

**SAMPLE ANALYSIS REPORT  
REVISION 5**

**SAMPLE COLLECTION AND ANALYSIS  
AT THE WALTER COKE FACILITY**

**BIRMINGHAM, ALABAMA**

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### ATTACHMENTS

Attachment A	Copies of Logbooks and Laboratory Correspondence
Attachment B	Copies of Signed Chain-of-Custody Forms
Attachment C	Photographic Logs
Attachment D	Data Summary Tables and Sample Analytical Results and B(a)P TEQ Calculation Tables

## 1.0 INTRODUCTION

Under the U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Enforcement, Permitting, and Assistance (REPA5) Contract (No. EP-W-12-031), Booz Allen Hamilton (Booz Allen) provides program management and technical environmental services in Zone 2. Under Task Order R4021, RCRA Corrective Action Support, Booz Allen was tasked to conduct a sampling event at the Walter Coke facility to collect samples from materials within the Mineral Wool Piles (MWP) at two depths from four locations. The purpose of the sampling event was to collect and analyze MWP samples. The resulting analytical data would be used by U.S. EPA to determine the most appropriate statutory authority and regulatory standards for managing the mineral wool piles, as well as potential leachate releases to soil and groundwater. This Sample Analysis Report documents the activities performed during the sample collection activities performed on May 17, 2012. Table 1 provides a complete list of personnel present during the sample collection activities, along with their affiliations.

**Table 1:  
Oversight and Sampling Event Participants – May 17, 2012**

Name	Affiliation
Don Wiggins	Walter Coke
Stephanie Park	CH2M Hill – Walter Coke’s Contractor
James Smith	Former U.S. EPA Site Manager
Art Masters	U.S. EPA Science and Ecosystem Support Division
Miles Buzbee	Booz Allen Hamilton
John Koehnen	ASE / Booz Allen Hamilton

## 2.0 PROJECT DESCRIPTION

### 2.1 Facility History and Background

The Walter Coke facility operates a coke manufacturing facility in Birmingham, Alabama. Walter Coke, formerly known as Sloss Industries Corporation, has been in operation at its present location since approximately 1920. Walter Coke has a diverse history of varied operations at the site. Currently, the primary product of the site is coke; however slag fibers (*e.g.*, mineral wool) were also historically produced at the facility. The facility property also includes areas currently or formerly dedicated to open pit mining, biological treatment, and stock piling of material on site (*i.e.*, the stockpiled MWPs located in the northeastern portion of the site). Figure 1 identifies the location of MWPs.

Walter Coke stated the stockpiled MWPs in question contain mineral wool, shot, coke, and flue dust from mineral wool production. According to the 1989 Administrative Order, the Facility has stated that the mineral wool components may include:

Silicon Dioxide (SiO <sub>2</sub> )	Potassium Oxide (K <sub>2</sub> O)	Sodium Oxide (Na <sub>2</sub> O)
Calcium Oxide (CaO)	Magnesium Oxide (MgO)	Sulfur (S)
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	Titanium Dioxide (TiO <sub>2</sub> )	Iron (III) Oxide (Fe <sub>2</sub> O <sub>3</sub> )
Phosphorus Pentoxide (P <sub>2</sub> O <sub>5</sub> )		

On April 4, 2012, representatives of Walter Coke reported to EPA during an on-site visit that the facility's mineral wool process did not include binders (*e.g.*, phenol-formaldehyde) or finishing agents (*e.g.*, nitric acid).

## 2.2 Project Objectives

As specified in the April 12, 2012, Amended Scope of Work for an Independent Sampling Event at the Walter Coke facility (SOW), and as requested during the pre-planning meetings/teleconferences held with EPA, Booz Allen performed an independent sampling event at the site on May 17, 2012, in coordination with EPA Region 4 Science and Ecosystem Support Division (SESD) personnel.

The project scope and sample objectives were designed so that analytical data of sufficient quality and quantity would be collected to allow EPA to determine the most appropriate statutory authority and regulatory standards to address the MWP, as well as provide data to help evaluate potential leachate to soil and groundwater.

## 2.3 Site Description

The Walter Coke facility is located on a large parcel comprising approximately 400 acres of land at the intersection of 35<sup>th</sup> Avenue North and FL Shuttlesworth Drive in Birmingham, Jefferson County, Alabama (Figure 1). While the main administrative portion of the site was accessed during the sampling event, only those areas related to the MWPs were visited and sampled. The geographic coordinates of the main area of the MWPs (at sample location WC-MWP-02) are 33° 34' 4" (33.567981°) North latitude and 86° 47' 35" (86.793325°) West longitude. The physical address of the property is 3500 35<sup>th</sup> Avenue North, Birmingham, Alabama.

## 3.0 SAMPLING ACTIVITIES

### 3.1 Mineral Wool Pile Sampling

As directed in the Amended SOW, dated April 12, 2012, Booz Allen collected two (2) samples from four (4) sampling locations selected by EPA in the field for a total of eight (8) samples. The four sample locations are identified on Figure 2. For each of the four sampling locations, a surface sample was collected from the interval at 0" to 6" below grade within the MWP, and a subsurface sample was collected from the interval at 12" to 24" below grade (*i.e.*, 1' – 2'). Sample identifications were assigned as WC-MWP-##-06 for the 0" – 6" interval and WC-MWP-##-1224 for the 12" – 24" interval. All samples were analyzed for total volatile organic compounds (VOCs) using SW-846 Method 8260B, total semi-volatile organic compounds (SVOCs) using SW-846 Method 8270C, total metals (RCRA 8) including mercury using SW-846 Method 6020/7471A, and total cyanide using SW-846 Method 9012A. In addition, samples were prepared by the laboratory using the Synthetic Precipitation Leachate Procedure [SPLP]

(SW-846 Method 1312), with the resulting sample aliquot being analyzed for the analytes listed above. An SPLP preparation is designed to simulate material left in-situ and exposed to rainfall, then determine the mobility of both organic and inorganic constituents within the material. One duplicate sample was collected from the WC-MWP-04-06 location and designated as WC-MWP-14-06. Sample volumes for one field blank and one equipment blank were also collected. Refer to Section 3.2 for a discussion of quality control samples.

Booz Allen documented field sampling procedures and sampling locations in field logbooks. Copies of the logbooks are provided as Attachment A. Photographic documentation of the sampling event is included as Attachment C of this document. All data and documentation generated as a result of this sampling event are included.

