceptable limits?<br>(above freezing to 6°C) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8.  | Are all samples within holding time for requested laboratory tests?                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 9.  | Is a sufficient amount of sample provided to perform the tests indicated?                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 10. | Are all samples in proper containers for the analyses requested?                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 11. | Are all samples appropriately preserved for the analyses requested?                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 12. | Are all volatile organic containers free of headspace?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

COMMENTS

---

---

---

---

---

---

---

---



### Analysis Detects Report

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

Laboratory Sample ID: **12100130-001** Client Sample ID **SB-4 / (31')**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
Percent Moisture	SM18/2540G	7.0		0.1	0.1	1	%

Laboratory Sample ID: **12100130-002** Client Sample ID **SB-5 / (35.25')**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
Percent Moisture	SM18/2540G	14.7		0.1	0.1	1	%
TPH-Volatiles (GRO)	SW8015C	6520		5.9	5.9	200	mg/kg
1,2,4-Trimethylbenzene	SW8260B	264000		58.6	58.6	1000	ug/kg
1,3,5-Trimethylbenzene	SW8260B	90800		58.6	58.6	500	ug/kg
Benzene	SW8260B	8030		58.6	58.6	50	ug/kg
Ethylbenzene	SW8260B	152000		58.6	58.6	500	ug/kg
Isopropylbenzene	SW8260B	19300		58.6	58.6	50	ug/kg
m,p-Xylenes	SW8260B	547000		58.6	58.6	1000	ug/kg
Naphthalene	SW8260B	34900		58.6	58.6	100	ug/kg
n-Propylbenzene	SW8260B	71700		58.6	58.6	500	ug/kg
o-Xylene	SW8260B	218000		58.6	58.6	1000	ug/kg
p-Isopropyltoluene	SW8260B	3240		58.6	58.6	50	ug/kg
sec-Butylbenzene	SW8260B	5070		58.6	58.6	50	ug/kg
Styrene	SW8260B	4850		58.6	58.6	50	ug/kg
tert-Butylbenzene	SW8260B	205		58.6	58.6	50	ug/kg
Toluene	SW8260B	289000		58.6	58.6	1000	ug/kg
Xylenes, Total	SW8260B	765000		58.6	58.6	1	ug/kg
TPH-Semi-Volatiles (DRO)	SW8015C	1270		11.7	11.7	10	mg/kg

Laboratory Sample ID: **12100130-003** Client Sample ID **SB-6 / (10.75')**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
Percent Moisture	SM18/2540G	14.2		0.1	0.1	1	%
Acetone	SW8260B	399		233	233	50	ug/kg

Laboratory Sample ID: **12100130-004** Client Sample ID **SB-Dupe**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
Percent Moisture	SM18/2540G	14.1		0.1	0.1	1	%
TPH-Volatiles (GRO)	SW8015C	6480		5.8	5.8	200	mg/kg
1,2,4-Trimethylbenzene	SW8260B	246000		58.2	58.2	1000	ug/kg
1,3,5-Trimethylbenzene	SW8260B	83900		58.2	58.2	500	ug/kg
Benzene	SW8260B	7340		58.2	58.2	50	ug/kg
Ethylbenzene	SW8260B	140000		58.2	58.2	500	ug/kg
Iodomethane	SW8260B	62.4		58.2	58.2	50	ug/kg
Isopropylbenzene	SW8260B	18700		58.2	58.2	50	ug/kg



### Analysis Detects Report

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

m,p-Xylenes	SW8260B	501000	58.2	58.2	1000	ug/kg
Naphthalene	SW8260B	30000	58.2	58.2	100	ug/kg
n-Propylbenzene	SW8260B	66600	58.2	58.2	500	ug/kg
o-Xylene	SW8260B	193000	58.2	58.2	500	ug/kg
p-Isopropyltoluene	SW8260B	3250	58.2	58.2	50	ug/kg
sec-Butylbenzene	SW8260B	5060	58.2	58.2	50	ug/kg
Styrene	SW8260B	4200	58.2	58.2	50	ug/kg
tert-Butylbenzene	SW8260B	204	58.2	58.2	50	ug/kg
Toluene	SW8260B	272000	58.2	58.2	1000	ug/kg
Xylenes, Total	SW8260B	693000	58.2	58.2	1	ug/kg
TPH-Semi-Volatiles (DRO)	SW8015C	2240	11.6	11.6	10	mg/kg

Laboratory Sample ID: **12100130-005**

Client Sample ID **SB-4 (GW)**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
1,2,4-Trimethylbenzene	SW8260B	12.3		0.5	1.0	1	ug/L
1,3,5-Trimethylbenzene	SW8260B	3.5		0.2	1.0	1	ug/L
2-Butanone (MEK)	SW8260B	6.2	<b>J</b>	0.6	10.0	1	ug/L
Acetone	SW8260B	51.3		7.0	10.0	1	ug/L
Benzene	SW8260B	22.6		0.3	1.0	1	ug/L
Ethylbenzene	SW8260B	14.3		0.2	1.0	1	ug/L
Isopropylbenzene	SW8260B	1.0	<b>J1</b>	0.2	1.0	1	ug/L
m,p-Xylenes	SW8260B	50.7		0.5	2.0	1	ug/L
MTBE	SW8260B	4.6		0.4	1.0	1	ug/L
Naphthalene	SW8260B	3.2		0.5	1.0	1	ug/L
n-Propylbenzene	SW8260B	1.7		0.2	1.0	1	ug/L
o-Xylene	SW8260B	27.6		0.5	1.0	1	ug/L
Styrene	SW8260B	0.6	<b>J</b>	0.2	1.0	1	ug/L
TAME	SW8260B	1.7	<b>J</b>	0.3	5.0	1	ug/L
TBA	SW8260B	22.6	<b>J</b>	2.6	100	1	ug/L
Toluene	SW8260B	39.7		0.4	1.0	1	ug/L
Xylenes, Total	SW8260B	78.4		0.5	3.0	1	ug/L

Laboratory Sample ID: **12100130-006**

Client Sample ID **SB-5 (GW)**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
TPH-Volatiles (GRO)	SW8015C	40.4		0.5	0.5	50	mg/L
1,1-Dichloropropene	SW8260B	0.3	<b>J</b>	0.2	1.0	5	ug/L
1,2,4-Trichlorobenzene	SW8260B	0.3	<b>J</b>	0.2	1.0	5	ug/L
1,2,4-Trimethylbenzene	SW8260B	1670		0.5	1.0	5	ug/L
1,2-Dibromoethane (EDB)	SW8260B	31.0		0.3	1.0	5	ug/L
1,3,5-Trimethylbenzene	SW8260B	487		0.2	1.0	5	ug/L
1,3-Dichlorobenzene	SW8260B	0.2	<b>J</b>	0.2	1.0	5	ug/L
1,3-Dichloropropane	SW8260B	0.3	<b>J</b>	0.2	1.0	5	ug/L



### Analysis Detects Report

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

2-Butanone (MEK)	SW8260B	256		0.6	10.0	5	ug/L
Benzene	SW8260B	2860		0.3	1.0	20	ug/L
Bromomethane	SW8260B	0.4	J	0.3	1.0	5	ug/L
Chloroethane	SW8260B	2.9		0.4	1.0	5	ug/L
Di-isopropyl ether (DIPE)	SW8260B	0.5	J	0.3	5.0	5	ug/L
Ethylbenzene	SW8260B	2770		0.2	1.0	20	ug/L
Isopropylbenzene	SW8260B	124		0.2	1.0	5	ug/L
m,p-Xylenes	SW8260B	9070		0.5	2.0	20	ug/L
Methylene chloride	SW8260B	4.7		1.0	4.0	5	ug/L
MTBE	SW8260B	5.8		0.4	1.0	5	ug/L
Naphthalene	SW8260B	508		0.5	1.0	5	ug/L
n-Propylbenzene	SW8260B	328		0.2	1.0	5	ug/L
o-Xylene	SW8260B	4270		0.5	1.0	20	ug/L
p-Isopropyltoluene	SW8260B	11.1		0.2	1.0	5	ug/L
sec-Butylbenzene	SW8260B	17.1		0.4	1.0	5	ug/L
Styrene	SW8260B	117		0.2	1.0	5	ug/L
Toluene	SW8260B	19200		0.4	1.0	100	ug/L
Xylenes, Total	SW8260B	13300		0.5	3.0	1	ug/L
TPH-Semi-Volatiles (DRO)	SW8015C	30.1		0.3	0.5	10	mg/L

Laboratory Sample ID: **12100130-007**

Client Sample ID **SB-6 (GW)**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
MTBE	SW8260B	2.6		0.4	1.0	1	ug/L
Naphthalene	SW8260B	0.7	J	0.5	1.0	1	ug/L
Xylenes, Total	SW8260B	0.6	J	0.5	3.0	1	ug/L

Laboratory Sample ID: **12100130-008**

Client Sample ID **SB-Dupe (GW)**

Parameter	Reference Method	Sample Results	Qual	LOD	LOQ	Dil. Factor	Units
TPH-Volatiles (GRO)	SW8015C	40.4		0.5	0.5	50	mg/L
1,2,4-Trimethylbenzene	SW8260B	1520		0.5	1.0	20	ug/L
1,2-Dibromoethane (EDB)	SW8260B	27.2		0.3	1.0	1	ug/L
1,2-Dichloroethane	SW8260B	1.1		0.9	1.0	1	ug/L
1,3,5-Trimethylbenzene	SW8260B	416		0.2	1.0	20	ug/L
2-Butanone (MEK)	SW8260B	138		0.6	10.0	1	ug/L
Benzene	SW8260B	2120		0.3	1.0	20	ug/L
Chloroethane	SW8260B	0.5	J	0.4	1.0	1	ug/L
Chloromethane	SW8260B	1.0		0.5	1.0	1	ug/L
Di-isopropyl ether (DIPE)	SW8260B	0.7	J	0.3	5.0	1	ug/L
Ethylbenzene	SW8260B	2100		0.2	1.0	20	ug/L
Isopropylbenzene	SW8260B	132		0.2	1.0	1	ug/L
m,p-Xylenes	SW8260B	6970		0.5	2.0	20	ug/L
MTBE	SW8260B	2.6		0.4	1.0	1	ug/L





Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

---

---

### Analysis Detects Report

Client Name: Chesapeake Geosciences, Inc.  
Client Site ID: Midway (9-0037BA)  
Submitted To: Nancy Love

Date Issued: 11/13/2012

---

Naphthalene	SW8260B	394	0.5	1.0	1	ug/L
n-Propylbenzene	SW8260B	344	0.2	1.0	1	ug/L
o-Xylene	SW8260B	3400	0.5	1.0	20	ug/L
p-Isopropyltoluene	SW8260B	18.3	0.2	1.0	1	ug/L
sec-Butylbenzene	SW8260B	28.3	0.4	1.0	1	ug/L
Styrene	SW8260B	89.9	0.2	1.0	1	ug/L
Toluene	SW8260B	19000	0.4	1.0	100	ug/L
Xylenes, Total	SW8260B	10400	0.5	3.0	1	ug/L
TPH-Semi-Volatiles (DRO)	SW8015C	7.6	0.3	0.5	1	mg/L

---

Note that this report is not the "Certificate of Analysis". This report only lists the target analytes that displayed concentrations that exceeded the detection limit specified for that analyte. For a complete listing of all analytes requested and the results of the analysis see the "Certificate of Analysis".



2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

## Certificate of Analysis

### Final Report

### Laboratory Order ID 12100130

Client Name: Chesapeake Geosciences, Inc. 5405 Twin Knolls Rd. Suite 1 Columbia, Maryland 21045	Date Issued: November 13, 2012
Submitted To: Nancy Love	Project Number CG-09-0491.12
Client Site I.D.: Midway (9-0037BA)	Purchase Order CG090491NL

Laboratory Sample ID	Sample ID	Sample Date	Receive Date
12100130-001	SB-4 / (31')	October 01, 2012	October 03, 2012
12100130-002	SB-5 / (35.25')	October 01, 2012	October 03, 2012
12100130-003	SB-6 / (10.75')	October 01, 2012	October 03, 2012
12100130-004	SB-Dupe	October 01, 2012	October 03, 2012
12100130-005	SB-4 (GW)	October 01, 2012	October 03, 2012
12100130-006	SB-5 (GW)	October 01, 2012	October 03, 2012
12100130-007	SB-6 (GW)	October 01, 2012	October 03, 2012
12100130-008	SB-Dupe (GW)	October 01, 2012	October 03, 2012

On October 03, 2012, eight soil samples were received via UPS for analysis in accordance with the attached Chain-Of-Custody. The samples were received with sample containers intact by Georgianna Wenrich (AWS). Any deviations, discrepancies or irregularities observed in sample condition, including holding times, temperature, containers or preservatives have been notated on the chain-of-custody.

The samples were prepared and analyzed in accordance with SW-846 methodology.

Results have been calculated on a dry weight basis.

The Certificate of Analysis is being re-issued on November 03, 2012 to include J qualifiers.





2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

## Certificate of Analysis

*Final Report*

**Laboratory Order ID 12100130**

Client Name:	Chesapeake Geosciences, Inc. 5405 Twin Knolls Rd. Suite 1 Columbia, Maryland 21045	Date Issued:	November 13, 2012
Submitted To:	Nancy Love	Project Number	CG-09-0491.12
Client Site I.D.:	Midway (9-0037BA)	Purchase Order	CG090491NL

---

Ted Soyars  
Laboratory Manager



Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-4 / (31')      **Laboratory Sample ID** 12100130-001      **Sample Date** Date/Time Sampled: 10/01/12 12:40

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Percent Moisture	NA	SM18/2540G	10/16/12 16:25	10/16/12 16:25	7.0		0.1	0.1	1	%	KMW
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 13:33	10/12/12 13:33	BLOD		5.4	5.4	50	mg/kg	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-4 / (31')      **Laboratory Sample ID** 12100130-001      **Sample Date** Date/Time Sampled: 10/01/12 12:40

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
2-Butanone (MEK)	78-93-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		215	215	50	ug/kg	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		215	215	50	ug/kg	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		215	215	50	ug/kg	MKD
Acetone	67-64-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		215	215	50	ug/kg	MKD
Benzene	71-43-2	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Bromobenzene	108-86-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Bromochloromethane	74-97-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Bromodichloromethane	75-27-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Bromoform	75-25-2	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		215	215	50	ug/kg	MKD
Bromomethane	74-83-9	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Carbon disulfide	75-15-0	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Chlorobenzene	108-90-7	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Chloroethane	75-00-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Chloroform	67-66-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Chloromethane	74-87-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Dibromochloromethane	124-48-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Dibromomethane	74-95-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

### Certificate of Analysis

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID:** SB-4 / (31')      **Laboratory Sample ID:** 12100130-001      **Sample Date:** Date/Time Sampled: 10/01/12 12:40

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Ethylbenzene	100-41-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Iodomethane	74-88-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Isopropylbenzene	98-82-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Methylene chloride	75-09-2	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
MTBE	1634-04-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Naphthalene	91-20-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
n-Butylbenzene	104-51-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
n-Propylbenzene	103-65-1	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
o-Xylene	95-47-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Styrene	100-42-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
TAME	994-05-8	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
TBA	75-65-0	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	269	50	ug/kg	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Toluene	108-88-3	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Trichloroethylene	79-01-6	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Vinyl acetate	108-05-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-4 / (31') **Laboratory Sample ID** 12100130-001 **Sample Date** Date/Time Sampled: 10/01/12 12:40

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Vinyl chloride	75-01-4	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	50	ug/kg	MKD
Xylenes, Total	1330-20-7	SW8260B	10/12/12 15:05	10/12/12 15:05	BLOD		53.8	53.8	1	ug/kg	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/04/12 15:00	10/05/12 18:34	BLOD		10.8	10.8	1	mg/kg	JHV

Sample Comments:

Parameter	Method	QCBatchID	Qualifier	%R (Limits)	Comments
2,5-Dibromotoluene (FID-GRO)	SW8015C	QC121015006	S	50.6 (80-120)	Matrix interference

**Client Sample ID** SB-5 / (35.25') **Laboratory Sample ID** 12100130-002 **Sample Date** Date/Time Sampled: 10/01/12 14:50

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Percent Moisture	NA	SM18/2540G	10/16/12 16:25	10/16/12 16:25	14.7		0.1	0.1	1	%	KMW
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 18:20	10/12/12 18:20	6520		5.9	5.9	200	mg/kg	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/15/12 13:07	10/15/12 13:07	264000		58.6	58.6	1000	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-5 / (35.25')      **Laboratory Sample ID** 12100130-002      **Sample Date** Date/Time Sampled: 10/01/12 14:50

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/12/12 16:18	10/12/12 16:18	90800		58.6	58.6	500	ug/kg	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
2-Butanone (MEK)	78-93-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		234	234	50	ug/kg	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		234	234	50	ug/kg	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		234	234	50	ug/kg	MKD
Acetone	67-64-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		234	234	50	ug/kg	MKD
Benzene	71-43-2	SW8260B	10/12/12 17:53	10/12/12 17:53	8030		58.6	58.6	50	ug/kg	MKD
Bromobenzene	108-86-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Bromochloromethane	74-97-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Bromodichloromethane	75-27-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Bromoform	75-25-2	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		234	234	50	ug/kg	MKD
Bromomethane	74-83-9	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Carbon disulfide	75-15-0	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD







Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-5 / (35.25')      **Laboratory Sample ID** 12100130-002      **Sample Date** Date/Time Sampled: 10/01/12 14:50

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Carbon tetrachloride	56-23-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Chlorobenzene	108-90-7	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Chloroethane	75-00-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Chloroform	67-66-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Chloromethane	74-87-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Dibromochloromethane	124-48-1	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Dibromomethane	74-95-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Ethylbenzene	100-41-4	SW8260B	10/12/12 16:18	10/12/12 16:18	152000		58.6	58.6	500	ug/kg	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Iodomethane	74-88-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Isopropylbenzene	98-82-8	SW8260B	10/12/12 17:53	10/12/12 17:53	19300		58.6	58.6	50	ug/kg	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/15/12 13:07	10/15/12 13:07	547000		58.6	58.6	1000	ug/kg	MKD
Methylene chloride	75-09-2	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
MTBE	1634-04-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Naphthalene	91-20-3	SW8260B	10/12/12 17:06	10/12/12 17:06	34900		58.6	58.6	100	ug/kg	MKD
n-Butylbenzene	104-51-8	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
n-Propylbenzene	103-65-1	SW8260B	10/12/12 16:18	10/12/12 16:18	71700		58.6	58.6	500	ug/kg	MKD
o-Xylene	95-47-6	SW8260B	10/15/12 13:07	10/15/12 13:07	218000		58.6	58.6	1000	ug/kg	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/12/12 17:53	10/12/12 17:53	3240		58.6	58.6	50	ug/kg	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/12/12 17:53	10/12/12 17:53	5070		58.6	58.6	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-5 / (35.25')      **Laboratory Sample ID** 12100130-002      **Sample Date** Date/Time Sampled: 10/01/12 14:50

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Styrene	100-42-5	SW8260B	10/12/12 17:53	10/12/12 17:53	4850		58.6	58.6	50	ug/kg	MKD
TAME	994-05-8	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
TBA	75-65-0	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	293	50	ug/kg	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/12/12 17:53	10/12/12 17:53	205		58.6	58.6	50	ug/kg	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Toluene	108-88-3	SW8260B	10/15/12 13:07	10/15/12 13:07	289000		58.6	58.6	1000	ug/kg	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Trichloroethylene	79-01-6	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Vinyl acetate	108-05-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Vinyl chloride	75-01-4	SW8260B	10/12/12 17:53	10/12/12 17:53	BLOD		58.6	58.6	50	ug/kg	MKD
Xylenes, Total	1330-20-7	SW8260B	10/15/12 13:07	10/15/12 13:07	765000		58.6	58.6	1	ug/kg	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/04/12 15:00	10/08/12 15:38	1270		11.7	11.7	10	mg/kg	JHV

Sample Comments:

Parameter	Method	QCBatchID	Qualifier	%R (Limits)	Comments
4-Bromofluorobenzene	SW8260B	QC121015002	S	130 (74-121)	Matrix interference
2,5-Dibromotoluene (FID-GRO)	SW8015C	QC121015006	S	541 (80-120)	Matrix interference
4-Bromofluorobenzene	SW8260B	QC121016003	S	130 (74-121)	Matrix interference

**Client Sample ID** SB-6 / (10.75')      **Laboratory Sample ID** 12100130-003      **Sample Date** Date/Time Sampled: 10/01/12 16:25

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
-----------	-----	------------------	-----------------------	--------------------	----------------	-----------	-----	-----	----------	-------	---------





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 / (10.75')      **Laboratory Sample ID** 12100130-003      **Sample Date** Date/Time Sampled: 10/01/12 16:25

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Percent Moisture	NA	SM18/2540G	10/16/12 16:25	10/16/12 16:25	14.2		0.1	0.1	1	%	KMW
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 16:44	10/12/12 16:44	BLOD		5.8	5.8	50	mg/kg	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 / (10.75')      **Laboratory Sample ID** 12100130-003      **Sample Date** Date/Time Sampled: 10/01/12 16:25

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
2-Butanone (MEK)	78-93-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		233	233	50	ug/kg	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		233	233	50	ug/kg	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		233	233	50	ug/kg	MKD
Acetone	67-64-1	SW8260B	10/12/12 15:54	10/12/12 15:54	399		233	233	50	ug/kg	MKD
Benzene	71-43-2	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Bromobenzene	108-86-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Bromochloromethane	74-97-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Bromodichloromethane	75-27-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Bromoform	75-25-2	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		233	233	50	ug/kg	MKD
Bromomethane	74-83-9	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Carbon disulfide	75-15-0	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Chlorobenzene	108-90-7	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Chloroethane	75-00-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Chloroform	67-66-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Chloromethane	74-87-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Dibromochloromethane	124-48-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Dibromomethane	74-95-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 / (10.75')      **Laboratory Sample ID** 12100130-003      **Sample Date** Date/Time Sampled: 10/01/12 16:25

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Ethylbenzene	100-41-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Iodomethane	74-88-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Isopropylbenzene	98-82-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Methylene chloride	75-09-2	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
MTBE	1634-04-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Naphthalene	91-20-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
n-Butylbenzene	104-51-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
n-Propylbenzene	103-65-1	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
o-Xylene	95-47-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Styrene	100-42-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
TAME	994-05-8	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
TBA	75-65-0	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	291	50	ug/kg	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Toluene	108-88-3	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Trichloroethylene	79-01-6	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Vinyl acetate	108-05-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 / (10.75')      **Laboratory Sample ID** 12100130-003      **Sample Date** Date/Time Sampled: 10/01/12 16:25