Samples collected during the sampling event were shipped by Federal Express (FedEx) to the Test America laboratory (a Booz Allen Hamilton subcontracted laboratory under the REPA Zone 2 Contract), located in Pittsburgh, Pennsylvania, for analysis. Attachment B provides copies of the chain-of-custody (COC) forms. Upon receipt of the shipment by the laboratory, samples were analyzed for parameters as listed in Table 2. Sample results were reviewed for completeness as outlined in Section 5.0 of the EPA-approved QAPP for this sampling event prior to submitting the preliminary data to EPA on June 11, 2012.

Table 3 and Table 4 summarize the sample results for analytes detected during the analysis, and include bolding of the results which exceeded their respective EPA Industrial Regional Screening Levels (RSLs). The EPA RSLs were selected for comparison of the sampling results for industrial/commercial soil. Only the EPA Industrial RSLs for this site will be used for cleanup decisions. Laboratory analytical results are included as Attachment D. Detections are discussed in Sections 4.1 through 4.4, while any constituents detected above a screening level are discussed in Section 4.6.

### **3.2 Quality Control Samples**

The nature, frequency, and acceptance criteria for field QC samples were defined in the U.S. EPA-approved QAPP associated with this sampling event. One (1) field duplicate sample was collected at the WC-MWP-04-06 location and labeled as WC-MWP-14-06. Additional sample volume for Matrix Spike/Matrix Spike Duplicate (MS/MSD) was not collected from sample location WC-MWP-04-06 location as originally planned. However, Booz Allen requested that the laboratory attempt to complete the MS/MSD analyses on sample WC-MWP-02-06 because sufficient sample material was present at that location to fill the required sample containers.

**Table 2: Sample Description Table**

Sample ID	Sample Location	Sample Matrix	Sample Date	Sample Time	Sample Type	Analyses	GPS Coordinates
WC-MWP-01-06	MWP-01	Soil	05/17/2012	1014	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.56805° N 86.79435° W
WC-MWP-01-1224	MWP-01	Soil	05/17/2012	1049	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.56805° N 86.79435° W
WC-MWP-02-06	MWP-02	Soil	05/17/2012	1515	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.567981° N 86.793325° W
WC-MWP-02-1224	MWP-02	Soil	05/17/2012	1536	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.567981° N 86.793325° W
WC-MWP-03-06	MWP-03	Soil	05/17/2012	1420	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.567113° N 86.795031° W
WC-MWP-03-1224	MWP-03	Soil	05/17/2012	1435	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.567113° N 86.795031° W
WC-MWP-04-06	MWP-04	Soil	05/17/2012	1148	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.5682° N 86.792639° W
WC-MWP-04-1224	MWP-04	Soil	05/17/2012	1225	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.5682° N 86.792639° W
WC-MWP-14-06	MWP-14 (Duplicate of MWP- 04)	Soil	05/17/2012	1150	Grab	VOCs, SVOCs, Total Metals (RCRA 8), Total Cyanide, Soil Moisture, SPLP VOCs, SPLP SVOCs, SPLP Metals (RCRA 8), SPLP Cyanide	33.5682° N 86.792639° W

One (1) field blank was collected during this sampling event by pouring deionized water directly into a full set of sample containers for analysis of the total (non-SPLP preparation) analytes only. In addition, one (1) equipment rinsate blank was collected to evaluate field sampling and decontamination procedures by pouring deionized water over the decontaminated shovel used to excavate to depth at the sampling locations, and into a decontaminated pan used for sample homogenization. The resulting rinse water was poured into a full set of sample containers for analysis of the total (non-SPLP preparation) analytes only. Refer to section 4.7 for a discussion of QA/QC sample results.

The QAPP associated with this sampling event initially anticipated collection of one trip blank per cooler where samples for volatile organic analysis are included. However, trip blanks were not provided by the laboratory, nor were adequate containers available to prepare trip blanks outside of the laboratory.

### **3.3 Sample Custody and Shipment**

A completed label was attached to each sample container. The glass containers were wrapped in bubble wrap and the plastic containers were placed in plastic bags. Terracore samples for the soil VOC samples were placed in plastic bags. All samples were placed in a plastic bag within the cooler, along with ice, and additional bubble wrap was used to ensure sample integrity during shipment. Plastic bags were taped closed, the COC forms were taped to the bottoms of the cooler lids, and the coolers were taped shut and secured with custody seals. All of the samples collected during the sampling conducted on May 17, 2012, were shipped to the Test America Laboratory in Pittsburgh, Pennsylvania, via FedEx at the end of the day on May 17, 2012. Photograph documentation of the sample coolers presented for shipment is included in Attachment C. All samples were received by the laboratory on May 18, 2012 and reported to be in good condition and within  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . COC forms are included in Attachment B.

### **3.4 Field Documentation**

Booz Allen field personnel recorded all field activities conducted on May 17, 2012, in two field logbooks. A copy of each logbook is presented as Attachment A. Copies of the signed COC forms are provided as Attachment B. Photograph documentation was collected by Booz Allen (and ASE) personnel and is presented in the photographic logs in Attachment C.

The Walter Coke representative had previously requested split samples from the EPA during the sampling event. Booz Allen personnel were prepared to provide duplicate sample containers and coordinated the collection of the additional aliquots with the representative from Walter Coke's Contractor CH2M Hill. As appropriate, Booz Allen provided field and sample-specific information (*i.e.*, sample ID, sample times, location coordinates, etc.) to the CH2M Hill representative contemporaneously throughout the sampling event. The CH2M Hill representative maintained separate sample labels, COC forms, and a separate logbook relating to the split samples acquired from Booz Allen. Booz Allen personnel did not review or otherwise prepare documentation related to the split samples collected for Walter Coke and relinquished to the CH2M Hill representative.

### **3.5 Deviations from the Sampling Objectives**

Based on the goals for the sampling event as presented in Booz Allen's EPA-approved QAPP,

there were no significant deviations from the stated sampling objectives. However, it may be noted that sample material collected for SW-846 methods 6020, 7471A, 8270C, 9021A and the associate SPLP extractions at locations MWP-01, MWP-03, and MWP-04 was obtained using two (2) eight (8) ounce glass jars. The laboratory provided three (3) eight (8) ounce glass jars for collecting the sample volumes for the above analysis to ensure more than the minimum volume would be available to perform the above analysis.

Based on the information documented in the laboratory SOPs, which were used to develop the QAPP, Booz Allen assumed two (2) eight (8) ounce jars would be required for the laboratory to perform the requested analyses. Following completion of the sampling event, Booz Allen reported the discrepancy to the laboratory. Upon receiving the sample containers, the laboratory weighed each sample volume from the sets of two (2) eight (8) ounce glass jars and provided confirmation of receiving adequate sample volume to perform all the requested analysis. A copy of the email provided by the lab confirming sufficient volume is included in Attachment A.

In addition, the EPA-approved QAPP anticipated the preparation, shipment, and analysis of trip blanks for the Walter Coke sampling event. However, upon receipt of the bottle ware and materials from the laboratory, prepared trip blanks were not included, nor were additional bottle ware and supplies provided which would have allowed for trip blank preparation in the field. Due to the nature of the sample material (solid, with the exception of EB/FB QC Samples) collected this issue is not expected to introduce any limitations for the data usage.

#### 4.0 MINERAL WOOL SAMPLE RESULTS

This section summarized the analytes **detected** by the laboratory for both Total concentrations as well as SPLP (*i.e.*, designed to simulate material left in-situ and exposed to rainfall, then determine the mobility of both organic and inorganic constituents within the material) results. The following detections listed below were reported above the method detection limit. For several of these detections, the result may be a qualified value (“J” or “B”). Table 3 provides a listing of the detected analyte, the relevant Method Detection Limit for the analyte, as well as the resulting detected concentrations for the Total Analytes. Table 4 provides a listing of the detected analyte, the relevant Method Detection Limit for the analyte, the qualified data points and a comparison of result to their respective screening values, as well as the resulting detected concentrations for the SPLP Analytes. The complete analytical data package provided by Test America is included as Attachment D.

#### 4.1 Metals

##### Total Metals

Arsenic, barium, cadmium, chromium, lead, selenium, and silver were reported at concentrations exceeding the detection limits for all sample locations. Total mercury was not detected in any of the samples.

##### SPLP Metals

- SPLP arsenic, SPLP barium, SPLP chromium, and SPLP lead were reported at concentrations exceeding the detection limit for all sample locations.
- SPLP cadmium was reported at a concentration exceeding the detection limit for samples WC-MWP-01-06 and WC-MWP-02-06.



- SPLP selenium was reported at a concentration exceeding the detection limit for samples WC-MWP-01-1224 and WC-MWP-04-06.
- SPLP silver was reported at a concentration exceeding the detection limit for samples WC-MWP-01-06, WC-MWP-02-06, WC-MWP-04-06, WC-MWP-04-1224, and WC-MWP-14-06.
- SPLP mercury was not detected in any of the samples.

## 4.2 Volatile Organic Compounds (VOCs)

### Total VOCs

No VOC analytes were detected in any of the samples.

### SPLP VOCs

SPLP methylene chloride was reported at concentrations exceeding the detection limit for all sample locations, while SPLP toluene was reported above the detection limit for sample WC-MWP-04-06.

## 4.3 Semi-Volatile Organic Compounds (SVOCs)

### Total SVOCs

- Chrysene, fluoranthene, and pyrene were reported at concentrations exceeding the detection limits for samples WC-MWP-01-06 and WC-MWP-01-1224.
- Anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, 2-methylnaphthalene, and phenanthrene were reported above the detection limit for samples WC-MWP-01-1224 and WC-MWP-02-1224.
- Acenaphthene, carbazole, dibenz(a,h)anthracene, indeno[1,2,3-cd]pyrene, and naphthalene were reported above the detection limit for sample WC-MWP-01-1224.

### SPLP SVOCs

No SPLP SVOC analytes were reported at concentrations exceeding the detection limit in any of the samples.

## 4.4 Cyanide

### Total Cyanide

Cyanide was reported at concentrations exceeding the detection limit for all sample locations.

### SPLP Cyanide

SPLP cyanide was reported at concentrations exceeding the detection limit for samples WC-MWP-01-06 and WC-MWP-03-1224.

## 4.5 Benzo(a)pyrene Toxicity Equivalency

The benzo(a)pyrene [B(a)P] toxicity equivalency quotient (TEQ) for carcinogenic PAHs was calculated using the U.S. EPA toxicity equivalency factors (TEFs) established in the 1984 EPA report, "Health Effects Assessment of Polycyclic Aromatic Hydrocarbons." For each sampling location reporting PAH concentrations (*i.e.*, WC-MWP-01-06, WC-MWP-01-1224 and WC-MWP-02-1224), the analytical result was multiplied by the chemical specific TEF (as referenced above) to derive a B(a)P equivalent for a particular constituent. The product for each PAH is

then summed to estimate the total B(a)P exposure potential. Values for B(a)P TEQ are provided in Table 3. The total B(a)P equivalent quotients are 0.0000092 mg/kg for QC-MWP-01-06, 0.29523 mg/kg for WC-MWP-01-1224 and 0.072976 mg/kg for WC-MWP-02-1224. The resulting individual analytical results, as well as the total B(a)P equivalent are then compared against one or more screening level to determine whether any results exceed an applicable screening level. Calculations for the B(a)P toxicity equivalency for applicable sample locations are included at the end of Attachment D.

#### 4.6 Screening of Results

Sample results were **screened against** U.S. EPA Regional Screening Levels (RSLs – April 2009 found at <http://epa.gov/region4/superfund/programs/riskassess/riskassess.html>) and Soil Screening Levels (SSLs – July 1996). SPLP results were compared to the maximum contaminant level (MCL – May 2009). Alabama Department of Environmental Management (ADEM - April 2008) Risk-Based Preliminary Screening Values are also included. SPLP sample results were compared to groundwater MCLs. All other results were compared to soil screening levels and protection of groundwater values, which are based on leachability criteria. Note, a constituent may be “detected” through laboratory analysis at a concentration that exceeded the method detection limit (MDL), but may still be at a concentration at or below one or more applicable screening levels. Based on a review of the MDLs used for these analyses versus the screening levels used, the applicable MDLs appeared to provide an acceptable level of analytical precision and were below the applicable screening levels. Constituents which exceed their respective MDLs are presented in Sections 4.1 through 4.4 above and are shown on Table 3 (Total analytes) and Table 4 (SPLP Analytes). Constituents with detections exceeding an applicable screening level/value are listed on Tables 3 and 4.

#### 4.7 QA/QC Sample Results

The field blank and equipment blank were both collected following completion of the mineral wool sampling. The field blank and equipment blank were collected at the base of the MWP area, during which the winds were noted to be light and variable with no visible airborne particulates and no precipitation. Results for the field blank and equipment blank samples indicate the presence of benzaldehyde, arsenic, barium, cadmium, chromium, lead, selenium, mercury, and cyanide. Both QA/QC samples reported similar concentrations, all of which are less than the screening value (MCL), but above the method detection limit (MDL) for the analysis. See Table 5 for a listing of the detected QA/QC analytical results.