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Vinyl chloride	75-01-4	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	50	ug/kg	MKD
Xylenes, Total	1330-20-7	SW8260B	10/12/12 15:54	10/12/12 15:54	BLOD		58.2	58.2	1	ug/kg	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/04/12 15:00	10/05/12 19:28	BLOD		11.6	11.6	1	mg/kg	JHV

Sample Comments:

Parameter	Method	QCBatchID	Qualifier	%R (Limits)	Comments
Toluene-d8	SW8260B	QC121015002	S	118 (81-117)	Matrix interference

**Client Sample ID** SB-Dupe      **Laboratory Sample ID** 12100130-004      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Percent Moisture	NA	SM18/2540G	10/16/12 16:25	10/16/12 16:25	14.1		0.1	0.1	1	%	KMW
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 18:43	10/12/12 18:43	6480		5.8	5.8	200	mg/kg	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/15/12 13:31	10/15/12 13:31	246000		58.2	58.2	1000	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe      **Laboratory Sample ID** 12100130-004      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/12/12 16:42	10/12/12 16:42	83900		58.2	58.2	500	ug/kg	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
2-Butanone (MEK)	78-93-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		233	233	50	ug/kg	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		233	233	50	ug/kg	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		233	233	50	ug/kg	MKD
Acetone	67-64-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		233	233	50	ug/kg	MKD
Benzene	71-43-2	SW8260B	10/12/12 18:16	10/12/12 18:16	7340		58.2	58.2	50	ug/kg	MKD
Bromobenzene	108-86-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Bromochloromethane	74-97-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Bromodichloromethane	75-27-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Bromoform	75-25-2	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		233	233	50	ug/kg	MKD
Bromomethane	74-83-9	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Carbon disulfide	75-15-0	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe      **Laboratory Sample ID** 12100130-004      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Carbon tetrachloride	56-23-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Chlorobenzene	108-90-7	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Chloroethane	75-00-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Chloroform	67-66-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Chloromethane	74-87-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Dibromochloromethane	124-48-1	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Dibromomethane	74-95-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Ethylbenzene	100-41-4	SW8260B	10/12/12 16:42	10/12/12 16:42	140000		58.2	58.2	500	ug/kg	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Iodomethane	74-88-4	SW8260B	10/12/12 18:16	10/12/12 18:16	62.4		58.2	58.2	50	ug/kg	MKD
Isopropylbenzene	98-82-8	SW8260B	10/12/12 18:16	10/12/12 18:16	18700		58.2	58.2	50	ug/kg	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/15/12 13:31	10/15/12 13:31	501000		58.2	58.2	1000	ug/kg	MKD
Methylene chloride	75-09-2	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
MTBE	1634-04-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Naphthalene	91-20-3	SW8260B	10/12/12 17:29	10/12/12 17:29	30000		58.2	58.2	100	ug/kg	MKD
n-Butylbenzene	104-51-8	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
n-Propylbenzene	103-65-1	SW8260B	10/12/12 16:42	10/12/12 16:42	66600		58.2	58.2	500	ug/kg	MKD
o-Xylene	95-47-6	SW8260B	10/12/12 16:42	10/12/12 16:42	193000		58.2	58.2	500	ug/kg	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/12/12 18:16	10/12/12 18:16	3250		58.2	58.2	50	ug/kg	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/12/12 18:16	10/12/12 18:16	5060		58.2	58.2	50	ug/kg	MKD







Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe      **Laboratory Sample ID** 12100130-004      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Styrene	100-42-5	SW8260B	10/12/12 18:16	10/12/12 18:16	4200		58.2	58.2	50	ug/kg	MKD
TAME	994-05-8	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
TBA	75-65-0	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	291	50	ug/kg	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/12/12 18:16	10/12/12 18:16	204		58.2	58.2	50	ug/kg	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Toluene	108-88-3	SW8260B	10/15/12 13:31	10/15/12 13:31	272000		58.2	58.2	1000	ug/kg	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Trichloroethylene	79-01-6	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Vinyl acetate	108-05-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Vinyl chloride	75-01-4	SW8260B	10/12/12 18:16	10/12/12 18:16	BLOD		58.2	58.2	50	ug/kg	MKD
Xylenes, Total	1330-20-7	SW8260B	10/15/12 13:31	10/15/12 13:31	693000		58.2	58.2	1	ug/kg	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/04/12 15:00	10/08/12 16:05	2240		11.6	11.6	10	mg/kg	JHV

Sample Comments:

Parameter	Method	QCBatchID	Qualifier	%R (Limits)	Comments
2,5-Dibromotoluene (FID-GRO)	SW8015C	QC121015006	S	577 (80-120)	Matrix interference

**Client Sample ID** SB-4 (GW)      **Laboratory Sample ID** 12100130-005      **Sample Date** Date/Time Sampled: 10/01/12 13:10

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 16:21	10/12/12 16:21	BLOD		0.5	0.5	1	mg/L	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-4 (GW)      **Laboratory Sample ID** 12100130-005      **Sample Date** Date/Time Sampled: 10/01/12 13:10

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
1,1,1-Trichloroethane	71-55-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.7	1.0	1	ug/L	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.5	1.0	1	ug/L	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/05/12 14:01	10/05/12 14:01	12.3		0.5	1.0	1	ug/L	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.8	4.0	1	ug/L	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.9	1.0	1	ug/L	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.6	1.0	1	ug/L	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/05/12 14:01	10/05/12 14:01	3.5		0.2	1.0	1	ug/L	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.6	1.0	1	ug/L	MKD
2-Butanone (MEK)	78-93-3	SW8260B	10/05/12 14:01	10/05/12 14:01	6.2	J	0.6	10.0	1	ug/L	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.6	1.0	1	ug/L	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	10.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-4 (GW)      **Laboratory Sample ID** 12100130-005      **Sample Date** Date/Time Sampled: 10/01/12 13:10

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
4-Chlorotoluene	106-43-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.7	1.0	1	ug/L	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	10.0	1	ug/L	MKD
Acetone	67-64-1	SW8260B	10/05/12 14:01	10/05/12 14:01	51.3		7.0	10.0	1	ug/L	MKD
Benzene	71-43-2	SW8260B	10/05/12 14:01	10/05/12 14:01	22.6		0.3	1.0	1	ug/L	MKD
Bromobenzene	108-86-1	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.5	1.0	1	ug/L	MKD
Bromochloromethane	74-97-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
Bromodichloromethane	75-27-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
Bromoform	75-25-2	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.5	1.0	1	ug/L	MKD
Bromomethane	74-83-9	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
Carbon disulfide	75-15-0	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.6	10.0	1	ug/L	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Chlorobenzene	108-90-7	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Chloroethane	75-00-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Chloroform	67-66-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Chloromethane	74-87-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.5	1.0	1	ug/L	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
Dibromochloromethane	124-48-1	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.7	1.0	1	ug/L	MKD
Dibromomethane	74-95-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		1.0	1.0	1	ug/L	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	5.0	1	ug/L	MKD
Ethylbenzene	100-41-4	SW8260B	10/05/12 14:01	10/05/12 14:01	14.3		0.2	1.0	1	ug/L	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	25.0	1	ug/L	MKD
Iodomethane	74-88-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.1	10.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID:** SB-4 (GW)      **Laboratory Sample ID:** 12100130-005      **Sample Date:** Date/Time Sampled: 10/01/12 13:10

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Isopropylbenzene	98-82-8	SW8260B	10/05/12 14:01	10/05/12 14:01	1.0	J1	0.2	1.0	1	ug/L	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/05/12 14:01	10/05/12 14:01	50.7		0.5	2.0	1	ug/L	MKD
Methylene chloride	75-09-2	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		1.0	4.0	1	ug/L	MKD
MTBE	1634-04-4	SW8260B	10/05/12 14:01	10/05/12 14:01	4.6		0.4	1.0	1	ug/L	MKD
Naphthalene	91-20-3	SW8260B	10/05/12 14:01	10/05/12 14:01	3.2		0.5	1.0	1	ug/L	MKD
n-Butylbenzene	104-51-8	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
n-Propylbenzene	103-65-1	SW8260B	10/05/12 14:01	10/05/12 14:01	1.7		0.2	1.0	1	ug/L	MKD
o-Xylene	95-47-6	SW8260B	10/05/12 14:01	10/05/12 14:01	27.6		0.5	1.0	1	ug/L	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.2	1.0	1	ug/L	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Styrene	100-42-5	SW8260B	10/05/12 14:01	10/05/12 14:01	0.6	J	0.2	1.0	1	ug/L	MKD
TAME	994-05-8	SW8260B	10/05/12 14:01	10/05/12 14:01	1.7	J	0.3	5.0	1	ug/L	MKD
TBA	75-65-0	SW8260B	10/05/12 14:01	10/05/12 14:01	22.6	J	2.6	100	1	ug/L	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.1	1.0	1	ug/L	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Toluene	108-88-3	SW8260B	10/05/12 14:01	10/05/12 14:01	39.7		0.4	1.0	1	ug/L	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.5	1.0	1	ug/L	MKD
Trichloroethylene	79-01-6	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.4	1.0	1	ug/L	MKD
Vinyl acetate	108-05-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.9	10.0	1	ug/L	MKD
Vinyl chloride	75-01-4	SW8260B	10/05/12 14:01	10/05/12 14:01	BLOD		0.3	1.0	1	ug/L	MKD
Xylenes, Total	1330-20-7	SW8260B	10/05/12 14:01	10/05/12 14:01	78.4		0.5	3.0	1	ug/L	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/05/12 14:15	10/08/12 19:53	BLOD		0.3	0.5	1	mg/L	JHV





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-4 (GW)      **Laboratory Sample ID** 12100130-005      **Sample Date** Date/Time Sampled: 10/01/12 13:10

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
-----------	-----	------------------	-----------------------	--------------------	----------------	-----------	-----	-----	----------	-------	---------

**Client Sample ID** SB-5 (GW)      **Laboratory Sample ID** 12100130-006      **Sample Date** Date/Time Sampled: 10/01/12 15:30

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
TPH-Volatiles (GRO)	NA	SW8015C	10/15/12 13:27	10/15/12 13:27	40.4		0.5	0.5	50	mg/L	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.7	1.0	5	ug/L	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.5	1.0	5	ug/L	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	1.0	5	ug/L	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/05/12 15:09	10/05/12 15:09	0.3	J	0.2	1.0	5	ug/L	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.2	1.0	5	ug/L	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.2	1.0	5	ug/L	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/05/12 15:09	10/05/12 15:09	0.3	J	0.2	1.0	5	ug/L	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/05/12 15:09	10/05/12 15:09	1670		0.5	1.0	5	ug/L	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.8	4.0	5	ug/L	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/05/12 15:09	10/05/12 15:09	31.0		0.3	1.0	5	ug/L	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.2	1.0	5	ug/L	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.9	1.0	5	ug/L	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.6	1.0	5	ug/L	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/05/12 15:09	10/05/12 15:09	487		0.2	1.0	5	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-5 (GW)      **Laboratory Sample ID** 12100130-006      **Sample Date** Date/Time Sampled: 10/01/12 15:30

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
1,3-Dichlorobenzene	541-73-1	SW8260B	10/05/12 15:09	10/05/12 15:09	0.2	J	0.2	1.0	5	ug/L	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/05/12 15:09	10/05/12 15:09	0.3	J	0.2	1.0	5	ug/L	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.6	1.0	5	ug/L	MKD
2-Butanone (MEK)	78-93-3	SW8260B	10/05/12 15:09	10/05/12 15:09	256		0.6	10.0	5	ug/L	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.6	1.0	5	ug/L	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	10.0	5	ug/L	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.7	1.0	5	ug/L	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	10.0	5	ug/L	MKD
Acetone	67-64-1	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		7.0	10.0	5	ug/L	MKD
Benzene	71-43-2	SW8260B	10/08/12 14:30	10/08/12 14:30	2860		0.3	1.0	20	ug/L	MKD
Bromobenzene	108-86-1	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.5	1.0	5	ug/L	MKD
Bromochloromethane	74-97-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.2	1.0	5	ug/L	MKD
Bromodichloromethane	75-27-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	1.0	5	ug/L	MKD
Bromoform	75-25-2	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.5	1.0	5	ug/L	MKD
Bromomethane	74-83-9	SW8260B	10/05/12 15:09	10/05/12 15:09	0.4	J	0.3	1.0	5	ug/L	MKD
Carbon disulfide	75-15-0	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.6	10.0	5	ug/L	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
Chlorobenzene	108-90-7	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
Chloroethane	75-00-3	SW8260B	10/05/12 15:09	10/05/12 15:09	2.9		0.4	1.0	5	ug/L	MKD
Chloroform	67-66-3	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
Chloromethane	74-87-3	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.5	1.0	5	ug/L	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.2	1.0	5	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-5 (GW)      **Laboratory Sample ID** 12100130-006      **Sample Date** Date/Time Sampled: 10/01/12 15:30

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Dibromochloromethane	124-48-1	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.7	1.0	5	ug/L	MKD
Dibromomethane	74-95-3	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		1.0	1.0	5	ug/L	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/05/12 15:09	10/05/12 15:09	0.5	J	0.3	5.0	5	ug/L	MKD
Ethylbenzene	100-41-4	SW8260B	10/08/12 14:30	10/08/12 14:30	2770		0.2	1.0	20	ug/L	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	25.0	5	ug/L	MKD
Iodomethane	74-88-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.1	10.0	5	ug/L	MKD
Isopropylbenzene	98-82-8	SW8260B	10/05/12 15:09	10/05/12 15:09	124		0.2	1.0	5	ug/L	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/08/12 14:30	10/08/12 14:30	9070		0.5	2.0	20	ug/L	MKD
Methylene chloride	75-09-2	SW8260B	10/05/12 15:09	10/05/12 15:09	4.7		1.0	4.0	5	ug/L	MKD
MTBE	1634-04-4	SW8260B	10/05/12 15:09	10/05/12 15:09	5.8		0.4	1.0	5	ug/L	MKD
Naphthalene	91-20-3	SW8260B	10/05/12 15:09	10/05/12 15:09	508		0.5	1.0	5	ug/L	MKD
n-Butylbenzene	104-51-8	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	1.0	5	ug/L	MKD
n-Propylbenzene	103-65-1	SW8260B	10/05/12 15:09	10/05/12 15:09	328		0.2	1.0	5	ug/L	MKD
o-Xylene	95-47-6	SW8260B	10/08/12 14:30	10/08/12 14:30	4270		0.5	1.0	20	ug/L	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/05/12 15:09	10/05/12 15:09	11.1		0.2	1.0	5	ug/L	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/05/12 15:09	10/05/12 15:09	17.1		0.4	1.0	5	ug/L	MKD
Styrene	100-42-5	SW8260B	10/05/12 15:09	10/05/12 15:09	117		0.2	1.0	5	ug/L	MKD
TAME	994-05-8	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	5.0	5	ug/L	MKD
TBA	75-65-0	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		2.6	100	5	ug/L	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.1	1.0	5	ug/L	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
Toluene	108-88-3	SW8260B	10/08/12 13:45	10/08/12 13:45	19200		0.4	1.0	100	ug/L	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-5 (GW)      **Laboratory Sample ID** 12100130-006      **Sample Date** Date/Time Sampled: 10/01/12 15:30

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.5	1.0	5	ug/L	MKD
Trichloroethylene	79-01-6	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	1.0	5	ug/L	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.4	1.0	5	ug/L	MKD
Vinyl acetate	108-05-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.9	10.0	5	ug/L	MKD
Vinyl chloride	75-01-4	SW8260B	10/05/12 15:09	10/05/12 15:09	BLOD		0.3	1.0	5	ug/L	MKD
Xylenes, Total	1330-20-7	SW8260B	10/08/12 13:45	10/08/12 13:45	13300		0.5	3.0	1	ug/L	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/05/12 14:15	10/09/12 11:48	30.1		0.3	0.5	10	mg/L	JHV

**Client Sample ID** SB-6 (GW)      **Laboratory Sample ID** 12100130-007      **Sample Date** Date/Time Sampled: 10/01/12 17:05

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
TPH-Volatiles (GRO)	NA	SW8015C	10/12/12 15:57	10/12/12 15:57	BLOD		0.5	0.5	1	mg/L	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.7	1.0	1	ug/L	MKD
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD







Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 (GW)      **Laboratory Sample ID** 12100130-007      **Sample Date** Date/Time Sampled: 10/01/12 17:05

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.8	4.0	1	ug/L	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.9	1.0	1	ug/L	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.6	1.0	1	ug/L	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.6	1.0	1	ug/L	MKD
2-Butanone (MEK)	78-93-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.6	10.0	1	ug/L	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.6	1.0	1	ug/L	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	10.0	1	ug/L	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.7	1.0	1	ug/L	MKD
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	10.0	1	ug/L	MKD
Acetone	67-64-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		7.0	10.0	1	ug/L	MKD
Benzene	71-43-2	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
Bromobenzene	108-86-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
Bromochloromethane	74-97-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
Bromodichloromethane	75-27-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
Bromoform	75-25-2	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
Bromomethane	74-83-9	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 (GW)      **Laboratory Sample ID** 12100130-007      **Sample Date** Date/Time Sampled: 10/01/12 17:05

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
Carbon disulfide	75-15-0	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.6	10.0	1	ug/L	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Chlorobenzene	108-90-7	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Chloroethane	75-00-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Chloroform	67-66-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Chloromethane	74-87-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
Dibromochloromethane	124-48-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.7	1.0	1	ug/L	MKD
Dibromomethane	74-95-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		1.0	1.0	1	ug/L	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	5.0	1	ug/L	MKD
Ethylbenzene	100-41-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	25.0	1	ug/L	MKD
Iodomethane	74-88-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.1	10.0	1	ug/L	MKD
Isopropylbenzene	98-82-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
m,p-Xylenes	179601-23-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	2.0	1	ug/L	MKD
Methylene chloride	75-09-2	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		1.0	4.0	1	ug/L	MKD
MTBE	1634-04-4	SW8260B	10/05/12 14:24	10/05/12 14:24	2.6		0.4	1.0	1	ug/L	MKD
Naphthalene	91-20-3	SW8260B	10/05/12 14:24	10/05/12 14:24	0.7	J	0.5	1.0	1	ug/L	MKD
n-Butylbenzene	104-51-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
n-Propylbenzene	103-65-1	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
o-Xylene	95-47-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-6 (GW)      **Laboratory Sample ID** 12100130-007      **Sample Date** Date/Time Sampled: 10/01/12 17:05

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
sec-Butylbenzene	135-98-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Styrene	100-42-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.2	1.0	1	ug/L	MKD
TAME	994-05-8	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	5.0	1	ug/L	MKD
TBA	75-65-0	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		2.6	100	1	ug/L	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.1	1.0	1	ug/L	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Toluene	108-88-3	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.5	1.0	1	ug/L	MKD
Trichloroethylene	79-01-6	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.4	1.0	1	ug/L	MKD
Vinyl acetate	108-05-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.9	10.0	1	ug/L	MKD
Vinyl chloride	75-01-4	SW8260B	10/05/12 14:24	10/05/12 14:24	BLOD		0.3	1.0	1	ug/L	MKD
Xylenes, Total	1330-20-7	SW8260B	10/05/12 14:24	10/05/12 14:24	0.6	J	0.5	3.0	1	ug/L	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/05/12 14:15	10/08/12 20:44	BLOD		0.3	0.5	1	mg/L	JHV

**Client Sample ID** SB-Dupe (GW)      **Laboratory Sample ID** 12100130-008      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
TPH-Volatiles (GRO)	NA	SW8015C	10/15/12 13:51	10/15/12 13:51	40.4		0.5	0.5	50	mg/L	MKD
1,1,1,2-Tetrachloroethane	630-20-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
1,1,1-Trichloroethane	71-55-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.7	1.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe (GW)      **Laboratory Sample ID** 12100130-008      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
1,1,2,2-Tetrachloroethane	79-34-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
1,1,2-Trichloroethane	79-00-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.5	1.0	1	ug/L	MKD
1,1-Dichloroethane	75-34-3	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
1,1-Dichloroethylene	75-35-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	1.0	1	ug/L	MKD
1,1-Dichloropropene	563-58-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,2,3-Trichlorobenzene	87-61-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,2,3-Trichloropropane	96-18-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,2,4-Trichlorobenzene	120-82-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,2,4-Trimethylbenzene	95-63-6	SW8260B	10/05/12 14:46	10/05/12 14:46	1520		0.5	1.0	20	ug/L	MKD
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.8	4.0	1	ug/L	MKD
1,2-Dibromoethane (EDB)	106-93-4	SW8260B	10/05/12 15:32	10/05/12 15:32	27.2		0.3	1.0	1	ug/L	MKD
1,2-Dichlorobenzene	95-50-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,2-Dichloroethane	107-06-2	SW8260B	10/05/12 15:32	10/05/12 15:32	1.1		0.9	1.0	1	ug/L	MKD
1,2-Dichloropropane	78-87-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.6	1.0	1	ug/L	MKD
1,3,5-Trimethylbenzene	108-67-8	SW8260B	10/05/12 14:46	10/05/12 14:46	416		0.2	1.0	20	ug/L	MKD
1,3-Dichlorobenzene	541-73-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,3-Dichloropropane	142-28-9	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
1,4-Dichlorobenzene	106-46-7	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
2,2-Dichloropropane	594-20-7	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.6	1.0	1	ug/L	MKD
2-Butanone (MEK)	78-93-3	SW8260B	10/05/12 15:32	10/05/12 15:32	138		0.6	10.0	1	ug/L	MKD
2-Chlorotoluene	95-49-8	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.6	1.0	1	ug/L	MKD
2-Hexanone (MBK)	591-78-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	10.0	1	ug/L	MKD
4-Chlorotoluene	106-43-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.7	1.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe (GW)      **Laboratory Sample ID** 12100130-008      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
4-Methyl-2-pentanone (MIBK)	108-10-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	10.0	1	ug/L	MKD
Acetone	67-64-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		7.0	10.0	1	ug/L	MKD
Benzene	71-43-2	SW8260B	10/05/12 14:46	10/05/12 14:46	2120		0.3	1.0	20	ug/L	MKD
Bromobenzene	108-86-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.5	1.0	1	ug/L	MKD
Bromochloromethane	74-97-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
Bromodichloromethane	75-27-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	1.0	1	ug/L	MKD
Bromoform	75-25-2	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.5	1.0	1	ug/L	MKD
Bromomethane	74-83-9	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	1.0	1	ug/L	MKD
Carbon disulfide	75-15-0	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.6	10.0	1	ug/L	MKD
Carbon tetrachloride	56-23-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
Chlorobenzene	108-90-7	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
Chloroethane	75-00-3	SW8260B	10/05/12 15:32	10/05/12 15:32	0.5	J	0.4	1.0	1	ug/L	MKD
Chloroform	67-66-3	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
Chloromethane	74-87-3	SW8260B	10/05/12 15:32	10/05/12 15:32	1.0		0.5	1.0	1	ug/L	MKD
cis-1,2-Dichloroethylene	156-59-2	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
cis-1,3-Dichloropropene	10061-01-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.2	1.0	1	ug/L	MKD
Dibromochloromethane	124-48-1	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.7	1.0	1	ug/L	MKD
Dibromomethane	74-95-3	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
Dichlorodifluoromethane	75-71-8	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		1.0	1.0	1	ug/L	MKD
Di-isopropyl ether (DIPE)	108-20-3	SW8260B	10/05/12 15:32	10/05/12 15:32	0.7	J	0.3	5.0	1	ug/L	MKD
Ethylbenzene	100-41-4	SW8260B	10/05/12 14:46	10/05/12 14:46	2100		0.2	1.0	20	ug/L	MKD
Ethyl-t-butyl ether (ETBE)	637-92-3	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	25.0	1	ug/L	MKD
Iodomethane	74-88-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.1	10.0	1	ug/L	MKD
Isopropylbenzene	98-82-8	SW8260B	10/05/12 15:32	10/05/12 15:32	132		0.2	1.0	1	ug/L	MKD