For the collection of the field blank, distilled water was poured from a 1-gallon jug into sample containers, allowing the water to be exposed to the ambient air only during this time. Furthermore, the equipment blank was collected by pouring distilled water into a disposable aluminum pan representative of the aluminum pans used to collect and homogenize all the samples. The water was then poured from the pan and into the sample containers. Both QA/QC samples were collected at the same location on the Walter Coke property. The detection of constituents in the QA/QC samples is not expected to influence the quality of the data obtained during this sampling event. The presence of constituents may indicate the ambient nature of the contamination even though particulates were not visible, or it may reflect impurities of the distilled water used to prepare the QA/QC samples.

## **TABLES**

Table 3: Analyte Sample Detection Results and Screening Values

Analyte	Method Detection Limit (MDL)	WC-MWP-01-06	WC-MWP-01-1224	WC-MWP-02-06	WC-MWP-02-1224	WC-MWP-03-06	WC-MWP-03-1224	WC-MWP-04-06	WC-MWP-14-06	WC-MWP-04-1224	U.S. EPA Regional Screening Levels <sup>1</sup>	ADEM Risk-Based Preliminary Screening Values <sup>2</sup>	U.S. EPA Soil Screening Levels <sup>1</sup>		ADEM Risk-Based Preliminary Screening Values <sup>2</sup> Protection of Groundwater		
		Industrial Soil (mg/kg)	Commercial Soil (mg/kg)	Risk-Based SSL (mg/kg)	MCL-Based SSL (mg/kg)	Small Source (mg/kg)	Large Source (mg/kg)										
	mg/kg	6020 Metals mg/kg															
Arsenic	0.018	0.11	0.92	0.7	<b>1.7</b>	0.16	0.19	0.33	0.39	0.058 J	<b>1.6</b>	1.6	0.0013	0.29	0.703	0.388	
Barium	0.011	460 B	380 B	360 B	380 B	370 B	370 B	390 B	390 B	360 B	190000	6700	120	82	199	110	
Cadmium	0.007	1.0	0.89	1.2	1.5	1.3	1.3	1.3	1.2	1.4	800	45	0.52	0.38	0.908	0.501	
Chromium	0.0061	33 B	47 B	26 B	29 B	26 B	26 B	25 B	24 B	35 B	NA	64	NA	180000	4.61	2.54	
Lead	0.0038	0.95 B	1.4 B	2.3 B	4.7 B	1.5 B	0.93 B	1.3 B	0.95 B	0.82 B	800	800	NA	14	400	400	
Selenium	0.05	0.71	1.3	1.6	2.3	1.0	0.91	0.88	1.0	0.36 J	5100	510	0.4	0.26	NA	NA	
Silver	0.0039	0.15	0.15	0.19	0.23	0.18	0.19	0.18	0.17	0.19	5100	510	0.6	NA	0.612	0.337	
	mg/kg	8270C SVOCs mg/kg															
BaP TEQ		0.0000092	<b>0.29523</b>	ND	0.072976	ND	ND	ND	ND	ND	0.21	0.210	0.0035	0.24	0.968	0.534	
Benzo[a]pyrene	0.0067	ND	0.18	ND	0.058 J	ND	ND	ND	ND	ND	0.21	0.21	0.0035	0.24	0.968	0.5340	
Benzo[a]anthracene	0.0084	ND	0.2	ND	0.075 J	ND	ND	ND	ND	ND	2.1	2.1	0.01	NA	0.178	0.0983	
Benzo[b]fluoranthene	0.011	ND	0.22	ND	0.074 J	ND	ND	ND	ND	ND	2.1	2.1	0.035	NA	0.557	0.307	
Chrysene	0.008	0.0092 J	0.23	ND	0.076 J	ND	ND	ND	ND	ND	210	210	1.1	NA	17.8	9.83	
Dibenz(a,h)anthracene	0.0085	ND	0.065 J	ND	ND	ND	ND	ND	ND	ND	0.21	0.21	0.011	NA	0.167	0.0921	
Indeno[1,2,3-cd]pyrene	0.0079	ND	0.08	ND	ND	ND	ND	ND	ND	ND	2.1	2.1	0.12	NA	1.54	0.847	
Acenaphthene	0.0073	ND	0.013 J	ND	ND	ND	ND	ND	ND	ND	33000	2900	4.1	NA	0.883	0.487	
Anthracene	0.0066	ND	0.053 J	ND	0.016 J	ND	ND	ND	ND	ND	170000	100000	42	NA	20.9	11.5	
Benzo[g,h,i]perylene	0.0067	ND	0.15	ND	0.043 J	ND	ND	ND	ND	ND	NA	4950	NA	NA	437	241	
Carbazole	0.007	ND	0.019 J	ND	ND	ND	ND	ND	ND	ND	NA	86	NA	NA	0.0564	0.0311	
Fluoranthene	0.0072	0.0084 J	0.12	ND	0.042 J	ND	ND	ND	ND	ND	22000	2200	70	NA	79.9	44.1	
2-Methylnaphthalene	0.0061	ND	0.073 J	ND	0.019 J	ND	ND	ND	ND	ND	2200	NA	0.14	NA	0.114	0.0629	
Naphthalene	0.0066	ND	0.040 J	ND	ND	ND	ND	ND	ND	ND	18	19	0.00047	NA	0.0037	0.002	
Phenanthrene	0.0011	ND	0.19	ND	0.060 J	ND	ND	ND	ND	ND	NA	3060	NA	NA	3.35	1.85	
Pyrene	0.0068	0.0074 J	0.18	ND	0.053 J	ND	ND	ND	ND	ND	17000	2900	9.5	NA	9.59	5.29	
	mg/kg	Cyanide mg/kg															
Cyanide	0.11	3.1	1.1	2.0	3.0	3.0	2.1	3.9	2.3	3.0	610	3.500	0.094	2.0	0.7030	0.3880	

**Bolded results exceed EPA Regional Screening Levels**

ND - Not Detected

NA - Not Available

J - Result is less than the Reporting Limit (RL), but greater than or equal to the Method Detection Limit (MDL) and the concentration is an estimated value.

B - Compound was found in the blank and sample.

1 - USEPA Regional Screening Levels and other screening criteria derived from <http://epa.gov/region4/superfund/programs/riskassess/riskassess.html>

2 - Values taken from Alabama Department of Environmental Management's "Alabama Risk-Based Corrective Action Guidance Manual."