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe (GW)      **Laboratory Sample ID** 12100130-008      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
m,p-Xylenes	179601-23-1	SW8260B	10/05/12 14:46	10/05/12 14:46	6970		0.5	2.0	20	ug/L	MKD
Methylene chloride	75-09-2	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		1.0	4.0	1	ug/L	MKD
MTBE	1634-04-4	SW8260B	10/05/12 15:32	10/05/12 15:32	2.6		0.4	1.0	1	ug/L	MKD
Naphthalene	91-20-3	SW8260B	10/05/12 15:32	10/05/12 15:32	394		0.5	1.0	1	ug/L	MKD
n-Butylbenzene	104-51-8	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	1.0	1	ug/L	MKD
n-Propylbenzene	103-65-1	SW8260B	10/05/12 15:32	10/05/12 15:32	344		0.2	1.0	1	ug/L	MKD
o-Xylene	95-47-6	SW8260B	10/05/12 14:46	10/05/12 14:46	3400		0.5	1.0	20	ug/L	MKD
p-Isopropyltoluene	99-87-6	SW8260B	10/05/12 15:32	10/05/12 15:32	18.3		0.2	1.0	1	ug/L	MKD
sec-Butylbenzene	135-98-8	SW8260B	10/05/12 15:32	10/05/12 15:32	28.3		0.4	1.0	1	ug/L	MKD
Styrene	100-42-5	SW8260B	10/05/12 15:32	10/05/12 15:32	89.9		0.2	1.0	1	ug/L	MKD
TAME	994-05-8	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	5.0	1	ug/L	MKD
TBA	75-65-0	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		2.6	100	1	ug/L	MKD
tert-Butylbenzene	98-06-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.1	1.0	1	ug/L	MKD
Tetrachloroethylene (PCE)	127-18-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
Toluene	108-88-3	SW8260B	10/08/12 14:07	10/08/12 14:07	19000		0.4	1.0	100	ug/L	MKD
trans-1,2-Dichloroethylene	156-60-5	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
trans-1,3-Dichloropropene	10061-02-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.5	1.0	1	ug/L	MKD
Trichloroethylene	79-01-6	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	1.0	1	ug/L	MKD
Trichlorofluoromethane	75-69-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.4	1.0	1	ug/L	MKD
Vinyl acetate	108-05-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.9	10.0	1	ug/L	MKD
Vinyl chloride	75-01-4	SW8260B	10/05/12 15:32	10/05/12 15:32	BLOD		0.3	1.0	1	ug/L	MKD
Xylenes, Total	1330-20-7	SW8260B	10/05/12 15:32	10/05/12 15:32	10400		0.5	3.0	1	ug/L	MKD
TPH-Semi-Volatiles (DRO)	NA	SW8015C	10/05/12 14:15	10/08/12 21:10	7.6		0.3	0.5	1	mg/L	JHV





Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To** Nancy Love

**Date Issued:** 11/13/2012

**Client Sample ID** SB-Dupe (GW)      **Laboratory Sample ID** 12100130-008      **Sample Date** Date/Time Sampled: 10/01/12

Parameter	CAS	Reference Method	Sample Prep Date/Time	Analysis Date/Time	Sample Results	Qualifier	LOD	LOQ	Dilution	Units	Analyst
-----------	-----	------------------	-----------------------	--------------------	----------------	-----------	-----	-----	----------	-------	---------





Air Water & Soil Laboratories, Inc.  
 2109 A. North Hamilton Street  
 Richmond, Virginia 23230  
 (804) 358-8295 - Telephone  
 (804) 358-8297 - Fax

**Certificate of Analysis**

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To** Nancy Love

Date Issued: 11/13/2012

**Summary of Analytical QC Batches**

QC Batch ID	Method	Sample List
QC121008012	SW8015C	12100130-001, -003
<u>QC ID</u>	<u>Parameter</u>	<u>Qualifier</u> <u>Comments</u>
MSD	TPH-Semi-Volatiles (DRO)	P
QC121008013	SW8260B	12100130-005, -006, -007, -008
QC121009003	SW8015C	12100130-005, -007, -008
QC121009007	SW8260B	12100130-006, -008
QC121010037	SW8015C	12100130-002, -004
QC121011009	SW8015C	12100130-006
QC121015002	SW8260B	12100130-001, -002, -003, -004
QC121015006	SW8015C	12100130-001, -002, -003, -004
<u>QC ID</u>	<u>Parameter</u>	<u>Qualifier</u> <u>Comments</u>
MS	TPH-Volatiles (GRO)	M Matrix interference
MSD	TPH-Volatiles (GRO)	M Matrix interference
QC121015007	SW8015C	12100130-005, -007
QC121016003	SW8260B	12100130-002, -004
QC121016005	SW8015C	12100130-006, -008
QC121017013	SM18/2540G	12100130-001, -002, -003, -004

**Qualifier Definitions**

Qualifier	Description
J	The reported concentration is less than the LOQ but greater than the LOD. The concentration is considered to be estimated.
J1	The reported concentration has been rounded up to the LOQ due to EPA rounding rules. The concentration is considered to be estimated.
M	Matrix spike recovery is outside established acceptance limits.
P	Duplicate analysis does not meet the acceptance criteria for precision







Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

---

---

## Certificate of Analysis

**Client Name:** Chesapeake Geosciences, Inc.  
**Client Site ID:** Midway (9-0037BA)  
**Submitted To:** Nancy Love

**Date Issued:** 11/13/2012

---

### Qualifier Definitions

Qualifier	Description
S	Surrogate recovery is outside of established acceptance limits

---

### **End Notes:**

The test results listed in this report relate only to the samples submitted to the laboratory and as received by t

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requiremer holding times. These analyses should be performed in the field. The results of field analyses performed by th Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certi audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced, except in full, without the expressed and written approval of an authorized



**Analysis Certifications Report**

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

Order ID: 12100130

Parameter	Method	NC	VA-NP	VA-SO	WVA
1,1,1,2-Tetrachloroethane	SW8260B	X		X	X
1,1,1,2-Tetrachloroethane	SW8260B	X	X		X
1,1,1-Trichloroethane	SW8260B	X	X		X
1,1,1-Trichloroethane	SW8260B	X		X	X
1,1,2,2-Tetrachloroethane	SW8260B	X	X		X
1,1,2,2-Tetrachloroethane	SW8260B	X		X	X
1,1,2-Trichloroethane	SW8260B	X		X	X
1,1,2-Trichloroethane	SW8260B	X	X		X
1,1-Dichloroethane	SW8260B	X	X		X
1,1-Dichloroethane	SW8260B	X		X	X
1,1-Dichloroethylene	SW8260B	X		X	X
1,1-Dichloroethylene	SW8260B	X	X		X
1,1-Dichloropropene	SW8260B	X	X		X
1,1-Dichloropropene	SW8260B	X		X	X
1,2,3-Trichlorobenzene	SW8260B	X	X		X
1,2,3-Trichlorobenzene	SW8260B	X		X	X
1,2,3-Trichloropropane	SW8260B	X		X	X
1,2,3-Trichloropropane	SW8260B	X	X		X
1,2,4-Trichlorobenzene	SW8260B	X	X		X
1,2,4-Trichlorobenzene	SW8260B	X		X	X
1,2,4-Trimethylbenzene	SW8260B	X	X		X
1,2,4-Trimethylbenzene	SW8260B	X		X	X
1,2-Dibromo-3-chloropropane (DBCP)	SW8260B	X		X	X
1,2-Dibromo-3-chloropropane (DBCP)	SW8260B	X	X		X
1,2-Dibromoethane (EDB)	SW8260B	X		X	X
1,2-Dibromoethane (EDB)	SW8260B	X	X		X
1,2-Dichlorobenzene	SW8260B	X		X	X
1,2-Dichlorobenzene	SW8260B	X	X		X
1,2-Dichloroethane	SW8260B	X		X	X
1,2-Dichloroethane	SW8260B	X	X		X
1,2-Dichloropropane	SW8260B	X		X	X
1,2-Dichloropropane	SW8260B	X	X		X
1,3,5-Trimethylbenzene	SW8260B	X	X		X
1,3,5-Trimethylbenzene	SW8260B	X		X	X
1,3-Dichlorobenzene	SW8260B	X	X		X



**Analysis Certifications Report**

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

Order ID: 12100130

Parameter	Method	NC	VA-NP	VA-SO	WVA
1,3-Dichlorobenzene	SW8260B	X		X	X
1,3-Dichloropropane	SW8260B	X	X		X
1,3-Dichloropropane	SW8260B	X		X	X
1,4-Dichlorobenzene	SW8260B	X		X	X
1,4-Dichlorobenzene	SW8260B	X	X		X
2,2-Dichloropropane	SW8260B	X	X		X
2,2-Dichloropropane	SW8260B	X		X	X
2-Butanone (MEK)	SW8260B	X	X		X
2-Butanone (MEK)	SW8260B	X		X	X
2-Chlorotoluene	SW8260B	X		X	X
2-Chlorotoluene	SW8260B	X	X		X
2-Hexanone (MBK)	SW8260B	X		X	X
2-Hexanone (MBK)	SW8260B	X	X		X
4-Chlorotoluene	SW8260B	X		X	X
4-Chlorotoluene	SW8260B	X	X		X
4-Methyl-2-pentanone (MIBK)	SW8260B	X	X		X
4-Methyl-2-pentanone (MIBK)	SW8260B	X		X	X
Acetone	SW8260B	X		X	X
Acetone	SW8260B	X	X		X
Benzene	SW8260B	X		X	X
Benzene	SW8260B	X	X		X
Bromobenzene	SW8260B	X	X		X
Bromobenzene	SW8260B	X		X	X
Bromochloromethane	SW8260B	X		X	X
Bromochloromethane	SW8260B	X	X		X
Bromodichloromethane	SW8260B	X		X	X
Bromodichloromethane	SW8260B	X	X		X
Bromoform	SW8260B	X	X		X
Bromoform	SW8260B	X		X	X
Bromomethane	SW8260B	X	X		X
Bromomethane	SW8260B	X		X	X
Carbon disulfide	SW8260B	X		X	X
Carbon disulfide	SW8260B	X	X		X
Carbon tetrachloride	SW8260B	X		X	X
Carbon tetrachloride	SW8260B	X	X		X
Chlorobenzene	SW8260B	X	X		X



**Analysis Certifications Report**

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

Order ID: 12100130

Parameter	Method	NC	VA-NP	VA-SO	WVA
Chlorobenzene	SW8260B	X		X	X
Chloroethane	SW8260B	X		X	X
Chloroethane	SW8260B	X	X		X
Chloroform	SW8260B	X	X		X
Chloroform	SW8260B	X		X	X
Chloromethane	SW8260B	X	X		X
Chloromethane	SW8260B	X		X	X
cis-1,2-Dichloroethylene	SW8260B	X	X		X
cis-1,2-Dichloroethylene	SW8260B	X		X	X
cis-1,3-Dichloropropene	SW8260B	X	X		X
cis-1,3-Dichloropropene	SW8260B	X		X	X
Dibromochloromethane	SW8260B	X	X		X
Dibromochloromethane	SW8260B	X		X	X
Dibromomethane	SW8260B	X	X		X
Dibromomethane	SW8260B	X		X	X
Dichlorodifluoromethane	SW8260B	X	X		X
Dichlorodifluoromethane	SW8260B	X		X	X
Di-isopropyl ether (DIPE)	SW8260B	X	X		X
Di-isopropyl ether (DIPE)	SW8260B	X		X	X
Ethylbenzene	SW8260B	X		X	X
Ethylbenzene	SW8260B	X	X		X
Ethyl-t-butyl ether (ETBE)	SW8260B	X	X		X
Ethyl-t-butyl ether (ETBE)	SW8260B	X			X
Iodomethane	SW8260B	X		X	X
Iodomethane	SW8260B	X	X		X
Isopropylbenzene	SW8260B	X	X		X
Isopropylbenzene	SW8260B	X		X	X
m,p-Xylenes	SW8260B	X	X		X
m,p-Xylenes	SW8260B	X		X	X
Methylene chloride	SW8260B	X	X		X
Methylene chloride	SW8260B	X		X	X
MTBE	SW8260B	X	X		X
MTBE	SW8260B	X		X	X
Naphthalene	SW8260B	X		X	X
Naphthalene	SW8260B	X	X		X
n-Butylbenzene	SW8260B	X	X		X



**Analysis Certifications Report**

Client Name: Chesapeake Geosciences, Inc.  
 Client Site ID: Midway (9-0037BA)  
 Submitted To: Nancy Love

Date Issued: 11/13/2012

Order ID: 12100130

Parameter	Method	NC	VA-NP	VA-SO	WVA
n-Butylbenzene	SW8260B	X		X	X
n-Propylbenzene	SW8260B	X	X		X
n-Propylbenzene	SW8260B	X		X	X
o-Xylene	SW8260B	X	X		X
o-Xylene	SW8260B	X		X	X
p-Isopropyltoluene	SW8260B	X	X		X
p-Isopropyltoluene	SW8260B	X		X	X
sec-Butylbenzene	SW8260B	X	X		X
sec-Butylbenzene	SW8260B	X		X	X
Styrene	SW8260B	X	X		X
Styrene	SW8260B	X		X	X
TAME	SW8260B	X	X		X
TAME	SW8260B	X			X
TBA	SW8260B	X	X		X
TBA	SW8260B	X			X
tert-Butylbenzene	SW8260B	X	X		X
tert-Butylbenzene	SW8260B	X		X	X
Tetrachloroethylene (PCE)	SW8260B	X	X		X
Tetrachloroethylene (PCE)	SW8260B	X		X	X
Toluene	SW8260B	X	X		X
Toluene	SW8260B	X		X	X
TPH-Semi-Volatiles (DRO)	SW8015C	X	X		X
TPH-Semi-Volatiles (DRO)	SW8015C	X		X	X
TPH-Volatiles (GRO)	SW8015C	X	X		X
TPH-Volatiles (GRO)	SW8015C	X		X	X
trans-1,2-Dichloroethylene	SW8260B	X	X		X
trans-1,2-Dichloroethylene	SW8260B	X		X	X
trans-1,3-Dichloropropene	SW8260B	X	X		X
trans-1,3-Dichloropropene	SW8260B	X		X	X
Trichloroethylene	SW8260B	X	X		X
Trichloroethylene	SW8260B	X		X	X
Trichlorofluoromethane	SW8260B	X	X		X
Trichlorofluoromethane	SW8260B	X		X	X
Vinyl acetate	SW8260B	X		X	X
Vinyl acetate	SW8260B	X	X		X
Vinyl chloride	SW8260B	X	X		X



Air Water & Soil Laboratories, Inc.  
2109 A. North Hamilton Street  
Richmond, Virginia 23230  
(804) 358-8295 - Telephone  
(804) 358-8297 - Fax

---

---

### Analysis Certifications Report

Client Name: Chesapeake Geosciences, Inc.  
Client Site ID: Midway (9-0037BA)  
Submitted To: Nancy Love

Date Issued: 11/13/2012

---

Order ID: 12100130

Parameter	Method	NC	VA-NP	VA-SO	WVA
Vinyl chloride	SW8260B	X		X	X
Xylenes, Total	SW8260B	X		X	X
Xylenes, Total	SW8260B	X	X		X

"X" denotes that the associated parameter is certified or accredited under the program indicated in the column header.

VA-NP = VELAP Non-Potable Water: Virginia DGS Division of Consolidated Laboratory Services(460021); VA-SOLIDS = VELAP Solids: Virginia DGS Division of Consolidated Laboratory Services(460021); VA-SOLIDS = VELAP Solids: North Carolina(495); WVA: West Virginia Department of Environmental Protection(350); NC: North Carolina(495)





2109A North Hamilton Street • Richmond, Virginia 23230 • Tel : (804) 358-

CGI

Midway (9-0037BA)



12100130

DUE: 10 Days

Recd: 10/03/12

**Sample Conditions Checklist**

Opened by: (Initials)

[Handwritten Signature]

Lab ID No.:

Date Cooler Opened:

10/3/12

- |     |  | YES                                 | NO                                  | N/A                                 |
|-----|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1.  | How were samples received?   |                                     |                                     |                                     |
|     | Fed Ex <input type="checkbox"/>  |                                     |                                     |                                     |
|     | UPS <input checked="" type="checkbox"/>  |                                     |                                     |                                     |
|     | Courier <input type="checkbox"/>   |                                     |                                     |                                     |
|     | Walk In <input type="checkbox"/>   |                                     |                                     |                                     |
| 2.  | Were custody seals used?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 3.  | If yes, are custody seals unbroken and intact at the date and time of arrival?                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 4.  | Are the custody papers filled out completely and correctly?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5.  | Do all bottle labels agree with custody papers?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6.  | Are the samples received on ice?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7.  | Is the temperature blank or representative sample within acceptable limits?<br>(above freezing to 6°C) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8.  | Are all samples within holding time for requested laboratory tests?                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 9.  | Is a sufficient amount of sample provided to perform the tests indicated?                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 10. | Are all samples in proper containers for the analyses requested?                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 11. | Are all samples appropriately preserved for the analyses requested?                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 12. | Are all volatile organic containers free of headspace?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

COMMENTS

---

---

---

---

---

---

---

---





**ATTACHMENT D**

**LABORATORY ANALYTICAL REPORTS  
SOIL VAPOR SAMPLES**

Report Date:  
01-Aug-12 11:15



- Final Report
- Re-Issued Report
- Revised Report

**SPECTRUM ANALYTICAL, INC.**  
*Featuring*  
**HANIBAL TECHNOLOGY**  
**Laboratory Report**

Chesapeake GeoSciences, Inc.  
5405 Twin Knolls Rd, Suite 1  
Columbia, MD 21045  
Attn: Nancy Love

Project: Midway - 6905 & 6911 5th Ave - MD  
Project #: CG-09-0491.09

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Container</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB53200-01	VMP-5	Summa canister 6 liter	Soil Gas	18-Jul-12 09:37	20-Jul-12 14:00
SB53200-02	VMP-dupe	Summa canister 6 liter	Soil Gas	18-Jul-12 00:00	20-Jul-12 14:00
SB53200-03	VMP-8	Summa canister 6 liter	Soil Gas	18-Jul-12 09:10	20-Jul-12 14:00
SB53200-04	VMP-6	Summa canister 6 liter	Soil Gas	18-Jul-12 09:28	20-Jul-12 14:00
SB53200-05	VMP-7	Summa canister 6 liter	Soil Gas	18-Jul-12 08:56	20-Jul-12 14:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110  
Connecticut # PH-0777  
Florida # E87600/E87936  
Maine # MA138  
New Hampshire # 2538  
New Jersey # MA011/MA012  
New York # 11393/11840  
Pennsylvania # 68-04426/68-02924  
Rhode Island # 98  
USDA # S-51435



Authorized by:

Nicole Leja  
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes.

Please note that this report contains 20 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

*Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at [www.spectrum-analytical.com](http://www.spectrum-analytical.com) for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).*

**CASE NARRATIVE:**

Samples are received and the pressure is recorded from the gauge on the canister. If a canister does not have a gauge, a vacuum gauge is attached to the valve and pressure is recorded. If the canister is below -10 psig, the can must be pressurized to 0 psig. Tedlar bags do not have the pressure recorded. The can pressure can be located within this report in the sample header information.

If a Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.**

**EPA TO-15**

**Calibration:**

1207048

---

Analyte quantified by quadratic equation type calibration.

Naphthalene

This affected the following samples:

1217840-BLK1  
1217840-BS1  
S208661-ICV1  
S209038-CCV1  
VMP-5  
VMP-6  
VMP-7  
VMP-8  
VMP-dupe

S208661-ICV1

---

Analyte percent recovery is outside individual acceptance criteria (80-120).

Ethanol (75%)  
Hexachlorobutadiene (72%)  
Isopropyl alcohol (76%)

This affected the following samples:

1217840-BLK1  
1217840-BS1  
S209038-CCV1  
VMP-5  
VMP-6  
VMP-7  
VMP-8  
VMP-dupe

**Laboratory Control Samples:**

1217840 BS

---

1,2,4-Trichlorobenzene percent recovery 142 (70-130) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

VMP-5  
VMP-6  
VMP-7  
VMP-8  
VMP-dupe

**EPA TO-15**

**Laboratory Control Samples:**

1217840 BS

---

Benzyl chloride percent recovery 142 (70-130) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

- VMP-5
- VMP-6
- VMP-7
- VMP-8
- VMP-dupe

**Samples:**

S209038-CCV1

---

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

- Acrylonitrile (41.6%)
- Chloromethane (45.1%)

This affected the following samples:

- 1217840-BLK1
- 1217840-BS1
- VMP-5
- VMP-6
- VMP-7
- VMP-8
- VMP-dupe

SB53200-01                      *VMP-5*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

SB53200-02                      *VMP-dupe*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

SB53200-03                      *VMP-8*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

SB53200-05                      *VMP-7*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

Sample Identification

VMP-5  
SB53200-01

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 09:37

Received  
20-Jul-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
<b>Air Quality Analyses</b>											
<b>Volatile Organics in Air</b>											
		ppbv		Prepared 26-Jul-12 Dilution: 2		R05	Can pressure: -2 Can ID: 4611				
115-07-1	Propene	< 0.426	1.00	< 0.73	1.72	U	EPA TO-15	26-Jul-12	KRL	1217840	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.660	1.00	< 3.26	4.94	U	"	"	"	"	X
74-87-3	Chloromethane	< 0.750	1.00	< 1.55	2.07	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.730	1.00	< 5.10	6.99	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.788	1.00	< 2.01	2.56	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.754	1.00	< 1.67	2.21	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.596	1.00	< 2.31	3.88	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.896	1.00	< 2.36	2.64	U	"	"	"	"	X
67-64-1	Acetone	43.7	1.00	103.84	2.38		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.894	1.00	< 5.02	5.62	U	"	"	"	"	X
64-17-5	Ethanol	5.30	1.00	9.99	1.89		"	"	"	"	
107-13-1	Acrylonitrile	< 0.766	1.00	< 1.66	2.17	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.746	1.00	< 2.96	3.97	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.886	1.00	< 3.08	3.47	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.738	1.00	< 5.66	7.66	U	"	"	"	"	X
75-15-0	Carbon disulfide	8.06	1.00	25.09	3.11		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.426	1.00	< 1.69	3.97	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.400	1.00	< 1.62	4.05	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.338	1.00	< 1.22	3.61	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	0.880	1.00	2.16	2.45	J	"	"	"	"	X
78-93-3	2-Butanone (MEK)	2.88	1.00	8.49	2.95		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.326	1.00	< 1.29	3.97	U	"	"	"	"	X
110-54-3	Hexane	< 0.434	1.00	< 1.53	3.53	U	"	"	"	"	X
141-78-6	Ethyl acetate	< 0.550	1.00	< 1.98	3.60	U	"	"	"	"	
67-66-3	Chloroform	0.780	1.00	3.80	4.87	J	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.440	1.00	< 1.30	2.95	U	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.508	1.00	< 2.06	4.05	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.392	1.00	< 2.14	5.46	U	"	"	"	"	X
71-43-2	Benzene	< 0.322	1.00	< 1.03	3.19	U	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.416	1.00	< 2.62	6.29	U	"	"	"	"	X
110-82-7	Cyclohexane	< 0.350	1.00	< 1.20	3.44	U	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.392	1.00	< 1.81	4.62	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.422	1.00	< 2.83	6.70	U	"	"	"	"	X
79-01-6	Trichloroethene	1.04	1.00	5.59	5.37		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.530	1.00	< 1.91	3.60	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.366	1.00	< 1.50	4.10	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.500	1.00	< 2.05	4.10	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.340	1.00	< 1.54	4.54	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.298	1.00	< 1.35	4.54	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.524	1.00	< 2.86	5.46	U	"	"	"	"	X
108-88-3	Toluene	1.46	1.00	5.49	3.76		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.308	1.00	< 1.26	4.10	U	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.368	1.00	< 3.14	8.52	U	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

VMP-5  
SB53200-01

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 09:37

Received  
20-Jul-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

		<u>ppbv</u>	<u>Prepared 26-Jul-12</u>				<u>Can pressure: -2</u>				
			<u>Dilution: 2</u>				<u>Can ID: 4611</u>				
106-93-4	1,2-Dibromoethane (EDB)	< 0.610	1.00	< 4.69	7.69	U	EPA TO-15	26-Jul-12	KRL	1217840	X
127-18-4	Tetrachloroethene	< 0.402	1.00	< 2.73	6.78	U	"	"	"	"	X
108-90-7	Chlorobenzene	< 0.580	1.00	< 2.67	4.61	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.454	1.00	< 3.12	6.87	U	"	"	"	"	
100-41-4	Ethylbenzene	< 0.390	1.00	< 1.69	4.34	U	"	"	"	"	X
179601-23-1	m,p-Xylene	< 0.988	2.00	< 4.28	8.67	U	"	"	"	"	X
75-25-2	Bromoform	< 0.444	1.00	< 4.59	10.34	U	"	"	"	"	X
100-42-5	Styrene	< 0.494	1.00	< 2.10	4.25	U	"	"	"	"	X
95-47-6	o-Xylene	< 0.610	1.00	< 2.64	4.34	U	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.546	1.00	< 3.75	6.87	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.506	1.00	< 2.49	4.92	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.584	1.00	< 2.87	4.92	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.474	1.00	< 2.33	4.92	U	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.334	1.00	< 1.64	4.92	U	"	"	"	"	X
91-20-3	Naphthalene	< 0.346	1.00	< 1.81	5.24	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.546	1.00	< 3.28	6.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.356	1.00	< 1.83	5.15	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.430	1.00	< 2.59	6.01	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.486	1.00	< 2.67	5.49	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.478	1.00	< 2.56	5.37	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.464	1.00	< 2.79	6.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.488	1.00	< 2.68	5.49	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.368	1.00	< 2.73	7.42	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.468	1.00	< 4.99	10.66	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	102		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-dupe  
SB53200-02

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 00:00

Received  
20-Jul-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
<b>Air Quality Analyses</b>											
<b>Volatile Organics in Air</b>											
		ppbv		Prepared 26-Jul-12 Dilution: 4		R05	Can pressure: -4 Can ID: 1342				
115-07-1	Propene	< 0.852	2.00	< 1.47	3.44	U	EPA TO-15	26-Jul-12	KRL	1217840	
75-71-8	Dichlorodifluoromethane (Freon12)	< 1.32	2.00	< 6.53	9.89	U	"	"	"	"	X
74-87-3	Chloromethane	< 1.50	2.00	< 3.10	4.13	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 1.46	2.00	< 10.21	13.98	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 1.58	2.00	< 4.04	5.11	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 1.51	2.00	< 3.33	4.42	U	"	"	"	"	X
74-83-9	Bromomethane	< 1.19	2.00	< 4.62	7.76	U	"	"	"	"	X
75-00-3	Chloroethane	< 1.79	2.00	< 4.72	5.28	U	"	"	"	"	X
67-64-1	Acetone	51.1	2.00	121.43	4.75		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.79	2.00	< 10.06	11.24	U	"	"	"	"	X
64-17-5	Ethanol	8.76	2.00	16.52	3.77		"	"	"	"	
107-13-1	Acrylonitrile	< 1.53	2.00	< 3.32	4.34	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.49	2.00	< 5.91	7.93	U	"	"	"	"	X
75-09-2	Methylene chloride	< 1.77	2.00	< 6.15	6.94	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.48	2.00	< 11.34	15.33	U	"	"	"	"	X
75-15-0	Carbon disulfide	7.44	2.00	23.16	6.22		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.852	2.00	< 3.38	7.93	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.800	2.00	< 3.24	8.10	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	4.20	2.00	15.15	7.21		"	"	"	"	X
67-63-0	Isopropyl alcohol	1.92	2.00	4.71	4.91	J	"	"	"	"	X
78-93-3	2-Butanone (MEK)	6.52	2.00	19.23	5.90		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.652	2.00	< 2.59	7.93	U	"	"	"	"	X
110-54-3	Hexane	1.40	2.00	4.94	7.05	J	"	"	"	"	X
141-78-6	Ethyl acetate	2.04	2.00	7.35	7.21		"	"	"	"	
67-66-3	Chloroform	< 1.14	2.00	< 5.55	9.73	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	2.40	2.00	7.08	5.90		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1.02	2.00	< 4.13	8.10	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.784	2.00	< 4.28	10.91	U	"	"	"	"	X
71-43-2	Benzene	0.680	2.00	2.17	6.38	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.832	2.00	< 5.23	12.58	U	"	"	"	"	X
110-82-7	Cyclohexane	1.20	2.00	4.13	6.88	J	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.784	2.00	< 3.62	9.24	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.844	2.00	< 5.65	13.40	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.712	2.00	< 3.83	10.75	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 1.06	2.00	< 3.82	7.20	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.732	2.00	< 3.00	8.20	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 1.00	2.00	< 4.10	8.20	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.680	2.00	< 3.09	9.08	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.596	2.00	< 2.71	9.08	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.05	2.00	< 5.73	10.91	U	"	"	"	"	X
108-88-3	Toluene	4.60	2.00	17.31	7.53		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.616	2.00	< 2.52	8.20	U	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.736	2.00	< 6.27	17.04	U	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.



Sample Identification

VMP-dupe  
SB53200-02

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 00:00

Received  
20-Jul-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

		<u>ppbv</u>	<u>Prepared 26-Jul-12</u>				<u>Can pressure: -4</u>				
			<u>Dilution: 4</u>			R05	<u>Can ID: 1342</u>				
106-93-4	1,2-Dibromoethane (EDB)	< 1.22	2.00	< 9.38	15.37	U	EPA TO-15	26-Jul-12	KRL	1217840	X
127-18-4	Tetrachloroethene	< 0.804	2.00	< 5.45	13.56	U	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.16	2.00	< 5.34	9.21	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.908	2.00	< 6.24	13.74	U	"	"	"	"	
100-41-4	Ethylbenzene	2.48	2.00	10.75	8.67		"	"	"	"	X
179601-23-1	m,p-Xylene	4.80	4.00	20.81	17.34		"	"	"	"	X
75-25-2	Bromoform	< 0.888	2.00	< 9.18	20.67	U	"	"	"	"	X
100-42-5	Styrene	< 0.988	2.00	< 4.20	8.51	U	"	"	"	"	X
95-47-6	o-Xylene	3.44	2.00	14.91	8.67		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 1.09	2.00	< 7.49	13.73	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.01	2.00	< 4.97	9.83	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	2.48	2.00	12.19	9.83		"	"	"	"	X
622-96-8	4-Ethyltoluene	2.64	2.00	12.98	9.83		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	6.08	2.00	29.89	9.83		"	"	"	"	X
91-20-3	Naphthalene	< 0.692	2.00	< 3.62	10.47	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.09	2.00	< 6.55	12.02	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.712	2.00	< 3.67	10.31	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.860	2.00	< 5.17	12.02	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.972	2.00	< 5.34	10.98	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.956	2.00	< 5.13	10.73	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.928	2.00	< 5.58	12.02	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.976	2.00	< 5.36	10.98	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.736	2.00	< 5.46	14.85	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.936	2.00	< 9.98	21.33	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	102		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-8  
SB53200-03

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 09:10

Received  
20-Jul-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
<b>Air Quality Analyses</b>											
<b>Volatile Organics in Air</b>											
		ppbv		Prepared 26-Jul-12 Dilution: 2		R05		Can pressure: -4 Can ID: 5586			
115-07-1	Propene	< 0.426	1.00	< 0.73	1.72	U	EPA TO-15	26-Jul-12	KRL	1217840	
75-71-8	Dichlorodifluoromethane (Freon12)	0.660	1.00	3.26	4.94	J	"	"	"	"	X
74-87-3	Chloromethane	< 0.750	1.00	< 1.55	2.07	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.730	1.00	< 5.10	6.99	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.788	1.00	< 2.01	2.56	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.754	1.00	< 1.67	2.21	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.596	1.00	< 2.31	3.88	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.896	1.00	< 2.36	2.64	U	"	"	"	"	X
67-64-1	Acetone	45.2	1.00	107.41	2.38		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.894	1.00	< 5.02	5.62	U	"	"	"	"	X
64-17-5	Ethanol	9.56	1.00	18.03	1.89		"	"	"	"	
107-13-1	Acrylonitrile	< 0.766	1.00	< 1.66	2.17	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.746	1.00	< 2.96	3.97	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.886	1.00	< 3.08	3.47	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.738	1.00	< 5.66	7.66	U	"	"	"	"	X
75-15-0	Carbon disulfide	13.5	1.00	42.02	3.11		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.426	1.00	< 1.69	3.97	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.400	1.00	< 1.62	4.05	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	2.02	1.00	7.29	3.61		"	"	"	"	X
67-63-0	Isopropyl alcohol	1.48	1.00	3.63	2.45		"	"	"	"	X
78-93-3	2-Butanone (MEK)	4.78	1.00	14.10	2.95		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.326	1.00	< 1.29	3.97	U	"	"	"	"	X
110-54-3	Hexane	0.480	1.00	1.69	3.53	J	"	"	"	"	X
141-78-6	Ethyl acetate	1.16	1.00	4.18	3.60		"	"	"	"	
67-66-3	Chloroform	1.10	1.00	5.35	4.87		"	"	"	"	X
109-99-9	Tetrahydrofuran	10.8	1.00	31.85	2.95		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.508	1.00	< 2.06	4.05	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.392	1.00	< 2.14	5.46	U	"	"	"	"	X
71-43-2	Benzene	0.520	1.00	1.66	3.19	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.416	1.00	< 2.62	6.29	U	"	"	"	"	X
110-82-7	Cyclohexane	< 0.350	1.00	< 1.20	3.44	U	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.392	1.00	< 1.81	4.62	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.422	1.00	< 2.83	6.70	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.356	1.00	< 1.91	5.37	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.530	1.00	< 1.91	3.60	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.366	1.00	< 1.50	4.10	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.500	1.00	< 2.05	4.10	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.340	1.00	< 1.54	4.54	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.298	1.00	< 1.35	4.54	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.524	1.00	< 2.86	5.46	U	"	"	"	"	X
108-88-3	Toluene	5.20	1.00	19.57	3.76		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.308	1.00	< 1.26	4.10	U	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.368	1.00	< 3.14	8.52	U	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-8  
SB53200-03

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 09:10

Received  
20-Jul-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
---------	------------	--------------	------	--------------------------	------	------	-------------	----------	---------	-------	-------

Air Quality Analyses

Volatile Organics in Air

		ppbv	Prepared 26-Jul-12 Dilution: 2		R05		Can pressure: -4 Can ID: 5586				
106-93-4	1,2-Dibromoethane (EDB)	< 0.610	1.00	< 4.69	7.69	U	EPA TO-15	26-Jul-12	KRL	1217840	X
127-18-4	Tetrachloroethene	< 0.402	1.00	< 2.73	6.78	U	"	"	"	"	X
108-90-7	Chlorobenzene	< 0.580	1.00	< 2.67	4.61	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.454	1.00	< 3.12	6.87	U	"	"	"	"	
100-41-4	Ethylbenzene	3.46	1.00	15.00	4.34		"	"	"	"	X
179601-23-1	m,p-Xylene	14.9	2.00	64.60	8.67		"	"	"	"	X
75-25-2	Bromoform	< 0.444	1.00	< 4.59	10.34	U	"	"	"	"	X
100-42-5	Styrene	< 0.494	1.00	< 2.10	4.25	U	"	"	"	"	X
95-47-6	o-Xylene	6.98	1.00	30.26	4.34		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.546	1.00	< 3.75	6.87	U	"	"	"	"	X
98-82-8	Isopropylbenzene	0.740	1.00	3.64	4.92	J	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	20.4	1.00	100.29	4.92		"	"	"	"	X
622-96-8	4-Ethyltoluene	5.78	1.00	28.42	4.92		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	44.9	1.00	220.74	4.92		"	"	"	"	X
91-20-3	Naphthalene	< 0.346	1.00	< 1.81	5.24	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.546	1.00	< 3.28	6.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.356	1.00	< 1.83	5.15	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	1.26	1.00	7.58	6.01		"	"	"	"	X
135-98-8	sec-Butylbenzene	0.600	1.00	3.29	5.49	J	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.478	1.00	< 2.56	5.37	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.464	1.00	< 2.79	6.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	3.06	1.00	16.80	5.49		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.368	1.00	< 2.73	7.42	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.468	1.00	< 4.99	10.66	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	107		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

VMP-6  
SB53200-04

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 09:28

Received  
20-Jul-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
<b>Air Quality Analyses</b>											
<b>Volatile Organics in Air</b>											
		<u>ppbv</u>		<u>Prepared 26-Jul-12</u>				<u>Can pressure: -3</u>			
				<u>Dilution: 1</u>				<u>Can ID: 1347</u>			
115-07-1	Propene	< 0.213	0.500	< 0.37	0.86	U	EPA TO-15	26-Jul-12	KRL	1217840	
75-71-8	Dichlorodifluoromethane (Freon12)	<b>0.630</b>	0.500	<b>3.12</b>	2.47		"	"	"	"	X
74-87-3	Chloromethane	<b>1.27</b>	0.500	<b>2.62</b>	1.03		"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	0.500	< 2.55	3.49	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.394	0.500	< 1.01	1.28	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.377	0.500	< 0.83	1.10	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.298	0.500	< 1.16	1.94	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.448	0.500	< 1.18	1.32	U	"	"	"	"	X
67-64-1	Acetone	< 0.445	0.500	< 1.06	1.19	U	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.447	0.500	< 2.51	2.81	U	"	"	"	"	X
64-17-5	Ethanol	<b>12.8</b>	0.500	<b>24.13</b>	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.383	0.500	< 0.83	1.08	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.373	0.500	< 1.48	1.98	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.443	0.500	< 1.54	1.74	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	0.500	< 2.83	3.83	U	"	"	"	"	X
75-15-0	Carbon disulfide	<b>8.84</b>	0.500	<b>27.51</b>	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.213	0.500	< 0.84	1.98	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.200	0.500	< 0.81	2.02	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	<b>4.54</b>	0.500	<b>16.38</b>	1.80		"	"	"	"	X
67-63-0	Isopropyl alcohol	<b>4.23</b>	0.500	<b>10.38</b>	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	<b>7.13</b>	0.500	<b>21.03</b>	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.163	0.500	< 0.65	1.98	U	"	"	"	"	X
110-54-3	Hexane	<b>2.10</b>	0.500	<b>7.40</b>	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	<b>1.84</b>	0.500	<b>6.63</b>	1.80		"	"	"	"	
67-66-3	Chloroform	<b>0.450</b>	0.500	<b>2.19</b>	2.43	J	"	"	"	"	X
109-99-9	Tetrahydrofuran	<b>3.15</b>	0.500	<b>9.29</b>	1.47		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.254	0.500	< 1.03	2.02	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.196	0.500	< 1.07	2.73	U	"	"	"	"	X
71-43-2	Benzene	<b>0.710</b>	0.500	<b>2.27</b>	1.60		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.208	0.500	< 1.31	3.15	U	"	"	"	"	X
110-82-7	Cyclohexane	<b>1.54</b>	0.500	<b>5.30</b>	1.72		"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.196	0.500	< 0.91	2.31	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.211	0.500	< 1.41	3.35	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.178	0.500	< 0.96	2.69	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.265	0.500	< 0.95	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	<b>0.450</b>	0.500	<b>1.84</b>	2.05	J	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	<b>0.320</b>	0.500	<b>1.31</b>	2.05	J	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.170	0.500	< 0.77	2.27	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.149	0.500	< 0.68	2.27	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.262	0.500	< 1.43	2.73	U	"	"	"	"	X
108-88-3	Toluene	<b>3.34</b>	0.500	<b>12.57</b>	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	<b>0.330</b>	0.500	<b>1.35</b>	2.05	J	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.184	0.500	< 1.57	4.26	U	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-6  
SB53200-04

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 09:28

Received  
20-Jul-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

		<u>ppbv</u>	<u>Prepared 26-Jul-12</u>				<u>Can pressure: -3</u>				
			<u>Dilution: 1</u>				<u>Can ID: 1347</u>				
106-93-4	1,2-Dibromoethane (EDB)	< 0.305	0.500	< 2.34	3.84	U	EPA TO-15	26-Jul-12	KRL	1217840	X
127-18-4	Tetrachloroethene	<b>5.32</b>	0.500	<b>36.08</b>	3.39		"	"	"	"	X
108-90-7	Chlorobenzene	< 0.290	0.500	< 1.34	2.30	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.227	0.500	< 1.56	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	<b>1.52</b>	0.500	<b>6.59</b>	2.17		"	"	"	"	X
179601-23-1	m,p-Xylene	<b>2.28</b>	1.00	<b>9.88</b>	4.34		"	"	"	"	X
75-25-2	Bromoform	< 0.222	0.500	< 2.29	5.17	U	"	"	"	"	X
100-42-5	Styrene	< 0.247	0.500	< 1.05	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	<b>0.940</b>	0.500	<b>4.08</b>	2.17		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.273	0.500	< 1.87	3.43	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.253	0.500	< 1.24	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	<b>0.870</b>	0.500	<b>4.28</b>	2.46		"	"	"	"	X
622-96-8	4-Ethyltoluene	<b>0.920</b>	0.500	<b>4.52</b>	2.46		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	<b>8.24</b>	0.500	<b>40.51</b>	2.46		"	"	"	"	X
91-20-3	Naphthalene	< 0.173	0.500	< 0.91	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.273	0.500	< 1.64	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.178	0.500	< 0.92	2.58	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.215	0.500	< 1.29	3.01	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.243	0.500	< 1.33	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	<b>0.460</b>	0.500	<b>2.47</b>	2.68	J	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.232	0.500	< 1.39	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	<b>1.35</b>	0.500	<b>7.41</b>	2.74		"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.184	0.500	< 1.37	3.71	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.234	0.500	< 2.50	5.33	U	"	"	"	"	X

Surrogate recoveries:

<u>460-00-4</u>	<u>4-Bromofluorobenzene</u>	<u>104</u>		<u>70-130 %</u>			"	"	"	"	
-----------------	-----------------------------	------------	--	-----------------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-7  
SB53200-05