MDL - MDL levels may vary slightly from the numbers provided due to sample batch and run variations

Table 4: Leachate (SPLP\*) Sample Detection Results and Screening Values

Analyte	Method Detection Limit (MDL) µg/L	WC-MWP-01-06	WC-MWP-01-1224	WC-MWP-02-06	WC-MWP-02-1224	WC-MWP-03-06	WC-MWP-03-1224	WC-MWP-04-06	WC-MWP-14-06	WC-MWP-04-1224	U.S. EPA <sup>1</sup> MCL µg/L	ADEM <sup>2</sup> MCL µg/L
		8260B SPLP µg/L										
Methylene Chloride	1.10	4.6 J	2.3 J	<b>6.3</b>	<b>6.8</b>	<b>5.1</b>	4.9 J	<b>6</b>	<b>6.1</b>	<b>5.4</b>	5	5
Toluene	0.85	ND	ND	ND	ND	ND	ND	1.5 J	ND	ND	1000	1000
		6020 metals SPLP µg/L										
Arsenic	0.29	1.5	1.8	8.9	1.5	0.86 J	<b>11</b>	3.1	1.1	5.2	10	10
Barium	0.10	4.3 J	5.6 J	6.4 J	14	2.8 J	3.3 J	2.4 J	2.7 J	1.7	2000	2000
Cadmium	0.11	0.11 J	ND	0.12 J	ND	ND	ND	ND	ND	ND	5	5
Chromium	0.54	6.3	6.3	4.8	5.8	4.9	5.9	6.3	5.5	6.6	100	100
Lead	0.02	2.0 B	0.095 J B	5.8 J B	0.064 J B	1.7 B	2.0 B	0.98 J B	1.1 B	1.4 B	15	15
Selenium	0.42	ND	0.79 J	ND	ND	ND	ND	0.48 J	ND	ND	50	50
Silver	0.04	0.056 J B	ND	0.66 J B	ND	ND	ND	0.14 J B	0.059 J B	0.038 J B	NA	18
		Cyanide SPLP µg/L										
Cyanide	1.50	2.4 J	ND	ND	ND	ND	3.7	ND	ND	ND	200	10

**Bolded results exceed EPA Regional Screening Levels**

ND - Not Detected

NA - Not Available

J - Result is less than the Reporting Limit (RL), but greater than or equal to the Method Detection Limit (MDL) and the concentration is an estimated value.

B - Compound was found in the blank and sample.

1 - USEPA Regional Screening Levels and other screening criteria (e.g., MCLa) derived from <http://epa.gov/region4/superfund/programs/riskassess/riskassess.html>

2 - Values taken from Alabama Department of Environmental Management's "Alabama Risk-Based Corrective Action Guidance Manual."

MDL - MDL levels may vary slightly from the numbers provided due to sample batch and run variations

\* An SPLP preparation is designed to simulate material left in-situ and exposed to rainfall, then determine the mobility of both organic and inorganic constituents within the material.

**Table 5: QA/QC Sample Results**

Analyte	Field Blank WC-MWP-FB1	Equipment Blank WC-MWP-EB1	MCL
8270C µg/L			
Benzaldehyde	11.0	11.0	NA
6020 µg/L			
Arsenic	0.95 J	0.78 J	10
Barium	15.0 B	0.27 J B	2000
Cadmium	0.12 J	ND	5
Chromium	3.3	3.2	100
Lead	0.41 J B	0.090 J B	15
Selenium	1.1 J	0.55 J	50
Mercury	0.040 J	0.039 J	NA
Cyanide	3.6 J B	1.6 J B	200

**Bolded results exceed EPA Regional Screening Levels**

ND - Not detected

NA - Not Available

J - Result is less than the Reporting Limit (RL), but greater than or equal to the Method Detection Limit (MDL) and the concentration is an estimated value.