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 08:56

Received  
20-Jul-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
<b>Air Quality Analyses</b>											
<b>Volatile Organics in Air</b>											
		ppbv		Prepared 26-Jul-12 Dilution: 4		R05	Can pressure: -6 Can ID: 1645				
115-07-1	Propene	< 0.852	2.00	< 1.47	3.44	U	EPA TO-15	26-Jul-12	KRL	1217840	
75-71-8	Dichlorodifluoromethane (Freon12)	< 1.32	2.00	< 6.53	9.89	U	"	"	"	"	X
74-87-3	Chloromethane	< 1.50	2.00	< 3.10	4.13	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 1.46	2.00	< 10.21	13.98	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 1.58	2.00	< 4.04	5.11	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 1.51	2.00	< 3.33	4.42	U	"	"	"	"	X
74-83-9	Bromomethane	< 1.19	2.00	< 4.62	7.76	U	"	"	"	"	X
75-00-3	Chloroethane	< 1.79	2.00	< 4.72	5.28	U	"	"	"	"	X
67-64-1	Acetone	51.5	2.00	122.38	4.75		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.79	2.00	< 10.06	11.24	U	"	"	"	"	X
64-17-5	Ethanol	10.5	2.00	19.80	3.77		"	"	"	"	
107-13-1	Acrylonitrile	< 1.53	2.00	< 3.32	4.34	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.49	2.00	< 5.91	7.93	U	"	"	"	"	X
75-09-2	Methylene chloride	< 1.77	2.00	< 6.15	6.94	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.48	2.00	< 11.34	15.33	U	"	"	"	"	X
75-15-0	Carbon disulfide	19.5	2.00	60.69	6.22		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.852	2.00	< 3.38	7.93	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.800	2.00	< 3.24	8.10	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.676	2.00	< 2.44	7.21	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	2.44	2.00	5.99	4.91		"	"	"	"	X
78-93-3	2-Butanone (MEK)	4.96	2.00	14.63	5.90		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.652	2.00	< 2.59	7.93	U	"	"	"	"	X
110-54-3	Hexane	1.32	2.00	4.65	7.05	J	"	"	"	"	X
141-78-6	Ethyl acetate	1.88	2.00	6.77	7.21	J	"	"	"	"	
67-66-3	Chloroform	< 1.14	2.00	< 5.55	9.73	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.880	2.00	< 2.60	5.90	U	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1.02	2.00	< 4.13	8.10	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.784	2.00	< 4.28	10.91	U	"	"	"	"	X
71-43-2	Benzene	1.16	2.00	3.70	6.38	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.832	2.00	< 5.23	12.58	U	"	"	"	"	X
110-82-7	Cyclohexane	< 0.700	2.00	< 2.41	6.88	U	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.784	2.00	< 3.62	9.24	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.844	2.00	< 5.65	13.40	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.712	2.00	< 3.83	10.75	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 1.06	2.00	< 3.82	7.20	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.732	2.00	< 3.00	8.20	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 1.00	2.00	< 4.10	8.20	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.680	2.00	< 3.09	9.08	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.596	2.00	< 2.71	9.08	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.05	2.00	< 5.73	10.91	U	"	"	"	"	X
108-88-3	Toluene	5.32	2.00	20.02	7.53		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.616	2.00	< 2.52	8.20	U	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.736	2.00	< 6.27	17.04	U	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

VMP-7  
SB53200-05

Client Project #  
CG-09-0491.09

Matrix  
Soil Gas

Collection Date/Time  
18-Jul-12 08:56

Received  
20-Jul-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

		<u>ppbv</u>	<u>Prepared 26-Jul-12</u>				<u>Can pressure: -6</u>				
			<u>Dilution: 4</u>			R05	<u>Can ID: 1645</u>				
106-93-4	1,2-Dibromoethane (EDB)	< 1.22	2.00	< 9.38	15.37	U	EPA TO-15	26-Jul-12	KRL	1217840	X
127-18-4	Tetrachloroethene	< 0.804	2.00	< 5.45	13.56	U	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.16	2.00	< 5.34	9.21	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.908	2.00	< 6.24	13.74	U	"	"	"	"	
100-41-4	Ethylbenzene	< 0.780	2.00	< 3.38	8.67	U	"	"	"	"	X
179601-23-1	m,p-Xylene	<b>2.40</b>	4.00	<b>10.40</b>	17.34	J	"	"	"	"	X
75-25-2	Bromoform	< 0.888	2.00	< 9.18	20.67	U	"	"	"	"	X
100-42-5	Styrene	< 0.988	2.00	< 4.20	8.51	U	"	"	"	"	X
95-47-6	o-Xylene	< 1.22	2.00	< 5.29	8.67	U	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 1.09	2.00	< 7.49	13.73	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.01	2.00	< 4.97	9.83	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 1.17	2.00	< 5.75	9.83	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.948	2.00	< 4.66	9.83	U	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	<b>2.92</b>	2.00	<b>14.36</b>	9.83		"	"	"	"	X
91-20-3	Naphthalene	< 0.692	2.00	< 3.62	10.47	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.09	2.00	< 6.55	12.02	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.712	2.00	< 3.67	10.31	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.860	2.00	< 5.17	12.02	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.972	2.00	< 5.34	10.98	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.956	2.00	< 5.13	10.73	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.928	2.00	< 5.58	12.02	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.976	2.00	< 5.36	10.98	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.736	2.00	< 5.46	14.85	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.936	2.00	< 9.98	21.33	U	"	"	"	"	X

Surrogate recoveries:

<u>460-00-4</u>	<u>4-Bromofluorobenzene</u>	<u>103</u>		<u>70-130 %</u>			"	"	"	"	
-----------------	-----------------------------	------------	--	-----------------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

**Air Quality Analyses - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1217840 - General Air Prep</b>										
<b><u>Blank (1217840-BLK1)</u></b>										<u>Prepared &amp; Analyzed: 26-Jul-12</u>
Propene	< 0.213	U	ppbv	0.213						
Dichlorodifluoromethane (Freon12)	< 0.330	U	ppbv	0.330						
Chloromethane	< 0.375	U	ppbv	0.375						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	U	ppbv	0.365						
Vinyl chloride	< 0.394	U	ppbv	0.394						
1,3-Butadiene	< 0.377	U	ppbv	0.377						
Bromomethane	< 0.298	U	ppbv	0.298						
Chloroethane	< 0.448	U	ppbv	0.448						
Acetone	< 0.445	U	ppbv	0.445						
Trichlorofluoromethane (Freon 11)	< 0.447	U	ppbv	0.447						
Ethanol	< 0.404	U	ppbv	0.404						
Acrylonitrile	< 0.383	U	ppbv	0.383						
1,1-Dichloroethene	< 0.373	U	ppbv	0.373						
Methylene chloride	< 0.443	U	ppbv	0.443						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	U	ppbv	0.369						
Carbon disulfide	< 0.372	U	ppbv	0.372						
trans-1,2-Dichloroethene	< 0.213	U	ppbv	0.213						
1,1-Dichloroethane	< 0.200	U	ppbv	0.200						
Methyl tert-butyl ether	< 0.169	U	ppbv	0.169						
Isopropyl alcohol	< 0.228	U	ppbv	0.228						
2-Butanone (MEK)	< 0.358	U	ppbv	0.358						
cis-1,2-Dichloroethene	< 0.163	U	ppbv	0.163						
Hexane	< 0.217	U	ppbv	0.217						
Ethyl acetate	< 0.275	U	ppbv	0.275						
Chloroform	< 0.284	U	ppbv	0.284						
Tetrahydrofuran	< 0.220	U	ppbv	0.220						
1,2-Dichloroethane	< 0.254	U	ppbv	0.254						
1,1,1-Trichloroethane	< 0.196	U	ppbv	0.196						
Benzene	< 0.161	U	ppbv	0.161						
Carbon tetrachloride	< 0.208	U	ppbv	0.208						
Cyclohexane	< 0.175	U	ppbv	0.175						
1,2-Dichloropropane	< 0.196	U	ppbv	0.196						
Bromodichloromethane	< 0.211	U	ppbv	0.211						
Trichloroethene	< 0.178	U	ppbv	0.178						
1,4-Dioxane	< 0.265	U	ppbv	0.265						
n-Heptane	< 0.183	U	ppbv	0.183						
4-Methyl-2-pentanone (MIBK)	< 0.250	U	ppbv	0.250						
cis-1,3-Dichloropropene	< 0.170	U	ppbv	0.170						
trans-1,3-Dichloropropene	< 0.149	U	ppbv	0.149						
1,1,2-Trichloroethane	< 0.262	U	ppbv	0.262						
Toluene	< 0.189	U	ppbv	0.189						
2-Hexanone (MBK)	< 0.154	U	ppbv	0.154						
Dibromochloromethane	< 0.184	U	ppbv	0.184						
1,2-Dibromoethane (EDB)	< 0.305	U	ppbv	0.305						
Tetrachloroethene	< 0.201	U	ppbv	0.201						
Chlorobenzene	< 0.290	U	ppbv	0.290						
1,1,1,2-Tetrachloroethane	< 0.227	U	ppbv	0.227						
Ethylbenzene	< 0.195	U	ppbv	0.195						
m,p-Xylene	< 0.494	U	ppbv	0.494						
Bromoform	< 0.222	U	ppbv	0.222						
Styrene	< 0.247	U	ppbv	0.247						
o-Xylene	< 0.305	U	ppbv	0.305						

*This laboratory report is not valid without an authorized signature on the cover page.*



**Air Quality Analyses - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1217840 - General Air Prep</b>										
<b>Blank (1217840-BLK1)</b>					<u>Prepared &amp; Analyzed: 26-Jul-12</u>					
1,1,2,2-Tetrachloroethane	< 0.273	U	ppbv	0.273						
Isopropylbenzene	< 0.253	U	ppbv	0.253						
1,3,5-Trimethylbenzene	< 0.292	U	ppbv	0.292						
4-Ethyltoluene	< 0.237	U	ppbv	0.237						
1,2,4-Trimethylbenzene	< 0.167	U	ppbv	0.167						
Naphthalene	< 0.173	U	ppbv	0.173						
1,3-Dichlorobenzene	< 0.273	U	ppbv	0.273						
Benzyl chloride	< 0.178	U	ppbv	0.178						
1,4-Dichlorobenzene	< 0.215	U	ppbv	0.215						
sec-Butylbenzene	< 0.243	U	ppbv	0.243						
4-Isopropyltoluene	< 0.239	U	ppbv	0.239						
1,2-Dichlorobenzene	< 0.232	U	ppbv	0.232						
n-Butylbenzene	< 0.244	U	ppbv	0.244						
1,2,4-Trichlorobenzene	< 0.184	U	ppbv	0.184						
Hexachlorobutadiene	< 0.234	U	ppbv	0.234						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>10.1</i>		ppbv		<i>10.0</i>		<i>101</i>	<i>70-130</i>		
<b>LCS (1217840-BS1)</b>					<u>Prepared &amp; Analyzed: 26-Jul-12</u>					
Propene	<b>10.7</b>		ppbv		10.0		107	70-130		
Dichlorodifluoromethane (Freon12)	<b>10.9</b>		ppbv		10.0		109	70-130		
Chloromethane	<b>10.2</b>		ppbv		10.0		102	70-130		
1,2-Dichlorotetrafluoroethane (Freon 114)	<b>10.8</b>		ppbv		10.0		108	70-130		
Vinyl chloride	<b>10.7</b>		ppbv		10.0		107	70-130		
1,3-Butadiene	<b>10.7</b>		ppbv		10.0		107	70-130		
Bromomethane	<b>10.5</b>		ppbv		10.0		105	70-130		
Chloroethane	<b>10.6</b>		ppbv		10.0		106	70-130		
Acetone	<b>10.6</b>		ppbv		10.0		106	70-130		
Trichlorofluoromethane (Freon 11)	<b>10.9</b>		ppbv		10.0		109	70-130		
Ethanol	<b>8.28</b>		ppbv		10.0		83	70-130		
Acrylonitrile	<b>13.2</b>		ppbv		10.0		132	50-150		
1,1-Dichloroethene	<b>10.9</b>		ppbv		10.0		109	70-130		
Methylene chloride	<b>10.2</b>		ppbv		10.0		102	70-130		
1,1,2-Trichlorotrifluoroethane (Freon 113)	<b>10.8</b>		ppbv		10.0		108	70-130		
Carbon disulfide	<b>10.5</b>		ppbv		10.0		105	70-130		
trans-1,2-Dichloroethene	<b>10.6</b>		ppbv		10.0		106	70-130		
1,1-Dichloroethane	<b>10.4</b>		ppbv		10.0		104	70-130		
Methyl tert-butyl ether	<b>11.1</b>		ppbv		10.0		111	70-130		
Isopropyl alcohol	<b>8.67</b>		ppbv		10.0		87	70-130		
2-Butanone (MEK)	<b>10.5</b>		ppbv		10.0		105	70-130		
cis-1,2-Dichloroethene	<b>10.6</b>		ppbv		10.0		106	70-130		
Hexane	<b>8.92</b>		ppbv		10.0		89	70-130		
Ethyl acetate	<b>9.85</b>		ppbv		10.0		98	70-130		
Chloroform	<b>10.4</b>		ppbv		10.0		104	70-130		
Tetrahydrofuran	<b>10.8</b>		ppbv		10.0		108	70-130		
1,2-Dichloroethane	<b>10.5</b>		ppbv		10.0		105	70-130		
1,1,1-Trichloroethane	<b>10.6</b>		ppbv		10.0		106	70-130		
Benzene	<b>10.4</b>		ppbv		10.0		104	70-130		
Carbon tetrachloride	<b>10.5</b>		ppbv		10.0		105	70-130		
Cyclohexane	<b>9.48</b>		ppbv		10.0		95	70-130		
1,2-Dichloropropane	<b>10.1</b>		ppbv		10.0		101	70-130		
Bromodichloromethane	<b>10.2</b>		ppbv		10.0		102	70-130		
Trichloroethene	<b>10.4</b>		ppbv		10.0		104	70-130		

*This laboratory report is not valid without an authorized signature on the cover page.*

**Air Quality Analyses - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1217840 - General Air Prep</b>										
<b><u>LCS (1217840-BS1)</u></b>					<b><u>Prepared &amp; Analyzed: 26-Jul-12</u></b>					
1,4-Dioxane	9.37		ppbv		10.0		94	50-150		
n-Heptane	10.5		ppbv		10.0		105	70-130		
4-Methyl-2-pentanone (MIBK)	10.3		ppbv		10.0		103	70-130		
cis-1,3-Dichloropropene	10.3		ppbv		10.0		103	70-130		
trans-1,3-Dichloropropene	10.5		ppbv		10.0		105	70-130		
1,1,2-Trichloroethane	10.0		ppbv		10.0		100	70-130		
Toluene	10.4		ppbv		10.0		104	70-130		
2-Hexanone (MBK)	10.1		ppbv		10.0		101	70-130		
Dibromochloromethane	10.1		ppbv		10.0		101	70-130		
1,2-Dibromoethane (EDB)	9.95		ppbv		10.0		100	70-130		
Tetrachloroethene	10.5		ppbv		10.0		105	70-130		
Chlorobenzene	10.9		ppbv		10.0		109	70-130		
1,1,1,2-Tetrachloroethane	13.6		ppbv		10.0		136	50-150		
Ethylbenzene	11.4		ppbv		10.0		114	70-130		
m,p-Xylene	22.2		ppbv		20.0		111	70-130		
Bromoform	11.1		ppbv		10.0		111	70-130		
Styrene	11.1		ppbv		10.0		111	70-130		
o-Xylene	11.3		ppbv		10.0		113	70-130		
1,1,2,2-Tetrachloroethane	10.5		ppbv		10.0		105	70-130		
Isopropylbenzene	13.7		ppbv		10.0		137	50-150		
1,3,5-Trimethylbenzene	10.6		ppbv		10.0		106	70-130		
4-Ethyltoluene	10.8		ppbv		10.0		108	70-130		
1,2,4-Trimethylbenzene	10.4		ppbv		10.0		104	70-130		
Naphthalene	14.1		ppbv		10.0		141	50-150		
1,3-Dichlorobenzene	10.5		ppbv		10.0		105	70-130		
Benzyl chloride	14.2	QC2	ppbv		10.0		142	70-130		
1,4-Dichlorobenzene	10.4		ppbv		10.0		104	70-130		
sec-Butylbenzene	13.9		ppbv		10.0		139	50-150		
4-Isopropyltoluene	14.0		ppbv		10.0		140	50-150		
1,2-Dichlorobenzene	10.2		ppbv		10.0		102	70-130		
n-Butylbenzene	14.2		ppbv		10.0		142	50-150		
1,2,4-Trichlorobenzene	14.2	QC2	ppbv		10.0		142	70-130		
Hexachlorobutadiene	10.8		ppbv		10.0		108	70-130		
Surrogate: 4-Bromofluorobenzene	9.86		ppbv		10.0		99	70-130		

*This laboratory report is not valid without an authorized signature on the cover page.*

## Certificate of Analysis

**Container Type:** Summa canister 6 liter

**Date of Analysis:** 6/14/2012

**Canister ID:** 4612

**Analyst's Initials:** KG

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>	<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachloroethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

**This certification applies to the following sampling devices:**

1645

# Certificate of Analysis

**Container Type:** Summa canister 6 liter

**Date of Analysis:** 6/21/2012

**Canister ID:** 663

**Analyst's Initials:** KG

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>	<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachloroethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

**This certification applies to the following sampling devices:**

4611

## Certificate of Analysis

**Container Type:** Summa canister 6 liter

**Date of Analysis:** 6/27/2012

**Canister ID:** 7634

**Analyst's Initials:** KG

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>	<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachloroethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

**This certification applies to the following sampling devices:**

1342

1347

5586

## Notes and Definitions

J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
R05	Elevated Reporting Limits due to the presence of high levels of non-target analytes.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:  
Nicole Leja



SPECTRUM ANALYTICAL, INC.  
Framingham  
HANBURN TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 1

Standard TAT - 7 to 10 business days  
Rush TAT - Date Needed: \_\_\_\_\_  
All TATs subject to laboratory approval.  
Min. 24-hour notification needed for rushes.

Special Handling: *SP0000*

Report To: Chesapeake Geosciences  
5405 Twin Knolls Rd, Suite 1  
Columbia, MD 21045

Invoice To: Game as reporting

Project No.: CG-09-0491.09  
Site Name: Midway  
Location: 6905 + 6911 5th Avenue, State: MD

Tel #: 410-740-1911 ext 106  
Attn: Account S Payable  
Sample(s): Lara Bennett/Devine Glawcey

Project Manager: Nancy Love  
P.O. No.: CG 090491 NL RON: N/A

Can ID	Can Size (L)	Outgoing Canister Pressure (Hq) (Lsb)	Incoming Canister Pressure (Hq) (Lsb)	1-T Duplicates	Flow Controller	Flow Rate (ml/min)	Lab ID	Sample ID	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field (Hq) (Start)	Canister Pressure in Field (Hq) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis	Matrix
4611	6	-30	2991	3.41	53200-01	NMP-5	7/17/12	7/17/12	9:39	9:37	-30	-1	90	85	X	Indoor / Ambient Air	
1342	6	-30	2972	3.43	NMP-Dupe										X	Soil Gas	
5586	6	-30	2976	3.47	VMP-8					9:08	9:10	-30	-3	90	85	X	
1347	6	-30	2971	3.44	VMP-6					9:28	9:28	-30	0.5	90	85	X	
1645	6	-30	2977	3.45	VMP-7					7/17/12	7/14/12	8:55	8:56	90	85	X	

Date of Request: 7/11/12 Total # Canisters: 5  
Requested by: Nancy Love # LL Canisters: 0  
Company: Chesapeake Geosciences # Flow Controllers: 5  
Location: Columbia MD Flow Rate/Setting: 24hrs  
Date Needed: 7/16/12 Order #: 23273

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: *Lara Bennett* Date: 7/13/12  
Printed: Lara Bennett

Relinquished by: *Lara Bennett* Received by: *UPS Ground* Date: 7/13/12 Time: 15:00  
Tracking #: *1Z6401E0391R1411*

Special Instructions/QC Requirements & Comments: Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issues(s) with air media.

QA/QC Reporting Level:  
 Standard  
 NO QC  
 DOA\*  
 NY ASP A\*  
 NY ASP B\*  
 TIER II\*  
 TIER IV\*  
 MA DEP CAM  
 CT DPH RCP  
 \* additional changes may apply contact SA's QA Department for further info.

Client Use: Start 90 Stop 85  
Ambient Temperature (Fahrenheit): 90  
Ambient Pressure (inches of Hg): N/A

Printed: *UPS A* 2497 *Almeyer Drive* Framingham, MA 01001 • 1-800-789-9115 • 413-789-9018 • FAX 413-789-4076 • www.spectrum-analytical.com  
7/30/12 14:00 *052 cmb* Revised 06/10

BB53200 JB

MARIA C. COLLAZO  
4107401911 100  
CHESAPEAKE GEOSCIENCES  
5405 TWIN KNOLLS ROAD  
COLUMBIA MD 21045

30 LBS

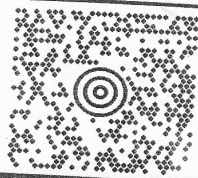
1 OF 1

DWT: 25,20,19

FOLD HERE

**SHIP TO:**

NICOLE LEJA  
(413) 789-9018  
SPECTRUM ANALYTICAL, INC  
11 ALMGREN DRIVE  
AGAWAM MA 01001-3831

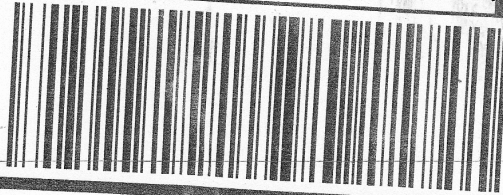


MA 011 9-06



**UPS GROUND**

TRACKING #: 1Z 6Y6 01E 03 9112 1411



BILLING: P/P

Reference#1: CG090491.09LB

US 14.5.29 WNTIE90 27.0A 04/2012



https://www.ups.com/uis/create?ActionOriginPair=default  
PrintWindowPage&key=lab... 7/18/2012



Report Date:  
25-Oct-12 12:18



- Final Report
- Re-Issued Report
- Revised Report

**SPECTRUM ANALYTICAL, INC.**

Featuring

**HANIBAL TECHNOLOGY**

**Laboratory Report**

Chesapeake GeoSciences, Inc.  
5405 Twin Knolls Rd, Suite 1  
Columbia, MD 21045  
Attn: Nancy Love

Project: Midway - 6900, 6910, 6912 & 6907 5th Ave - MD  
Project #: CG-09-0491.09/12

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Container</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB58154-01	VMP-16	Summa canister 6 liter	Soil Gas	11-Oct-12 12:33	15-Oct-12 15:00
SB58154-02	VMP-14	Summa canister 6 liter	Soil Gas	11-Oct-12 11:25	15-Oct-12 15:00
SB58154-03	VMP-11	Summa canister 6 liter	Soil Gas	11-Oct-12 10:30	15-Oct-12 15:00
SB58154-04	VMP-9	Summa canister 6 liter	Soil Gas	11-Oct-12 12:04	15-Oct-12 15:00
SB58154-05	VMP-15	Summa canister 6 liter	Soil Gas	11-Oct-12 12:22	15-Oct-12 15:00
SB58154-06	VMP-DUPE	Summa canister 6 liter	Soil Gas	11-Oct-12 00:00	15-Oct-12 15:00
SB58154-07	VMP-10	Summa canister 6 liter	Soil Gas	11-Oct-12 12:16	15-Oct-12 15:00
SB58154-08	VMP-12	Summa canister 6 liter	Soil Gas	11-Oct-12 10:45	15-Oct-12 15:00
SB58154-09	VMP-13	Summa canister 6 liter	Soil Gas	11-Oct-12 10:51	15-Oct-12 15:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.  
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110  
Connecticut # PH-0777  
Florida # E87600/E87936  
Maine # MA138  
New Hampshire # 2538  
New Jersey # MA011/MA012  
New York # 11393/11840  
Pennsylvania # 68-04426/68-02924  
Rhode Island # 98  
USDA # S-51435



Authorized by:

Nicole Leja  
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 27 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

*Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at [www.spectrum-analytical.com](http://www.spectrum-analytical.com) for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).*

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

**CASE NARRATIVE:**

Samples are received and the pressure is recorded from the gauge on the canister. If a canister does not have a gauge, a vacuum gauge is attached to the valve and pressure is recorded. If the canister is below -10 psig, the can must be pressurized to 0 psig. Tedlar bags do not have the pressure recorded. The can pressure can be located within this report in the sample header information.