B - Compound was found in the blank and sample

## **FIGURES**



**Booz | Allen | Hamilton**

230 Peachtree Street N.W. Suite 2100  
Atlanta, Georgia 30303

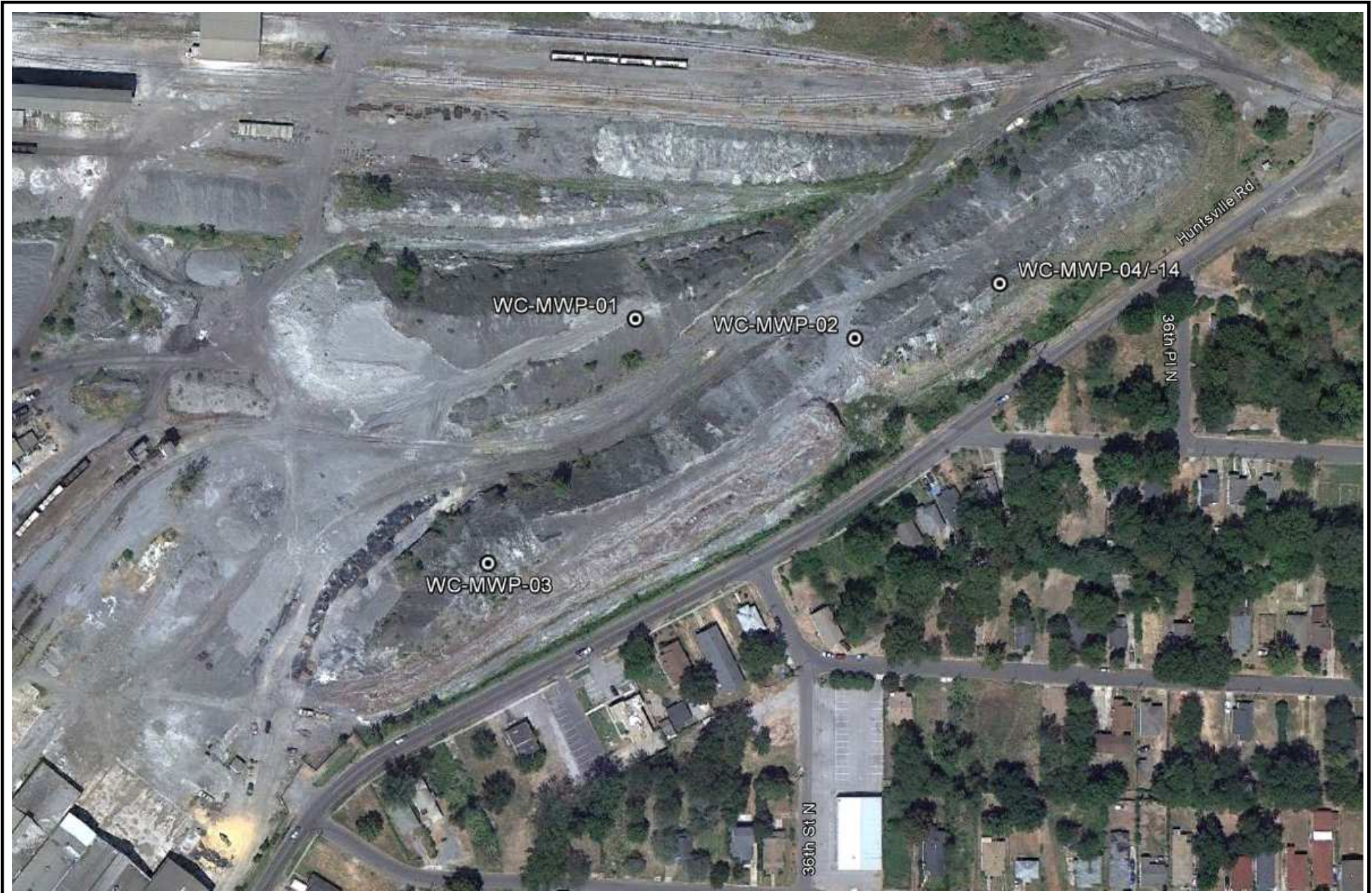
### Figure 1: Site Overview

Walter Coke Facility

Birmingham, Alabama







**Booz | Allen | Hamilton**

230 Peachtree Street N.W. Suite 2100  
Atlanta, Georgia 30303

## Figure 2: Sampling Locations

Walter Coke Facility

Birmingham, Alabama



## **ATTACHMENTS**

**ATTACHMENT A**  
**COPIES OF FIELD LOGBOOKS**



"Rite in the Rain"  
ALL-WEATHER WRITING PAPER



Name MILES BURBEE  
BOOZ ALLEN HAMILTON  
Address 230 PEACHTREE ST. NW  
STE 2100, ATLANTA, GA  
Phone 404.587.4129

Project Walter Coke  
Waste Sampling

Clear Vinyl Protective Slipcovers (Item No. 30) are available for this style of notebook.  
Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

CONTENTS

PAGE

REFERENCE

DATE

~~Handwritten scribbles and a large 'X' across the table.~~

Handwritten: *Miles Burbie*  
*5/17/50*

5/17/2012

Times are CST

800: Arrive @ Designated Meeting Place. EPA is

Already there

James Smith - R4  
Art Masters - SESDProvide quick introduction  
& discuss sampling locations  
and plan.822: GET in Vehicles &  
Head to Main gate  
entrance.833 - enter office to sign in  
as visitors & meet w/  
Don Wiggings of Walter Lake.  
Don & Stephanie<sup>Park</sup> meet  
with us.

Stephanie ⇒ CH2M Hill

Don starts by asking about  
the intent of the project.

Don W: 205 516 0348 (cell)

mls/Bh 5/17/2012

Plan

- go to mineral wool piles
  - James indicates we will select locations based on the make-up & consistency of material
- EPA will plan to sample locations high on the pile that would allow material to be airborne

4 locations will be sampled.  
CH2M Hill will oversee split  
samples

Safety - hard hats, safety  
glasses, steel toe

We will be working in a  
remote portion of plant.

No Confined spaces, No smoking

205. 808. 7848 - in house clinic  
for safety issues  
911 is also okay

mls/Bh 5/17/2012

Pictures are okay to  
take @ mineral wool pile.  
Do not take at facility.

Facility requests GPS coordinates

855- finish meeting, go to  
vehicles

108- arrive @ waste piles

113- walk to ~~top of~~ ~~top~~ ~~of~~ ~~hill~~  
to top of hill to survey  
sampling locations

Mr Wiggins provides process overview  
Slag, coke, { fiber } shot

WC-MWP-01-06 → Surface

WC-MWP-01-1224 → Subsurface

PIC 1: facing NE, view of  
Sample location 01. 0925

MS/K/L 5/17/2012

Call Mitch to convey  
state of waste piles.

Go Backup waste pile  
Drive vehicle.

START By unloading {  
taking pens to Dean.

Dean aluminum pans.

for WC-01 well will use  
Scoops to collect samples.  
Shovel down ~ 1ft & then  
use scoops to collect lower  
samples too.

1010 - go to top of hill  
to WC-01 to collect  
samples

1314 - collect samples 0-6"  
1 TDS, 3 VOA, 2 8oz, 2 4oz

MS/K/L 5/17/2012

1049: Collect 12-24  
Samples

For 12-24, we  
dug down to ~12",  
Material is very rocky  
so it was necessary  
to break it apart  
in the ground w/ the  
shovel. Collected  
TerraCore Samples  
w/ material still in  
excavation. For glass  
jars soil was removed  
w/ shovel & placed in  
Aluminum pan, homogenized  
& placed in jars.

PIC 2: WC-01 excavation  
Facing NE, LOS.

110 START loading Vehicle to  
move to next location

*mil/rlr* 5/17/2012

gpt to WC-04. Can not  
drive to top of hill, so  
we must walk. facility lets  
us put coolers in their  
vehicle. to drive up hill.

EPA locates location at <sup>near</sup>  
top of ridge on ~~East~~ North  
side of waste pile.

PIC 3: 1144, facing N.  
View of WC-04 sampling  
location.

Began sampling WC-04 ~ 1148  
Collect duplicate WC-14 @  
0-6" strata.

End Sampling 1230

PIC 4: 1231, facing South,  
View of 1'-2" sampling  
hole.

Walk back to truck, load  
*mil/rlr* 5/17/2012

1245 - Break for lunch.

1352 - Return from lunch.

Drive back to location  
we parked before lunch.  
will sample #MERB WC-03/02

PIC 5: facing S, 1417, view  
of WC-03.

1420 - Start Sampling WC03

1435 - Sub surface start

1449 - finish sampling

PIC 6: S, 1451, view of lower  
strata, WC-03

go down hill & decon  
shovel.

get ready to set up @ WC-02.

John tells me we have only been  
collecting 2-8oz jars @ each location.  
The lab sent us jars to collect  
mib/gh 5/17/2012

4-8oz jars @ each location  
for WC-02 we will collect  
all 4-8oz.

John indicates it is hrs  
experience that only 2 ~~8oz~~ are  
necessary for SPLP.

PIC 7: 1317, facing SW, WC-02  
1515 will be sample time.

1535 - lower 12"-24"

1555 - finish sampling

PIC 8 - lower strata, facing SW  
1555.

go down hill & collect

Blanks  
field blank & EQ blank

1605 - field blank EQ sample time.  
Start w/ VOCs, SVOCs, Cyanides  
Metals.

mib/gh 5/17/2012



1622 - Start Equipment  
Blank

Pour Distilled H<sub>2</sub>O over shovel  
& into Aluminum Pan, then pour  
1633 - finish sampling

1645 - completed loading truck.  
Head out of facility for  
Fed Ex, Back Coolers

PTC 9: 1953 - cooler 1 sealed  
@ Fed ex.

PTC 10 - cooler 2 & 3

~~PTC 11 - cooler 3~~

Relinquish coolers & leave  
Fed ex → 19:59

Drive Back to ATZ.

*nick Ryker* 5/17/2012

Custody Seals

1: 545681, 545682

2: 545668, 545669

3: 545671, 545674

END

*nick Ryker*  
5/17/2012

**ATTACHMENT B**

**COPIES OF SIGNED CHAIN-OF-CUSTODY FORMS**

TestAmerica Pittsburgh  
 301 Alpha Drive RIDC Park  
 Pittsburgh, PA 15238  
 Phone (412) 963-7058 Fax (412) 963-2468

#3  
 10882  
 8-80  
 Chain of Custody Record

TestAmerica  
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information  
 Client Contact: John Belin  
 Company: Booz Allen Hamilton Inc  
 Address: 230 Peachtree Street, NW Suite 2100  
 City: Atlanta  
 State, Zip: GA, 30303  
 Phone:  
 Email: belin\_john@bah.com  
 Project Name: R4021, Birmingham Facility Project  
 Site:  
 Due Date Requested:  
 TAT Requested (days): 15 DAYS  
 PO #: B-09074-0151-2421-1000005  
 WO #:  
 Project #: 18009853  
 SSOW#:  
 Lab PM: John Koenig  
 Carrier Tracking No: 81840898  
 Job #: 2814  
 COC No: 180-5115-1515.4  
 Page: 4 of 4  
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=oil, G=gas, A=air)	Field Filtered Sample (Yes or No)	Performance/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
WC-MWP-04-06	5/17/12	1148	G	Solid			8260B - 8260B VOC 4.2 list 8260B - 8260B SPLP VOC 6020, 7470A 8260B - 8260 Volatiles 8270C - 8270 Semivolatiles 9012A - 9012 Total Cyanide		TOT VOCs NOT RUN
WC-MWP-14-06	5/17/12	1150	G	Solid			8260B - 8260B VOC 4.2 list 8260B - 8260B SPLP VOC 6020, 7470A 8260B - 8260 Volatiles 8270C - 8270 Semivolatiles 9012A - 9012 Total Cyanide		V
WC-MWP-04-1224	5/17/12	1225	G	Solid			8260B - 8260B VOC 4.2 list 8260B - 8260B SPLP VOC 6020, 7470A 8260B - 8260 Volatiles 8270C - 8270 Semivolatiles 9012A - 9012 Total Cyanide		V

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by: [Signature]  
 Relinquished by: [Signature] Date/Time: 5/17/2012 1945  
 Relinquished by: [Signature] Date/Time: [ ]  
 Relinquished by: [Signature] Date/Time: [ ]  
 Custody Seal No.: [ ]  
 Custody Seal Intact: [ ]  
 Relinquished by: [Signature] Date/Time: [ ]  
 Relinquished by: [Signature] Date/Time: [ ]  
 Relinquished by: [Signature] Date/Time: [ ]  
 Method of Shipment: [ ]  
 Received by: [Signature] Date/Time: 5-18-12 945  
 Received by: [Signature] Date/Time: [ ]  
 Received by: [Signature] Date/Time: [ ]  
 Company: [ ]  
 Company: [ ]  
 Company: [ ]  
 Company: [ ]  
 Company: [ ]  
 Company: [ ]  
 Company: [ ]  
 Cooler Temperature(s) °C and Other Remarks:





**ATTACHMENT C**

**Photographic Logs**

## Photographic Log

1. Photo No.	<b>1</b>	2. Photographer	Miles Buzbee, Booz Allen Hamilton
3. Date	May 17, 2012	4. Time	0925 CST
5. Location			
Walter Coke, Birmingham, Alabama			
6. Description			
View of sample location WC-MWP-01 prior to sampling the 0-6" bgs interval. Facing Northeast.			

1. Photo No.	<b>2</b>	2. Photographer	John Koehnen, (ASE, Inc.) Booz Allen Hamilton
3. Date	May 17, 2012	4. Time	1054 CST
5. Location			
Walter Coke, Birmingham, Alabama			
6. Description			
View of sample location WC-MWP-01 (12-24" bgs interval). Facing West.			



## Photographic Log

1. Photo No. <b>3</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton	1. Photo No. <b>4</b>	2. Photographer John Koehnen, (ASE, Inc.) Booz Allen Hamilton
3. Date May 17, 2012	4. Time 1105 CST	3. Date May 17, 2012	4. Time 1106 CST
5. Location  Walter Coke, Birmingham, Alabama		5. Location  Walter Coke, Birmingham, Alabama	
6. Description  View of sample location WC-MWP-01 after excavating to 12" bgs. Photo shows sampling location prior to collecting the 12"-24" bgs interval. Facing Northeast.		6. Description  Expanded view of sample location WC-MWP-01 after collection of samples from both intervals. Location is on top of easternmost pile. Facing South.	





## Photographic Log

1. Photo No.	<b>5</b>	2. Photographer	Miles Buzbee, Booz Allen Hamilton
3. Date	May 17, 2012	4. Time	1144 CST
5. Location			
Walter Coke, Birmingham, Alabama			
6. Description			
View of sample location WC-MWP-04 and WC-MWP-14 prior to sampling the 0-6" bgs interval. WC-MWP-14 is the duplicate sample. Facing Northeast.			

1. Photo No.	<b>6</b>	2. Photographer	John Koehnen, (ASE, Inc.) Booz Allen Hamilton
3. Date	May 17, 2012	4. Time	1158 CST
5. Location			
Walter Coke, Birmingham, Alabama			
6. Description			
Close view of sample (VOC) collection at location WCMWP-04 and WC-MWP-14 (Duplicate) at the 0-6" bgs interval. Facing East.			



## Photographic Log

1. Photo No. <b>7</b>	2. Photographer John Koehnen, (ASE, Inc.) Booz Allen Hamilton	1. Photo No. <b>8</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton
3. Date May 17, 2012	4. Time 1226 CST	3. Date May 17, 2012	4. Time 1231 CST
5. Location  Walter Coke, Birmingham, Alabama		5. Location  Walter Coke, Birmingham, Alabama	
6. Description  View of sample location WC-MWP-04 and WC-MWP-14 (Duplicate) after excavating to 24" bgs and collecting samples. Facing Southwest.		6. Description  View of sample location WC-MWP-04 and WC-MWP-14 after excavating to 12" bgs. WC-MWP-14 is the duplicate sample. Photo shows sampling location prior to collecting the 12"-24" bgs interval. Facing Southwest.	



# Photographic Log

1. Photo No. <b>9</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton	1. Photo No. <b>10</b>	2. Photographer John Koehnen, (ASE, Inc.) Booz Allen Hamilton
3. Date May 17, 2012	4. Time 1417 CST	3. Date May 17, 2012	4. Time 1444 CST
5. Location Walter Coke, Birmingham, Alabama		5. Location Walter Coke, Birmingham, Alabama	
6. Description View of sample location WC-MWP-03 prior to sampling the 0-6" bgs interval. Facing South.		6. Description View of sample location WC-MWP-03 following sample completion. Facing Northeast.	