If a Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.**

**EPA TO-15**

**Calibration:**

S212461-ICV1

---

Analyte percent recovery is outside individual acceptance criteria (80-120).

- 1,2,4-Trichlorobenzene (78%)
- Bromoform (76%)
- Bromomethane (78%)
- Ethanol (71%)
- Hexachlorobutadiene (68%)

This affected the following samples:

- 1225811-BLK1
- 1225811-BS1
- S212991-CCV1
- VMP-10
- VMP-11
- VMP-12
- VMP-13
- VMP-14
- VMP-15
- VMP-16
- VMP-9
- VMP-DUPE

**Samples:**

SB58154-01                      *VMP-16*

---

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

SB58154-03                      *VMP-11*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

SB58154-04                      *VMP-9*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

SB58154-06                      *VMP-DUPE*

---

Elevated Reporting Limits due to the presence of high levels of non-target analytes.

SB58154-09                      *VMP-13*

---

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Identification

VMP-16  
SB58154-01

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:33

Received  
15-Oct-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
<b>Air Quality Analyses</b>											
<u>Volatile Organics in Air</u>		ppbv		<u>Prepared 22-Oct-12</u>		AirP	<u>Can pressure: -21</u>				
				<u>Dilution: 1.875</u>			<u>Can ID: 5583</u>				
115-07-1	Propene	< 0.399	0.938	< 0.69	1.61	U, D	EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.619	0.938	< 3.06	4.64	U, D	"	"	"	"	X
74-87-3	Chloromethane	< 0.703	0.938	< 1.45	1.94	U, D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.684	0.938	< 4.78	6.56	U, D	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.739	0.938	< 1.89	2.40	U, D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.707	0.938	< 1.56	2.07	U, D	"	"	"	"	X
74-83-9	Bromomethane	< 0.559	0.938	< 2.17	3.64	U, D	"	"	"	"	X
75-00-3	Chloroethane	< 0.840	0.938	< 2.22	2.47	U, D	"	"	"	"	X
67-64-1	Acetone	<b>37.3</b>	0.938	<b>88.64</b>	2.23	D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.838	0.938	< 4.71	5.27	U, D	"	"	"	"	X
64-17-5	Ethanol	<b>19.8</b>	0.938	<b>37.33</b>	1.77	D	"	"	"	"	
107-13-1	Acrylonitrile	< 0.718	0.938	< 1.56	2.03	U, D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.699	0.938	< 2.77	3.72	U, D	"	"	"	"	X
75-09-2	Methylene chloride	< 0.831	0.938	< 2.89	3.26	U, D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.692	0.938	< 5.30	7.19	U, D	"	"	"	"	X
75-15-0	Carbon disulfide	<b>0.994</b>	0.938	<b>3.09</b>	2.92	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.399	0.938	< 1.58	3.72	U, D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.375	0.938	< 1.52	3.80	U, D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.317	0.938	< 1.14	3.38	U, D	"	"	"	"	X
67-63-0	Isopropyl alcohol	<b>1.48</b>	0.938	<b>3.63</b>	2.30	D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	<b>10.6</b>	0.938	<b>31.26</b>	2.77	D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.306	0.938	< 1.21	3.72	U, D	"	"	"	"	X
110-54-3	Hexane	<b>4.39</b>	0.938	<b>15.48</b>	3.31	D	"	"	"	"	X
141-78-6	Ethyl acetate	<b>8.59</b>	0.938	<b>30.95</b>	3.38	D	"	"	"	"	
67-66-3	Chloroform	< 0.532	0.938	< 2.59	4.57	U, D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.412	0.938	< 1.21	2.77	U, D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.476	0.938	< 1.93	3.80	U, D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.368	0.938	< 2.01	5.12	U, D	"	"	"	"	X
71-43-2	Benzene	<b>0.338</b>	0.938	<b>1.08</b>	2.99	J, D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.390	0.938	< 2.45	5.90	U, D	"	"	"	"	X
110-82-7	Cyclohexane	< 0.328	0.938	< 1.13	3.23	U, D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.368	0.938	< 1.70	4.34	U, D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.396	0.938	< 2.65	6.28	U, D	"	"	"	"	X
79-01-6	Trichloroethene	< 0.334	0.938	< 1.79	5.04	U, D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.497	0.938	< 1.79	3.38	U, D	"	"	"	"	X
142-82-5	n-Heptane	< 0.343	0.938	< 1.41	3.84	U, D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.469	0.938	< 1.92	3.84	U, D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.319	0.938	< 1.45	4.26	U, D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.279	0.938	< 1.27	4.26	U, D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.491	0.938	< 2.68	5.12	U, D	"	"	"	"	X
108-88-3	Toluene	<b>2.49</b>	0.938	<b>9.37</b>	3.53	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.289	0.938	< 1.18	3.84	U, D	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.345	0.938	< 2.94	7.99	U, D	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.572	0.938	< 4.40	7.21	U, D	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

VMP-16  
SB58154-01

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:33

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

<u>Volatile Organics in Air</u>		<u>ppbv</u>	<u>Prepared 22-Oct-12</u>		<u>AirP</u>	<u>Can pressure: -21</u>					
			<u>Dilution: 1.875</u>			<u>Can ID: 5583</u>					
127-18-4	Tetrachloroethene	< 0.377	0.938	< 2.56	6.36	U, D	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 0.544	0.938	< 2.51	4.32	U, D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.426	0.938	< 2.93	6.45	U, D	"	"	"	"	
100-41-4	Ethylbenzene	< 0.366	0.938	< 1.59	4.07	U, D	"	"	"	"	X
179601-23-1	m,p-Xylene	<b>0.956</b>	1.88	<b>4.14</b>	8.15	J, D	"	"	"	"	X
75-25-2	Bromoform	< 0.416	0.938	< 4.30	9.69	U, D	"	"	"	"	X
100-42-5	Styrene	< 0.463	0.938	< 1.97	3.99	U, D	"	"	"	"	X
95-47-6	o-Xylene	< 0.572	0.938	< 2.48	4.07	U, D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.512	0.938	< 3.52	6.44	U, D	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.474	0.938	< 2.33	4.61	U, D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.548	0.938	< 2.69	4.61	U, D	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.444	0.938	< 2.18	4.61	U, D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	<b>0.675</b>	0.938	<b>3.32</b>	4.61	J, D	"	"	"	"	X
91-20-3	Naphthalene	< 0.324	0.938	< 1.70	4.91	U, D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.512	0.938	< 3.08	5.64	U, D	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.334	0.938	< 1.72	4.83	U, D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.403	0.938	< 2.42	5.64	U, D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.456	0.938	< 2.50	5.15	U, D	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.448	0.938	< 2.40	5.03	U, D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.435	0.938	< 2.62	5.64	U, D	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.458	0.938	< 2.51	5.15	U, D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.345	0.938	< 2.56	6.96	U, D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.439	0.938	< 4.68	10.00	U, D	"	"	"	"	X

*Surrogate recoveries:*

460-00-4	4-Bromofluorobenzene	107		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-14  
SB58154-02

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 11:25

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>	
<b>Air Quality Analyses</b>												
<u>Volatile Organics in Air</u>		ppbv	<u>Prepared 22-Oct-12</u>				<u>Can pressure: -1</u>					
				<u>Dilution: 1</u>				<u>Can ID: 1372</u>				
115-07-1	Propene	< 0.213	0.500	< 0.37	0.86	U	EPA TO-15	22-Oct-12	KRL	1225811		
75-71-8	Dichlorodifluoromethane (Freon12)	<b>0.450</b>	0.500	<b>2.23</b>	2.47	J	"	"	"	"	X	
74-87-3	Chloromethane	< 0.375	0.500	< 0.77	1.03	U	"	"	"	"	X	
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	0.500	< 2.55	3.49	U	"	"	"	"	X	
75-01-4	Vinyl chloride	< 0.394	0.500	< 1.01	1.28	U	"	"	"	"	X	
106-99-0	1,3-Butadiene	< 0.377	0.500	< 0.83	1.10	U	"	"	"	"	X	
74-83-9	Bromomethane	< 0.298	0.500	< 1.16	1.94	U	"	"	"	"	X	
75-00-3	Chloroethane	< 0.448	0.500	< 1.18	1.32	U	"	"	"	"	X	
67-64-1	Acetone	<b>8.16</b>	0.500	<b>19.39</b>	1.19		"	"	"	"	X	
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.447	0.500	< 2.51	2.81	U	"	"	"	"	X	
64-17-5	Ethanol	<b>4.03</b>	0.500	<b>7.60</b>	0.94		"	"	"	"		
107-13-1	Acrylonitrile	< 0.383	0.500	< 0.83	1.08	U	"	"	"	"	X	
75-35-4	1,1-Dichloroethene	< 0.373	0.500	< 1.48	1.98	U	"	"	"	"	X	
75-09-2	Methylene chloride	< 0.443	0.500	< 1.54	1.74	U	"	"	"	"	X	
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	0.500	< 2.83	3.83	U	"	"	"	"	X	
75-15-0	Carbon disulfide	<b>11.4</b>	0.500	<b>35.48</b>	1.56		"	"	"	"	X	
156-60-5	trans-1,2-Dichloroethene	< 0.213	0.500	< 0.84	1.98	U	"	"	"	"	X	
75-34-3	1,1-Dichloroethane	< 0.200	0.500	< 0.81	2.02	U	"	"	"	"	X	
1634-04-4	Methyl tert-butyl ether	< 0.169	0.500	< 0.61	1.80	U	"	"	"	"	X	
67-63-0	Isopropyl alcohol	<b>0.590</b>	0.500	<b>1.45</b>	1.23		"	"	"	"	X	
78-93-3	2-Butanone (MEK)	<b>4.01</b>	0.500	<b>11.82</b>	1.47		"	"	"	"	X	
156-59-2	cis-1,2-Dichloroethene	< 0.163	0.500	< 0.65	1.98	U	"	"	"	"	X	
110-54-3	Hexane	<b>2.64</b>	0.500	<b>9.31</b>	1.76		"	"	"	"	X	
141-78-6	Ethyl acetate	<b>0.960</b>	0.500	<b>3.46</b>	1.80		"	"	"	"		
67-66-3	Chloroform	<b>0.820</b>	0.500	<b>3.99</b>	2.43		"	"	"	"	X	
109-99-9	Tetrahydrofuran	<b>1.62</b>	0.500	<b>4.78</b>	1.47		"	"	"	"		
107-06-2	1,2-Dichloroethane	< 0.254	0.500	< 1.03	2.02	U	"	"	"	"	X	
71-55-6	1,1,1-Trichloroethane	< 0.196	0.500	< 1.07	2.73	U	"	"	"	"	X	
71-43-2	Benzene	< 0.161	0.500	< 0.51	1.60	U	"	"	"	"	X	
56-23-5	Carbon tetrachloride	< 0.208	0.500	< 1.31	3.15	U	"	"	"	"	X	
110-82-7	Cyclohexane	< 0.175	0.500	< 0.60	1.72	U	"	"	"	"	X	
78-87-5	1,2-Dichloropropane	< 0.196	0.500	< 0.91	2.31	U	"	"	"	"	X	
75-27-4	Bromodichloromethane	< 0.211	0.500	< 1.41	3.35	U	"	"	"	"	X	
79-01-6	Trichloroethene	< 0.178	0.500	< 0.96	2.69	U	"	"	"	"	X	
123-91-1	1,4-Dioxane	< 0.265	0.500	< 0.95	1.80	U	"	"	"	"	X	
142-82-5	n-Heptane	< 0.183	0.500	< 0.75	2.05	U	"	"	"	"	X	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.250	0.500	< 1.02	2.05	U	"	"	"	"	X	
10061-01-5	cis-1,3-Dichloropropene	< 0.170	0.500	< 0.77	2.27	U	"	"	"	"	X	
10061-02-6	trans-1,3-Dichloropropene	< 0.149	0.500	< 0.68	2.27	U	"	"	"	"	X	
79-00-5	1,1,2-Trichloroethane	< 0.262	0.500	< 1.43	2.73	U	"	"	"	"	X	
108-88-3	Toluene	<b>0.390</b>	0.500	<b>1.47</b>	1.88	J	"	"	"	"	X	
591-78-6	2-Hexanone (MBK)	< 0.154	0.500	< 0.63	2.05	U	"	"	"	"		
124-48-1	Dibromochloromethane	< 0.184	0.500	< 1.57	4.26	U	"	"	"	"	X	
106-93-4	1,2-Dibromoethane (EDB)	< 0.305	0.500	< 2.34	3.84	U	"	"	"	"	X	

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-14  
SB58154-02

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 11:25

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -1  
Can ID: 1372

127-18-4	Tetrachloroethene	< 0.201	0.500	< 1.36	3.39	U	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 0.290	0.500	< 1.34	2.30	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.227	0.500	< 1.56	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	< 0.195	0.500	< 0.85	2.17	U	"	"	"	"	X
179601-23-1	m,p-Xylene	< 0.494	1.00	< 2.14	4.34	U	"	"	"	"	X
75-25-2	Bromoform	< 0.222	0.500	< 2.29	5.17	U	"	"	"	"	X
100-42-5	Styrene	< 0.247	0.500	< 1.05	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	< 0.305	0.500	< 1.32	2.17	U	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.273	0.500	< 1.87	3.43	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.253	0.500	< 1.24	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.292	0.500	< 1.44	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.237	0.500	< 1.17	2.46	U	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.167	0.500	< 0.82	2.46	U	"	"	"	"	X
91-20-3	Naphthalene	< 0.173	0.500	< 0.91	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.273	0.500	< 1.64	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.178	0.500	< 0.92	2.58	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.215	0.500	< 1.29	3.01	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.243	0.500	< 1.33	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.239	0.500	< 1.28	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.232	0.500	< 1.39	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.244	0.500	< 1.34	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.184	0.500	< 1.37	3.71	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.234	0.500	< 2.50	5.33	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	103		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-11  
SB58154-03

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 10:30

Received  
15-Oct-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
---------	------------	--------------	------	--------------------------	------	------	-------------	----------	---------	-------	-------

Air Quality Analyses

Volatile Organics in Air		ppbv	Prepared 22-Oct-12 Dilution: 115		R05	Can pressure: +1 Can ID: 0222					
115-07-1	Propene	< 24.5	57.5	< 42.17	98.96	U, D	EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	< 38.0	57.5	< 187.90	284.33	U, D	"	"	"	"	X
74-87-3	Chloromethane	< 43.1	57.5	< 89.02	118.76	U, D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 42.0	57.5	< 293.57	401.91	U, D	"	"	"	"	X
75-01-4	Vinyl chloride	< 45.3	57.5	< 115.80	146.98	U, D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 43.4	57.5	< 95.85	126.99	U, D	"	"	"	"	X
74-83-9	Bromomethane	< 34.3	57.5	< 133.13	223.18	U, D	"	"	"	"	X
75-00-3	Chloroethane	< 51.5	57.5	< 135.86	151.69	U, D	"	"	"	"	X
67-64-1	Acetone	< 51.2	57.5	< 121.67	136.64	U, D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 51.4	57.5	< 288.85	323.13	U, D	"	"	"	"	X
64-17-5	Ethanol	< 46.5	57.5	< 87.67	108.42	U, D	"	"	"	"	X
107-13-1	Acrylonitrile	< 44.0	57.5	< 95.38	124.64	U, D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 42.9	57.5	< 170.20	228.12	U, D	"	"	"	"	X
75-09-2	Methylene chloride	< 50.9	57.5	< 176.74	199.66	U, D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 42.4	57.5	< 324.98	440.72	U, D	"	"	"	"	X
75-15-0	Carbon disulfide	< 42.8	57.5	< 133.21	178.97	U, D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 24.5	57.5	< 97.15	228.00	U, D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 23.0	57.5	< 93.13	232.82	U, D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 19.4	57.5	< 69.98	207.42	U, D	"	"	"	"	X
67-63-0	Isopropyl alcohol	< 26.2	57.5	< 64.29	141.10	U, D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 41.2	57.5	< 121.49	169.56	U, D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 18.7	57.5	< 74.15	228.00	U, D	"	"	"	"	X
110-54-3	Hexane	< 25.0	57.5	< 88.14	202.72	U, D	"	"	"	"	X
141-78-6	Ethyl acetate	< 31.6	57.5	< 113.86	207.19	U, D	"	"	"	"	X
67-66-3	Chloroform	< 32.7	57.5	< 159.15	279.86	U, D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 25.3	57.5	< 74.61	169.56	U, D	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 29.2	57.5	< 118.23	232.82	U, D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 22.5	57.5	< 122.76	313.72	U, D	"	"	"	"	X
71-43-2	Benzene	< 18.5	57.5	< 59.02	183.44	U, D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 23.9	57.5	< 150.34	361.70	U, D	"	"	"	"	X
110-82-7	Cyclohexane	1780	57.5	6126.99	197.92	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 22.5	57.5	< 103.99	265.75	U, D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 24.3	57.5	< 162.80	385.21	U, D	"	"	"	"	X
79-01-6	Trichloroethene	< 20.5	57.5	< 110.17	309.02	U, D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 30.5	57.5	< 109.78	206.95	U, D	"	"	"	"	X
142-82-5	n-Heptane	< 21.0	57.5	< 86.06	235.64	U, D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 28.8	57.5	< 118.03	235.64	U, D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 19.6	57.5	< 88.98	261.04	U, D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 17.1	57.5	< 77.63	261.04	U, D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 30.1	57.5	< 164.23	313.72	U, D	"	"	"	"	X
108-88-3	Toluene	< 21.7	57.5	< 81.65	216.36	U, D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 17.7	57.5	< 72.54	235.64	U, D	"	"	"	"	X
124-48-1	Dibromochloromethane	< 21.2	57.5	< 180.61	489.87	U, D	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 35.1	57.5	< 269.75	441.89	U, D	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

VMP-11  
SB58154-03

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 10:30

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

<u>Volatile Organics in Air</u>		<u>ppbv</u>	<u>Prepared 22-Oct-12</u>			<u>R05</u>	<u>Can pressure: +1</u>				
			<u>Dilution: 115</u>				<u>Can ID: 0222</u>				
127-18-4	Tetrachloroethene	< 23.1	57.5	< 156.65	389.92	U, D	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 33.4	57.5	< 153.82	264.81	U, D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 26.1	57.5	< 179.34	395.09	U, D	"	"	"	"	
100-41-4	Ethylbenzene	< 22.4	57.5	< 97.11	249.28	U, D	"	"	"	"	X
179601-23-1	m,p-Xylene	< 56.8	115	< 246.25	498.57	U, D	"	"	"	"	X
75-25-2	Bromoform	< 25.5	57.5	< 263.55	594.28	U, D	"	"	"	"	X
100-42-5	Styrene	< 28.4	57.5	< 120.80	244.58	U, D	"	"	"	"	X
95-47-6	o-Xylene	< 35.1	57.5	< 152.17	249.28	U, D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 31.4	57.5	< 215.63	394.86	U, D	"	"	"	"	X
98-82-8	Isopropylbenzene	< 29.1	57.5	< 143.06	282.68	U, D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 33.6	57.5	< 165.18	282.68	U, D	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 27.3	57.5	< 134.21	282.68	U, D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 19.2	57.5	< 94.39	282.68	U, D	"	"	"	"	X
91-20-3	Naphthalene	< 19.9	57.5	< 104.18	301.02	U, D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 31.4	57.5	< 188.79	345.71	U, D	"	"	"	"	X
100-44-7	Benzyl chloride	< 20.5	57.5	< 105.64	296.32	U, D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 24.7	57.5	< 148.50	345.71	U, D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 27.9	57.5	< 153.14	315.60	U, D	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 27.5	57.5	< 147.57	308.55	U, D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 26.7	57.5	< 160.53	345.71	U, D	"	"	"	"	X
104-51-8	n-Butylbenzene	< 28.1	57.5	< 154.23	315.60	U, D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 21.2	57.5	< 157.37	426.84	U, D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 26.9	57.5	< 286.82	613.10	U, D	"	"	"	"	X

*Surrogate recoveries:*

460-00-4	4-Bromofluorobenzene	109		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*



## Sample Identification

VMP-9

SB58154-04

Client Project #  
CG-09-0491.09/12Matrix  
Soil GasCollection Date/Time  
11-Oct-12 12:04Received  
15-Oct-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
<b>Air Quality Analyses</b>											
Volatile Organics in Air		ppbv	Prepared 22-Oct-12 Dilution: 4		R05		Can pressure: -1 Can ID: 0255				
115-07-1	Propene	9.88	2.00	17.00	3.44	D	EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	< 1.32	2.00	< 6.53	9.89	U, D	"	"	"	"	X
74-87-3	Chloromethane	< 1.50	2.00	< 3.10	4.13	U, D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 1.46	2.00	< 10.21	13.98	U, D	"	"	"	"	X
75-01-4	Vinyl chloride	< 1.58	2.00	< 4.04	5.11	U, D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 1.51	2.00	< 3.33	4.42	U, D	"	"	"	"	X
74-83-9	Bromomethane	< 1.19	2.00	< 4.62	7.76	U, D	"	"	"	"	X
75-00-3	Chloroethane	< 1.79	2.00	< 4.72	5.28	U, D	"	"	"	"	X
67-64-1	Acetone	< 1.78	2.00	< 4.23	4.75	U, D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.79	2.00	< 10.06	11.24	U, D	"	"	"	"	X
64-17-5	Ethanol	< 1.62	2.00	< 3.05	3.77	U, D	"	"	"	"	X
107-13-1	Acrylonitrile	< 1.53	2.00	< 3.32	4.34	U, D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.49	2.00	< 5.91	7.93	U, D	"	"	"	"	X
75-09-2	Methylene chloride	< 1.77	2.00	< 6.15	6.94	U, D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.48	2.00	< 11.34	15.33	U, D	"	"	"	"	X
75-15-0	Carbon disulfide	6.76	2.00	21.04	6.22	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.852	2.00	< 3.38	7.93	U, D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.800	2.00	< 3.24	8.10	U, D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.676	2.00	< 2.44	7.21	U, D	"	"	"	"	X
67-63-0	Isopropyl alcohol	< 0.912	2.00	< 2.24	4.91	U, D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 1.43	2.00	< 4.22	5.90	U, D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.652	2.00	< 2.59	7.93	U, D	"	"	"	"	X
110-54-3	Hexane	145	2.00	511.21	7.05	D	"	"	"	"	X
141-78-6	Ethyl acetate	< 1.10	2.00	< 3.96	7.21	U, D	"	"	"	"	X
67-66-3	Chloroform	< 1.14	2.00	< 5.55	9.73	U, D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.880	2.00	< 2.60	5.90	U, D	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.02	2.00	< 4.13	8.10	U, D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.784	2.00	< 4.28	10.91	U, D	"	"	"	"	X
71-43-2	Benzene	2.96	2.00	9.44	6.38	D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.832	2.00	< 5.23	12.58	U, D	"	"	"	"	X
110-82-7	Cyclohexane	43.6	2.00	150.08	6.88	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.784	2.00	< 3.62	9.24	U, D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.844	2.00	< 5.65	13.40	U, D	"	"	"	"	X
79-01-6	Trichloroethene	< 0.712	2.00	< 3.83	10.75	U, D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 1.06	2.00	< 3.82	7.20	U, D	"	"	"	"	X
142-82-5	n-Heptane	49.5	2.00	202.86	8.20	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 1.00	2.00	< 4.10	8.20	U, D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.680	2.00	< 3.09	9.08	U, D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.596	2.00	< 2.71	9.08	U, D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.05	2.00	< 5.73	10.91	U, D	"	"	"	"	X
108-88-3	Toluene	34.4	2.00	129.44	7.53	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.616	2.00	< 2.52	8.20	U, D	"	"	"	"	X
124-48-1	Dibromochloromethane	< 0.736	2.00	< 6.27	17.04	U, D	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 1.22	2.00	< 9.38	15.37	U, D	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-9  
SB58154-04

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:04

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

<u>Volatile Organics in Air</u>		<u>ppbv</u>	<u>Prepared 22-Oct-12</u>			<u>R05</u>	<u>Can pressure: -1</u>				
			<u>Dilution: 4</u>				<u>Can ID: 0255</u>				
127-18-4	Tetrachloroethene	< 0.804	2.00	< 5.45	13.56	U, D	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 1.16	2.00	< 5.34	9.21	U, D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.908	2.00	< 6.24	13.74	U, D	"	"	"	"	
100-41-4	Ethylbenzene	18.9	2.00	81.94	8.67	D	"	"	"	"	X
179601-23-1	m,p-Xylene	96.7	4.00	419.23	17.34	D	"	"	"	"	X
75-25-2	Bromoform	< 0.888	2.00	< 9.18	20.67	U, D	"	"	"	"	X
100-42-5	Styrene	< 0.988	2.00	< 4.20	8.51	U, D	"	"	"	"	X
95-47-6	o-Xylene	42.0	2.00	182.09	8.67	D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 1.09	2.00	< 7.49	13.73	U, D	"	"	"	"	X
98-82-8	Isopropylbenzene	4.56	2.00	22.42	9.83	D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	10.7	2.00	52.60	9.83	D	"	"	"	"	X
622-96-8	4-Ethyltoluene	5.12	2.00	25.17	9.83	D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	20.7	2.00	101.76	9.83	D	"	"	"	"	X
91-20-3	Naphthalene	< 0.692	2.00	< 3.62	10.47	U, D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.09	2.00	< 6.55	12.02	U, D	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.712	2.00	< 3.67	10.31	U, D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.860	2.00	< 5.17	12.02	U, D	"	"	"	"	X
135-98-8	sec-Butylbenzene	1.20	2.00	6.59	10.98	J, D	"	"	"	"	
99-87-6	4-Isopropyltoluene	4.24	2.00	22.75	10.73	D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.928	2.00	< 5.58	12.02	U, D	"	"	"	"	X
104-51-8	n-Butylbenzene	1.64	2.00	9.00	10.98	J, D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.736	2.00	< 5.46	14.85	U, D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.936	2.00	< 9.98	21.33	U, D	"	"	"	"	X

*Surrogate recoveries:*

460-00-4	4-Bromofluorobenzene	112		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-15  
SB58154-05

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:22

Received  
15-Oct-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
---------	------------	--------------	------	--------------------------	------	------	-------------	----------	---------	-------	-------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -3  
Can ID: 7633

115-07-1	Propene	18.5	0.500	31.84	0.86		EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	0.470	0.500	2.32	2.47	J	"	"	"	"	X
74-87-3	Chloromethane	< 0.375	0.500	< 0.77	1.03	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	0.500	< 2.55	3.49	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.394	0.500	< 1.01	1.28	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.377	0.500	< 0.83	1.10	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.298	0.500	< 1.16	1.94	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.448	0.500	< 1.18	1.32	U	"	"	"	"	X
67-64-1	Acetone	9.94	0.500	23.62	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.447	0.500	< 2.51	2.81	U	"	"	"	"	X
64-17-5	Ethanol	3.08	0.500	5.81	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.383	0.500	< 0.83	1.08	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.373	0.500	< 1.48	1.98	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.443	0.500	< 1.54	1.74	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	0.500	< 2.83	3.83	U	"	"	"	"	X
75-15-0	Carbon disulfide	2.85	0.500	8.87	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.213	0.500	< 0.84	1.98	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.200	0.500	< 0.81	2.02	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.169	0.500	< 0.61	1.80	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	0.450	0.500	1.10	1.23	J	"	"	"	"	X
78-93-3	2-Butanone (MEK)	4.75	0.500	14.01	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.163	0.500	< 0.65	1.98	U	"	"	"	"	X
110-54-3	Hexane	1.56	0.500	5.50	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	1.30	0.500	4.68	1.80		"	"	"	"	
67-66-3	Chloroform	6.21	0.500	30.22	2.43		"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.220	0.500	< 0.65	1.47	U	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.254	0.500	< 1.03	2.02	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.196	0.500	< 1.07	2.73	U	"	"	"	"	X
71-43-2	Benzene	1.45	0.500	4.63	1.60		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.208	0.500	< 1.31	3.15	U	"	"	"	"	X
110-82-7	Cyclohexane	< 0.175	0.500	< 0.60	1.72	U	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.196	0.500	< 0.91	2.31	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.211	0.500	< 1.41	3.35	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.178	0.500	< 0.96	2.69	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.265	0.500	< 0.95	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	0.240	0.500	0.98	2.05	J	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.250	0.500	< 1.02	2.05	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.170	0.500	< 0.77	2.27	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.149	0.500	< 0.68	2.27	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.262	0.500	< 1.43	2.73	U	"	"	"	"	X
108-88-3	Toluene	1.79	0.500	6.74	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.154	0.500	< 0.63	2.05	U	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.184	0.500	< 1.57	4.26	U	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.305	0.500	< 2.34	3.84	U	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-15  
SB58154-05

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:22

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -3  
Can ID: 7633

127-18-4	Tetrachloroethene	< 0.201	0.500	< 1.36	3.39	U	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 0.290	0.500	< 1.34	2.30	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.227	0.500	< 1.56	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	0.400	0.500	1.73	2.17	J	"	"	"	"	X
179601-23-1	m,p-Xylene	1.20	1.00	5.20	4.34		"	"	"	"	X
75-25-2	Bromoform	< 0.222	0.500	< 2.29	5.17	U	"	"	"	"	X
100-42-5	Styrene	< 0.247	0.500	< 1.05	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	0.550	0.500	2.38	2.17		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.273	0.500	< 1.87	3.43	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.253	0.500	< 1.24	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.292	0.500	< 1.44	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.237	0.500	< 1.17	2.46	U	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	0.200	0.500	0.98	2.46	J	"	"	"	"	X
91-20-3	Naphthalene	< 0.173	0.500	< 0.91	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.273	0.500	< 1.64	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.178	0.500	< 0.92	2.58	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.215	0.500	< 1.29	3.01	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.243	0.500	< 1.33	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.239	0.500	< 1.28	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.232	0.500	< 1.39	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.244	0.500	< 1.34	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.184	0.500	< 1.37	3.71	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.234	0.500	< 2.50	5.33	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	105		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-DUPE  
SB58154-06

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 00:00

Received  
15-Oct-12

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m <sup>3</sup>	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
---------	------------	--------------	------	--------------------------	------	------	-------------	----------	---------	-------	-------

**Air Quality Analyses**

<u>Volatile Organics in Air</u>		ppbv	<u>Prepared 22-Oct-12</u>		R05		<u>Can pressure: 0</u>				
			<u>Dilution: 4</u>				<u>Can ID: 1645</u>				
115-07-1	Propene	9.72	2.00	16.73	3.44	D	EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	< 1.32	2.00	< 6.53	9.89	U, D	"	"	"	"	X
74-87-3	Chloromethane	< 1.50	2.00	< 3.10	4.13	U, D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 1.46	2.00	< 10.21	13.98	U, D	"	"	"	"	X
75-01-4	Vinyl chloride	< 1.58	2.00	< 4.04	5.11	U, D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 1.51	2.00	< 3.33	4.42	U, D	"	"	"	"	X
74-83-9	Bromomethane	< 1.19	2.00	< 4.62	7.76	U, D	"	"	"	"	X
75-00-3	Chloroethane	< 1.79	2.00	< 4.72	5.28	U, D	"	"	"	"	X
67-64-1	Acetone	< 1.78	2.00	< 4.23	4.75	U, D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.79	2.00	< 10.06	11.24	U, D	"	"	"	"	X
64-17-5	Ethanol	5.44	2.00	10.26	3.77	D	"	"	"	"	
107-13-1	Acrylonitrile	< 1.53	2.00	< 3.32	4.34	U, D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.49	2.00	< 5.91	7.93	U, D	"	"	"	"	X
75-09-2	Methylene chloride	< 1.77	2.00	< 6.15	6.94	U, D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.48	2.00	< 11.34	15.33	U, D	"	"	"	"	X
75-15-0	Carbon disulfide	6.60	2.00	20.54	6.22	D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.852	2.00	< 3.38	7.93	U, D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.800	2.00	< 3.24	8.10	U, D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.676	2.00	< 2.44	7.21	U, D	"	"	"	"	X
67-63-0	Isopropyl alcohol	< 0.912	2.00	< 2.24	4.91	U, D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	3.60	2.00	10.62	5.90	D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.652	2.00	< 2.59	7.93	U, D	"	"	"	"	X
110-54-3	Hexane	147	2.00	518.26	7.05	D	"	"	"	"	X
141-78-6	Ethyl acetate	< 1.10	2.00	< 3.96	7.21	U, D	"	"	"	"	
67-66-3	Chloroform	< 1.14	2.00	< 5.55	9.73	U, D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.880	2.00	< 2.60	5.90	U, D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1.02	2.00	< 4.13	8.10	U, D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.784	2.00	< 4.28	10.91	U, D	"	"	"	"	X
71-43-2	Benzene	2.88	2.00	9.19	6.38	D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.832	2.00	< 5.23	12.58	U, D	"	"	"	"	X
110-82-7	Cyclohexane	44.6	2.00	153.52	6.88	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.784	2.00	< 3.62	9.24	U, D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.844	2.00	< 5.65	13.40	U, D	"	"	"	"	X
79-01-6	Trichloroethene	< 0.712	2.00	< 3.83	10.75	U, D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 1.06	2.00	< 3.82	7.20	U, D	"	"	"	"	X
142-82-5	n-Heptane	48.3	2.00	197.94	8.20	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 1.00	2.00	< 4.10	8.20	U, D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.680	2.00	< 3.09	9.08	U, D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.596	2.00	< 2.71	9.08	U, D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.05	2.00	< 5.73	10.91	U, D	"	"	"	"	X
108-88-3	Toluene	32.3	2.00	121.54	7.53	D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.616	2.00	< 2.52	8.20	U, D	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.736	2.00	< 6.27	17.04	U, D	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 1.22	2.00	< 9.38	15.37	U, D	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-DUPE  
SB58154-06

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 00:00

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
<b>Air Quality Analyses</b>											
<u>Volatile Organics in Air</u>		ppbv	<u>Prepared 22-Oct-12</u>			R05	<u>Can pressure: 0</u>				
			<u>Dilution: 4</u>				<u>Can ID: 1645</u>				
127-18-4	Tetrachloroethene	< 0.804	2.00	< 5.45	13.56	U, D	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 1.16	2.00	< 5.34	9.21	U, D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.908	2.00	< 6.24	13.74	U, D	"	"	"	"	
100-41-4	Ethylbenzene	18.2	2.00	78.90	8.67	D	"	"	"	"	X
179601-23-1	m,p-Xylene	90.3	4.00	391.48	17.34	D	"	"	"	"	X
75-25-2	Bromoform	< 0.888	2.00	< 9.18	20.67	U, D	"	"	"	"	X
100-42-5	Styrene	< 0.988	2.00	< 4.20	8.51	U, D	"	"	"	"	X
95-47-6	o-Xylene	38.4	2.00	166.48	8.67	D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 1.09	2.00	< 7.49	13.73	U, D	"	"	"	"	X
98-82-8	Isopropylbenzene	4.28	2.00	21.04	9.83	D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	8.72	2.00	42.87	9.83	D	"	"	"	"	X
622-96-8	4-Ethyltoluene	4.68	2.00	23.01	9.83	D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	16.2	2.00	79.64	9.83	D	"	"	"	"	X
91-20-3	Naphthalene	< 0.692	2.00	< 3.62	10.47	U, D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.09	2.00	< 6.55	12.02	U, D	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.712	2.00	< 3.67	10.31	U, D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.860	2.00	< 5.17	12.02	U, D	"	"	"	"	X
135-98-8	sec-Butylbenzene	1.04	2.00	5.71	10.98	J, D	"	"	"	"	
99-87-6	4-Isopropyltoluene	4.52	2.00	24.25	10.73	D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.928	2.00	< 5.58	12.02	U, D	"	"	"	"	X
104-51-8	n-Butylbenzene	1.24	2.00	6.81	10.98	J, D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.736	2.00	< 5.46	14.85	U, D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.936	2.00	< 9.98	21.33	U, D	"	"	"	"	X
<u>Surrogate recoveries:</u>											
460-00-4	4-Bromofluorobenzene	111		70-130 %			"	"	"	"	

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-10  
SB58154-07

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:16

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -1  
Can ID: 1376

115-07-1	Propene	< 0.213	0.500	< 0.37	0.86	U	EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	<b>0.480</b>	0.500	<b>2.37</b>	2.47	J	"	"	"	"	X
74-87-3	Chloromethane	< 0.375	0.500	< 0.77	1.03	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	0.500	< 2.55	3.49	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.394	0.500	< 1.01	1.28	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.377	0.500	< 0.83	1.10	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.298	0.500	< 1.16	1.94	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.448	0.500	< 1.18	1.32	U	"	"	"	"	X
67-64-1	Acetone	<b>14.8</b>	0.500	<b>35.17</b>	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.447	0.500	< 2.51	2.81	U	"	"	"	"	X
64-17-5	Ethanol	<b>3.60</b>	0.500	<b>6.79</b>	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.383	0.500	< 0.83	1.08	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.373	0.500	< 1.48	1.98	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.443	0.500	< 1.54	1.74	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	0.500	< 2.83	3.83	U	"	"	"	"	X
75-15-0	Carbon disulfide	<b>9.25</b>	0.500	<b>28.79</b>	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.213	0.500	< 0.84	1.98	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.200	0.500	< 0.81	2.02	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.169	0.500	< 0.61	1.80	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	<b>0.230</b>	0.500	<b>0.56</b>	1.23	J	"	"	"	"	X
78-93-3	2-Butanone (MEK)	<b>12.3</b>	0.500	<b>36.27</b>	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.163	0.500	< 0.65	1.98	U	"	"	"	"	X
110-54-3	Hexane	<b>0.760</b>	0.500	<b>2.68</b>	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	<b>1.42</b>	0.500	<b>5.12</b>	1.80		"	"	"	"	
67-66-3	Chloroform	<b>2.56</b>	0.500	<b>12.46</b>	2.43		"	"	"	"	X
109-99-9	Tetrahydrofuran	<b>18.1</b>	0.500	<b>53.37</b>	1.47		"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.254	0.500	< 1.03	2.02	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.196	0.500	< 1.07	2.73	U	"	"	"	"	X
71-43-2	Benzene	<b>0.230</b>	0.500	<b>0.73</b>	1.60	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.208	0.500	< 1.31	3.15	U	"	"	"	"	X
110-82-7	Cyclohexane	< 0.175	0.500	< 0.60	1.72	U	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.196	0.500	< 0.91	2.31	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.211	0.500	< 1.41	3.35	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.178	0.500	< 0.96	2.69	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.265	0.500	< 0.95	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.183	0.500	< 0.75	2.05	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.250	0.500	< 1.02	2.05	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.170	0.500	< 0.77	2.27	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.149	0.500	< 0.68	2.27	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.262	0.500	< 1.43	2.73	U	"	"	"	"	X
108-88-3	Toluene	<b>0.650</b>	0.500	<b>2.45</b>	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.154	0.500	< 0.63	2.05	U	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.184	0.500	< 1.57	4.26	U	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.305	0.500	< 2.34	3.84	U	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-10  
SB58154-07

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 12:16

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -1  
Can ID: 1376

127-18-4	Tetrachloroethene	< 0.201	0.500	< 1.36	3.39	U	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 0.290	0.500	< 1.34	2.30	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.227	0.500	< 1.56	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	< 0.195	0.500	< 0.85	2.17	U	"	"	"	"	X
179601-23-1	m,p-Xylene	< 0.494	1.00	< 2.14	4.34	U	"	"	"	"	X
75-25-2	Bromoform	< 0.222	0.500	< 2.29	5.17	U	"	"	"	"	X
100-42-5	Styrene	< 0.247	0.500	< 1.05	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	< 0.305	0.500	< 1.32	2.17	U	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.273	0.500	< 1.87	3.43	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.253	0.500	< 1.24	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.292	0.500	< 1.44	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.237	0.500	< 1.17	2.46	U	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.167	0.500	< 0.82	2.46	U	"	"	"	"	X
91-20-3	Naphthalene	< 0.173	0.500	< 0.91	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.273	0.500	< 1.64	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.178	0.500	< 0.92	2.58	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.215	0.500	< 1.29	3.01	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.243	0.500	< 1.33	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.239	0.500	< 1.28	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.232	0.500	< 1.39	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.244	0.500	< 1.34	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.184	0.500	< 1.37	3.71	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.234	0.500	< 2.50	5.33	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	104		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*



Sample Identification

VMP-12  
SB58154-08

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 10:45

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -1  
Can ID: 1366

115-07-1	Propene	16.7	0.500	28.74	0.86		EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	0.460	0.500	2.27	2.47	J	"	"	"	"	X
74-87-3	Chloromethane	< 0.375	0.500	< 0.77	1.03	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	0.500	< 2.55	3.49	U	"	"	"	"	X
75-01-4	Vinyl chloride	< 0.394	0.500	< 1.01	1.28	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.377	0.500	< 0.83	1.10	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.298	0.500	< 1.16	1.94	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.448	0.500	< 1.18	1.32	U	"	"	"	"	X
67-64-1	Acetone	14.8	0.500	35.17	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.447	0.500	< 2.51	2.81	U	"	"	"	"	X
64-17-5	Ethanol	2.35	0.500	4.43	0.94		"	"	"	"	
107-13-1	Acrylonitrile	< 0.383	0.500	< 0.83	1.08	U	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 0.373	0.500	< 1.48	1.98	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.443	0.500	< 1.54	1.74	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	0.500	< 2.83	3.83	U	"	"	"	"	X
75-15-0	Carbon disulfide	42.6	0.500	132.59	1.56		"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.213	0.500	< 0.84	1.98	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.200	0.500	< 0.81	2.02	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.169	0.500	< 0.61	1.80	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	0.320	0.500	0.79	1.23	J	"	"	"	"	X
78-93-3	2-Butanone (MEK)	4.01	0.500	11.82	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.163	0.500	< 0.65	1.98	U	"	"	"	"	X
110-54-3	Hexane	2.16	0.500	7.62	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	< 0.275	0.500	< 0.99	1.80	U	"	"	"	"	
67-66-3	Chloroform	1.12	0.500	5.45	2.43		"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.220	0.500	< 0.65	1.47	U	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.254	0.500	< 1.03	2.02	U	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 0.196	0.500	< 1.07	2.73	U	"	"	"	"	X
71-43-2	Benzene	2.17	0.500	6.92	1.60		"	"	"	"	X
56-23-5	Carbon tetrachloride	< 0.208	0.500	< 1.31	3.15	U	"	"	"	"	X
110-82-7	Cyclohexane	0.200	0.500	0.69	1.72	J	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 0.196	0.500	< 0.91	2.31	U	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.211	0.500	< 1.41	3.35	U	"	"	"	"	X
79-01-6	Trichloroethene	< 0.178	0.500	< 0.96	2.69	U	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.265	0.500	< 0.95	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	0.600	0.500	2.46	2.05		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	0.300	0.500	1.23	2.05	J	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.170	0.500	< 0.77	2.27	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.149	0.500	< 0.68	2.27	U	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 0.262	0.500	< 1.43	2.73	U	"	"	"	"	X
108-88-3	Toluene	5.04	0.500	18.96	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	0.280	0.500	1.15	2.05	J	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.184	0.500	< 1.57	4.26	U	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.305	0.500	< 2.34	3.84	U	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-12  
SB58154-08

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 10:45

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

Volatile Organics in Air

ppbv

Prepared 22-Oct-12  
Dilution: 1

Can pressure: -1  
Can ID: 1366

127-18-4	Tetrachloroethene	< 0.201	0.500	< 1.36	3.39	U	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 0.290	0.500	< 1.34	2.30	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.227	0.500	< 1.56	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	<b>0.640</b>	0.500	<b>2.77</b>	2.17		"	"	"	"	X
179601-23-1	m,p-Xylene	<b>1.63</b>	1.00	<b>7.07</b>	4.34		"	"	"	"	X
75-25-2	Bromoform	< 0.222	0.500	< 2.29	5.17	U	"	"	"	"	X
100-42-5	Styrene	< 0.247	0.500	< 1.05	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	<b>0.720</b>	0.500	<b>3.12</b>	2.17		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.273	0.500	< 1.87	3.43	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.253	0.500	< 1.24	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.292	0.500	< 1.44	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	<b>0.280</b>	0.500	<b>1.38</b>	2.46	J	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	<b>0.750</b>	0.500	<b>3.69</b>	2.46		"	"	"	"	X
91-20-3	Naphthalene	< 0.173	0.500	< 0.91	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.273	0.500	< 1.64	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.178	0.500	< 0.92	2.58	U	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 0.215	0.500	< 1.29	3.01	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.243	0.500	< 1.33	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.239	0.500	< 1.28	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.232	0.500	< 1.39	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.244	0.500	< 1.34	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.184	0.500	< 1.37	3.71	U	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.234	0.500	< 2.50	5.33	U	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	104		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-13  
SB58154-09

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 10:51

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
<b>Air Quality Analyses</b>											
<u>Volatile Organics in Air</u>		ppbv	<u>Prepared 22-Oct-12</u>			GS1	<u>Can pressure: 0</u>				
			<u>Dilution: 20</u>				<u>Can ID: 4638</u>				
115-07-1	Propene	24.2	10.0	41.65	17.21	D	EPA TO-15	22-Oct-12	KRL	1225811	
75-71-8	Dichlorodifluoromethane (Freon12)	< 6.60	10.0	< 32.64	49.45	U, D	"	"	"	"	X
74-87-3	Chloromethane	< 7.50	10.0	< 15.49	20.65	U, D	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 7.30	10.0	< 51.03	69.90	U, D	"	"	"	"	X
75-01-4	Vinyl chloride	< 7.88	10.0	< 20.14	25.56	U, D	"	"	"	"	X
106-99-0	1,3-Butadiene	< 7.54	10.0	< 16.65	22.09	U, D	"	"	"	"	X
74-83-9	Bromomethane	< 5.96	10.0	< 23.13	38.81	U, D	"	"	"	"	X
75-00-3	Chloroethane	< 8.96	10.0	< 23.64	26.38	U, D	"	"	"	"	X
67-64-1	Acetone	< 8.90	10.0	< 21.15	23.76	U, D	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 8.94	10.0	< 50.24	56.20	U, D	"	"	"	"	X
64-17-5	Ethanol	< 8.08	10.0	< 15.23	18.85	U, D	"	"	"	"	
107-13-1	Acrylonitrile	< 7.66	10.0	< 16.60	21.68	U, D	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 7.46	10.0	< 29.60	39.67	U, D	"	"	"	"	X
75-09-2	Methylene chloride	< 8.86	10.0	< 30.77	34.72	U, D	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 7.38	10.0	< 56.56	76.65	U, D	"	"	"	"	X
75-15-0	Carbon disulfide	< 7.44	10.0	< 23.16	31.12	U, D	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 4.26	10.0	< 16.89	39.65	U, D	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 4.00	10.0	< 16.20	40.49	U, D	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 3.38	10.0	< 12.19	36.07	U, D	"	"	"	"	X
67-63-0	Isopropyl alcohol	< 4.56	10.0	< 11.19	24.54	U, D	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 7.16	10.0	< 21.11	29.49	U, D	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 3.26	10.0	< 12.93	39.65	U, D	"	"	"	"	X
110-54-3	Hexane	1030	10.0	3631.33	35.26	D	"	"	"	"	X
141-78-6	Ethyl acetate	< 5.50	10.0	< 19.82	36.03	U, D	"	"	"	"	
67-66-3	Chloroform	< 5.68	10.0	< 27.64	48.67	U, D	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 4.40	10.0	< 12.98	29.49	U, D	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 5.08	10.0	< 20.57	40.49	U, D	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 3.92	10.0	< 21.39	54.56	U, D	"	"	"	"	X
71-43-2	Benzene	< 3.22	10.0	< 10.27	31.90	U, D	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 4.16	10.0	< 26.17	62.90	U, D	"	"	"	"	X
110-82-7	Cyclohexane	482	10.0	1659.11	34.42	D	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 3.92	10.0	< 18.12	46.22	U, D	"	"	"	"	X
75-27-4	Bromodichloromethane	< 4.22	10.0	< 28.27	66.99	U, D	"	"	"	"	X
79-01-6	Trichloroethene	< 3.56	10.0	< 19.13	53.74	U, D	"	"	"	"	X
123-91-1	1,4-Dioxane	< 5.30	10.0	< 19.08	35.99	U, D	"	"	"	"	X
142-82-5	n-Heptane	31.0	10.0	127.04	40.98	D	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 5.00	10.0	< 20.49	40.98	U, D	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 3.40	10.0	< 15.44	45.40	U, D	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 2.98	10.0	< 13.53	45.40	U, D	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.24	10.0	< 28.59	54.56	U, D	"	"	"	"	X
108-88-3	Toluene	4.60	10.0	17.31	37.63	J, D	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 3.08	10.0	< 12.62	40.98	U, D	"	"	"	"	
124-48-1	Dibromochloromethane	< 3.68	10.0	< 31.35	85.19	U, D	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 6.10	10.0	< 46.88	76.85	U, D	"	"	"	"	X

*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

VMP-13  
SB58154-09

Client Project #  
CG-09-0491.09/12

Matrix  
Soil Gas

Collection Date/Time  
11-Oct-12 10:51

Received  
15-Oct-12

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result/Units</u>	<u>*RDL</u>	<u>Result ug/m<sup>3</sup></u>	<u>*RDL</u>	<u>Flag</u>	<u>Method Ref.</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
----------------	-------------------	---------------------	-------------	--------------------------------	-------------	-------------	--------------------	-----------------	----------------	--------------	--------------

**Air Quality Analyses**

<u>Volatile Organics in Air</u>		<u>ppbv</u>	<u>Prepared 22-Oct-12</u>			<u>GS1</u>	<u>Can pressure: 0</u>				
			<u>Dilution: 20</u>				<u>Can ID: 4638</u>				
127-18-4	Tetrachloroethene	< 4.02	10.0	< 27.26	67.81	U, D	EPA TO-15	22-Oct-12	KRL	1225811	X
108-90-7	Chlorobenzene	< 5.80	10.0	< 26.71	46.05	U, D	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 4.54	10.0	< 31.20	68.71	U, D	"	"	"	"	
100-41-4	Ethylbenzene	< 3.90	10.0	< 16.91	43.35	U, D	"	"	"	"	X
179601-23-1	m,p-Xylene	< 9.88	20.0	< 42.83	86.71	U, D	"	"	"	"	X
75-25-2	Bromoform	< 4.44	10.0	< 45.89	103.35	U, D	"	"	"	"	X
100-42-5	Styrene	< 4.94	10.0	< 21.01	42.54	U, D	"	"	"	"	X
95-47-6	o-Xylene	< 6.10	10.0	< 26.45	43.35	U, D	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.46	10.0	< 37.49	68.67	U, D	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.06	10.0	< 24.88	49.16	U, D	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 5.84	10.0	< 28.71	49.16	U, D	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 4.74	10.0	< 23.30	49.16	U, D	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 3.34	10.0	< 16.42	49.16	U, D	"	"	"	"	X
91-20-3	Naphthalene	< 3.46	10.0	< 18.11	52.35	U, D	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.46	10.0	< 32.83	60.12	U, D	"	"	"	"	X
100-44-7	Benzyl chloride	< 3.56	10.0	< 18.35	51.53	U, D	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 4.30	10.0	< 25.85	60.12	U, D	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 4.86	10.0	< 26.68	54.89	U, D	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 4.78	10.0	< 25.65	53.66	U, D	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 4.64	10.0	< 27.90	60.12	U, D	"	"	"	"	X
104-51-8	n-Butylbenzene	< 4.88	10.0	< 26.79	54.89	U, D	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 3.68	10.0	< 27.32	74.23	U, D	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 4.68	10.0	< 49.90	106.63	U, D	"	"	"	"	X

*Surrogate recoveries:*

460-00-4	4-Bromofluorobenzene	109		70-130 %			"	"	"	"	
----------	----------------------	-----	--	----------	--	--	---	---	---	---	--

*This laboratory report is not valid without an authorized signature on the cover page.*

**Air Quality Analyses - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1225811 - General Air Prep</b>										
<u>Blank (1225811-BLK1)</u>						<u>Prepared &amp; Analyzed: 22-Oct-12</u>				
Propene	< 0.213	U	ppbv	0.213						
Dichlorodifluoromethane (Freon12)	< 0.330	U	ppbv	0.330						
Chloromethane	< 0.375	U	ppbv	0.375						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.365	U	ppbv	0.365						
Vinyl chloride	< 0.394	U	ppbv	0.394						
1,3-Butadiene	< 0.377	U	ppbv	0.377						
Bromomethane	< 0.298	U	ppbv	0.298						
Chloroethane	< 0.448	U	ppbv	0.448						
Acetone	< 0.445	U	ppbv	0.445						
Trichlorofluoromethane (Freon 11)	< 0.447	U	ppbv	0.447						
Ethanol	< 0.404	U	ppbv	0.404						
Acrylonitrile	< 0.383	U	ppbv	0.383						
1,1-Dichloroethene	< 0.373	U	ppbv	0.373						
Methylene chloride	< 0.443	U	ppbv	0.443						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.369	U	ppbv	0.369						
Carbon disulfide	< 0.372	U	ppbv	0.372						
trans-1,2-Dichloroethene	< 0.213	U	ppbv	0.213						
1,1-Dichloroethane	< 0.200	U	ppbv	0.200						
Methyl tert-butyl ether	< 0.169	U	ppbv	0.169						
Isopropyl alcohol	< 0.228	U	ppbv	0.228						
2-Butanone (MEK)	< 0.358	U	ppbv	0.358						
cis-1,2-Dichloroethene	< 0.163	U	ppbv	0.163						
Hexane	< 0.217	U	ppbv	0.217						
Ethyl acetate	< 0.275	U	ppbv	0.275						
Chloroform	< 0.284	U	ppbv	0.284						
Tetrahydrofuran	< 0.220	U	ppbv	0.220						
1,2-Dichloroethane	< 0.254	U	ppbv	0.254						
1,1,1-Trichloroethane	< 0.196	U	ppbv	0.196						
Benzene	< 0.161	U	ppbv	0.161						
Carbon tetrachloride	< 0.208	U	ppbv	0.208						
Cyclohexane	< 0.175	U	ppbv	0.175						
1,2-Dichloropropane	< 0.196	U	ppbv	0.196						
Bromodichloromethane	< 0.211	U	ppbv	0.211						
Trichloroethene	< 0.178	U	ppbv	0.178						
1,4-Dioxane	< 0.265	U	ppbv	0.265						
n-Heptane	< 0.183	U	ppbv	0.183						
4-Methyl-2-pentanone (MIBK)	< 0.250	U	ppbv	0.250						
cis-1,3-Dichloropropene	< 0.170	U	ppbv	0.170						
trans-1,3-Dichloropropene	< 0.149	U	ppbv	0.149						
1,1,2-Trichloroethane	< 0.262	U	ppbv	0.262						
Toluene	< 0.189	U	ppbv	0.189						
2-Hexanone (MBK)	< 0.154	U	ppbv	0.154						
Dibromochloromethane	< 0.184	U	ppbv	0.184						
1,2-Dibromoethane (EDB)	< 0.305	U	ppbv	0.305						
Tetrachloroethene	< 0.201	U	ppbv	0.201						
Chlorobenzene	< 0.290	U	ppbv	0.290						
1,1,1,2-Tetrachloroethane	< 0.227	U	ppbv	0.227						
Ethylbenzene	< 0.195	U	ppbv	0.195						
m,p-Xylene	< 0.494	U	ppbv	0.494						
Bromoform	< 0.222	U	ppbv	0.222						
Styrene	< 0.247	U	ppbv	0.247						
o-Xylene	< 0.305	U	ppbv	0.305						

*This laboratory report is not valid without an authorized signature on the cover page.*

**Air Quality Analyses - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1225811 - General Air Prep</b>										
<b>Blank (1225811-BLK1)</b>					<u>Prepared &amp; Analyzed: 22-Oct-12</u>					
1,1,2,2-Tetrachloroethane	< 0.273	U	ppbv	0.273						
Isopropylbenzene	< 0.253	U	ppbv	0.253						
1,3,5-Trimethylbenzene	< 0.292	U	ppbv	0.292						
4-Ethyltoluene	< 0.237	U	ppbv	0.237						
1,2,4-Trimethylbenzene	< 0.167	U	ppbv	0.167						
Naphthalene	< 0.173	U	ppbv	0.173						
1,3-Dichlorobenzene	< 0.273	U	ppbv	0.273						
Benzyl chloride	< 0.178	U	ppbv	0.178						
1,4-Dichlorobenzene	< 0.215	U	ppbv	0.215						
sec-Butylbenzene	< 0.243	U	ppbv	0.243						
4-Isopropyltoluene	< 0.239	U	ppbv	0.239						
1,2-Dichlorobenzene	< 0.232	U	ppbv	0.232						
n-Butylbenzene	< 0.244	U	ppbv	0.244						
1,2,4-Trichlorobenzene	< 0.184	U	ppbv	0.184						
Hexachlorobutadiene	< 0.234	U	ppbv	0.234						
<hr/>										
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>10.6</i>		ppbv		<i>10.0</i>		<i>106</i>	<i>70-130</i>		
<b>LCS (1225811-BS1)</b>					<u>Prepared &amp; Analyzed: 22-Oct-12</u>					
Propene	<b>8.20</b>		ppbv		10.0		82	70-130		
Dichlorodifluoromethane (Freon12)	<b>8.64</b>		ppbv		10.0		86	70-130		
Chloromethane	<b>8.33</b>		ppbv		10.0		83	70-130		
1,2-Dichlorotetrafluoroethane (Freon 114)	<b>9.16</b>		ppbv		10.0		92	70-130		
Vinyl chloride	<b>8.69</b>		ppbv		10.0		87	70-130		
1,3-Butadiene	<b>8.46</b>		ppbv		10.0		85	70-130		
Bromomethane	<b>8.52</b>		ppbv		10.0		85	70-130		
Chloroethane	<b>8.57</b>		ppbv		10.0		86	70-130		
Acetone	<b>8.80</b>		ppbv		10.0		88	70-130		
Trichlorofluoromethane (Freon 11)	<b>9.02</b>		ppbv		10.0		90	70-130		
Ethanol	<b>7.08</b>		ppbv		10.0		71	70-130		
Acrylonitrile	<b>7.95</b>		ppbv		10.0		80	50-150		
1,1-Dichloroethene	<b>8.76</b>		ppbv		10.0		88	70-130		
Methylene chloride	<b>8.62</b>		ppbv		10.0		86	70-130		
1,1,2-Trichlorotrifluoroethane (Freon 113)	<b>9.03</b>		ppbv		10.0		90	70-130		
Carbon disulfide	<b>8.57</b>		ppbv		10.0		86	70-130		
trans-1,2-Dichloroethene	<b>8.78</b>		ppbv		10.0		88	70-130		
1,1-Dichloroethane	<b>8.23</b>		ppbv		10.0		82	70-130		
Methyl tert-butyl ether	<b>8.54</b>		ppbv		10.0		85	70-130		
Isopropyl alcohol	<b>8.32</b>		ppbv		10.0		83	70-130		
2-Butanone (MEK)	<b>8.50</b>		ppbv		10.0		85	70-130		
cis-1,2-Dichloroethene	<b>8.83</b>		ppbv		10.0		88	70-130		
Hexane	<b>8.71</b>		ppbv		10.0		87	70-130		
Ethyl acetate	<b>9.21</b>		ppbv		10.0		92	70-130		
Chloroform	<b>8.67</b>		ppbv		10.0		87	70-130		
Tetrahydrofuran	<b>8.69</b>		ppbv		10.0		87	70-130		
1,2-Dichloroethane	<b>8.04</b>		ppbv		10.0		80	70-130		
1,1,1-Trichloroethane	<b>8.82</b>		ppbv		10.0		88	70-130		
Benzene	<b>8.62</b>		ppbv		10.0		86	70-130		
Carbon tetrachloride	<b>9.23</b>		ppbv		10.0		92	70-130		
Cyclohexane	<b>7.88</b>		ppbv		10.0		79	70-130		
1,2-Dichloropropane	<b>8.33</b>		ppbv		10.0		83	70-130		
Bromodichloromethane	<b>8.84</b>		ppbv		10.0		88	70-130		
Trichloroethene	<b>8.84</b>		ppbv		10.0		88	70-130		

*This laboratory report is not valid without an authorized signature on the cover page.*

**Air Quality Analyses - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1225811 - General Air Prep</b>										
<u>LCS (1225811-BS1)</u>								<u>Prepared &amp; Analyzed: 22-Oct-12</u>		
1,4-Dioxane	<b>8.28</b>		ppbv		10.0		83	50-150		
n-Heptane	<b>8.59</b>		ppbv		10.0		86	70-130		
4-Methyl-2-pentanone (MIBK)	<b>8.46</b>		ppbv		10.0		85	70-130		
cis-1,3-Dichloropropene	<b>9.08</b>		ppbv		10.0		91	70-130		
trans-1,3-Dichloropropene	<b>8.97</b>		ppbv		10.0		90	70-130		
1,1,2-Trichloroethane	<b>8.85</b>		ppbv		10.0		88	70-130		
Toluene	<b>8.65</b>		ppbv		10.0		86	70-130		
2-Hexanone (MBK)	<b>8.35</b>		ppbv		10.0		84	70-130		
Dibromochloromethane	<b>9.50</b>		ppbv		10.0		95	70-130		
1,2-Dibromoethane (EDB)	<b>9.09</b>		ppbv		10.0		91	70-130		
Tetrachloroethene	<b>9.30</b>		ppbv		10.0		93	70-130		
Chlorobenzene	<b>9.30</b>		ppbv		10.0		93	70-130		
1,1,1,2-Tetrachloroethane	<b>10.3</b>		ppbv		10.0		103	50-150		
Ethylbenzene	<b>9.44</b>		ppbv		10.0		94	70-130		
m,p-Xylene	<b>19.2</b>		ppbv		20.0		96	70-130		
Bromoform	<b>10.4</b>		ppbv		10.0		104	70-130		
Styrene	<b>9.69</b>		ppbv		10.0		97	70-130		
o-Xylene	<b>9.75</b>		ppbv		10.0		98	70-130		
1,1,2,2-Tetrachloroethane	<b>10.0</b>		ppbv		10.0		100	70-130		
Isopropylbenzene	<b>9.92</b>		ppbv		10.0		99	50-150		
1,3,5-Trimethylbenzene	<b>9.82</b>		ppbv		10.0		98	70-130		
4-Ethyltoluene	<b>9.66</b>		ppbv		10.0		97	70-130		
1,2,4-Trimethylbenzene	<b>10.1</b>		ppbv		10.0		101	70-130		
Naphthalene	<b>13.1</b>		ppbv		10.0		131	50-150		
1,3-Dichlorobenzene	<b>10.4</b>		ppbv		10.0		104	70-130		
Benzyl chloride	<b>11.1</b>		ppbv		10.0		111	70-130		
1,4-Dichlorobenzene	<b>10.5</b>		ppbv		10.0		105	70-130		
sec-Butylbenzene	<b>10.8</b>		ppbv		10.0		108	50-150		
4-Isopropyltoluene	<b>11.0</b>		ppbv		10.0		110	50-150		
1,2-Dichlorobenzene	<b>10.1</b>		ppbv		10.0		101	70-130		
n-Butylbenzene	<b>11.2</b>		ppbv		10.0		112	50-150		
1,2,4-Trichlorobenzene	<b>10.3</b>		ppbv		10.0		103	70-130		
Hexachlorobutadiene	<b>9.15</b>		ppbv		10.0		92	70-130		
Surrogate: 4-Bromofluorobenzene	10.5		ppbv		10.0		105	70-130		

*This laboratory report is not valid without an authorized signature on the cover page.*

## Certificate of Analysis

**Container Type:** Summa canister 6 liter

**Date of Analysis:** 9/14/2012

**Canister ID:** 1376

**Analyst's Initials:** KG

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>	<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachloroethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

**This certification applies to the following sampling devices:**

1376

4638



## Certificate of Analysis

**Container Type:** Summa canister 6 liter

**Date of Analysis:** 9/27/2012

**Canister ID:** 162

**Analyst's Initials:** KG

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>	<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachloroethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

**This certification applies to the following sampling devices:**

222

5583

# Certificate of Analysis

**Container Type:** Summa canister 6 liter

**Date of Analysis:** 9/28/2012

**Canister ID:** 244

**Analyst's Initials:** KG

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>	<i>Analyte</i>	<i>Quantitation Limit (ppbv)</i>
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachloroethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

**This certification applies to the following sampling devices:**

1366  
1372  
1645  
255  
7633

## Notes and Definitions

AirP	Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.
D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
R05	Elevated Reporting Limits due to the presence of high levels of non-target analytes.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:  
Kimberly Wisk



MARIA C. COLLAZO  
4107401911 100  
CHESAPEAKE GEOSCIENCES  
5405 TWIN HILLS ROAD  
COLUMBIA MD 21045

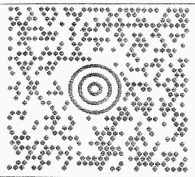
20 LBS

1 OF 1

DWT: 18.18.18

**SHIP TO:**

NICOLE LEJA  
(413) 789-9018  
SPECTRUM ANALYTICAL, INC  
11 ALMGREN DRIVE  
AGAWAM MA 01001-3831

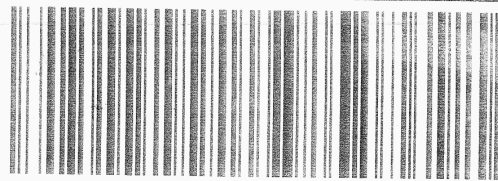


MA 011 9-06



**UPS GROUND**

TRACKING #: 1Z 6Y6 01E 03 9352 3564



BILLING: P/P

Reference#1: CG090491NL

UIS 14.5.28 WNTIE90 30 0A 07/2012



<https://www.ups.com/uis/create?ActionOriginPair=default>

PrintWindowPage&key=la...

10/11/2012