## Photographic Log

1. Photo No.	<b>11</b>	2. Photographer	John Koehnen, (ASE, Inc.) Booz Allen Hamilton	1. Photo No.	<b>12</b>	2. Photographer	John Koehnen, (ASE, Inc.) Booz Allen Hamilton
3. Date	May 17, 2012	4. Time	1444 CST	3. Date	May 17, 2012	4. Time	1445 CST
5. Location				5. Location			
Walter Coke, Birmingham, Alabama				Walter Coke, Birmingham, Alabama			
6. Description				6. Description			
Expanded View of Mineral Wool Piles from the northernmost sample location WC-MWP-03. Photo shows extent of MWP on Walter Coke facility. Facing South.				Expanded View of Mineral Wool Piles from the northernmost sample location WC-MWP-03. Photo Shows extent of MWP on the Walter Coke facility. Facing East- Southeast.			



## Photographic Log

1. Photo No. <b>13</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton	1. Photo No. <b>14</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton
3. Date May 17, 2012	4. Time 1451 CST	3. Date May 17, 2012	4. Time 1517 CST
5. Location  Walter Coke, Birmingham, Alabama		5. Location  Walter Coke, Birmingham, Alabama	
6. Description  View of sample location WC-MWP-03 after excavating to 12" bgs. Photo shows sampling location prior to collecting the 12"-24" bgs interval. Facing Northeast.		6. Description  View of sample location WC-MWP-02 prior to sampling the 0-6" bgs interval. Facing West-Northwest.	



## Photographic Log

1. Photo No.	<b>15</b>	2. Photographer	John Koehnen, (ASE, Inc.) Booz Allen Hamilton	1. Photo No.	<b>16</b>	2. Photographer	Miles Buzbee, Booz Allen Hamilton
3. Date	May 17, 2012	4. Time	1520 CST	3. Date	May 17, 2012	4. Time	1555 CST
5. Location				5. Location			
Walter Coke, Birmingham, Alabama				Walter Coke, Birmingham, Alabama			
6. Description				6. Description			
View of sample location WC-MWP-02 after excavating to 12" bgs. Facing West.				View of sample location WC-MWP-02 after excavating to 12" bgs. Photo shows sampling location prior to collecting the 12"-24" bgs interval. Facing West-Northwest.			



## Photographic Log

1. Photo No. <b>17</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton	1. Photo No. <b>18</b>	2. Photographer Miles Buzbee, Booz Allen Hamilton
3. Date May 17, 2012	4. Time 1953 CST	3. Date May 17, 2012	4. Time 1958 CST
5. Location  Walter Coke, Birmingham, Alabama		5. Location  Walter Coke, Birmingham, Alabama	
6. Description View of sample cooler at FedEx. Note: the custody seals #545681 and #545682 are attached, intact, and covered with strapping tape. Sample coolers were relinquished to FedEx for shipment to Test America – Pittsburgh, PA.		6. Description View of two sample coolers at FedEx. The custody seals #545668, #545669, #545671, and #545674 are attached, intact, and covered with strapping tape. Sample coolers were relinquished to FedEx for shipment to Test America - Pittsburgh.	



**ATTACHMENT D**  
**SAMPLE ANALYTICAL RESULTS**



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-10882-1

Client Project/Site: R4021, Birmingham Facility Project

For:

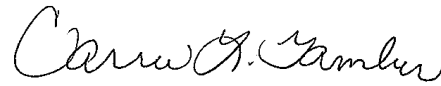
Booz Allen Hamilton Inc

230 Peachtree Street, NW

Suite 2100

Atlanta, Georgia 30303

Attn: John Belin



Authorized for release by:

6/8/2012 2:35:02 PM

Carrie Gamber

Customer Service Manager

[carrie.gamber@testamericainc.com](mailto:carrie.gamber@testamericainc.com)

Designee for

Whitney Ritari

Project Manager I

[whitney.ritari@testamericainc.com](mailto:whitney.ritari@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

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# Case Narrative

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Job ID: 180-10882-1**

**Laboratory: TestAmerica Pittsburgh**

**Narrative**

## CASE NARRATIVE

**Client: Booz Allen Hamilton Inc**

**Project: R4021, Birmingham Facility Project**

**Report Number: 180-10882-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### RECEIPT

The samples were received on 05/18/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.7° C, 2.5° C and 2.8° C.

### SPLP VOLATILE ORGANIC COMPOUNDS (GC-MS)

1,1,1-Trichloroethane failed the recovery criteria for the LCS from batch 37287. All other compounds recovered within QC limits.

1,1,1-Trichloroethane and or trichlorofluoromethane failed the recovery criteria for the MS and MSD of sample WC-MWP-02-06MS (180-10882-6) in batch 180-37287.

### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Several compounds were detected in method blanks at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Trichlorofluoromethane failed the recovery criteria for the LCS and LCSD. All other compounds recovered within QC limits.

### SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

There were no problems associated with these analyses.

### SPLP METALS (ICPMS)

Several metals were detected in method blanks at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

### TOTAL METALS (ICPMS)

Several metals were detected in method blanks at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The serial dilution performed for the following sample associated with batch 36863 was outside control limits for chromium.

### GENERAL CHEMISTRY

## Case Narrative

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

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### Job ID: 180-10882-1 (Continued)

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#### Laboratory: TestAmerica Pittsburgh (Continued)

Cyanide, Total was detected in method blank MB 180-37192/4-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

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# Definitions/Glossary

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

### General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
TestAmerica Pittsburgh	California	NELAC	9	4224CA
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAC	4	E871008
TestAmerica Pittsburgh	Illinois	NELAC	5	002602
TestAmerica Pittsburgh	Kansas	NELAC	7	E-10350
TestAmerica Pittsburgh	L-A-B	DoD ELAP		L2314
TestAmerica Pittsburgh	Louisiana	NELAC	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAC	1	203011
TestAmerica Pittsburgh	New Jersey	NELAC	2	PA005
TestAmerica Pittsburgh	New York	NELAC	2	11182
TestAmerica Pittsburgh	North Carolina DENR	State Program	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAC	3	02-00416
TestAmerica Pittsburgh	Pennsylvania	State Program	3	02-416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014002
TestAmerica Pittsburgh	USDA	Federal		P330-10-00139
TestAmerica Pittsburgh	USDA	Federal		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAC	8	STLP
TestAmerica Pittsburgh	Virginia	NELAC	3	460189
TestAmerica Pittsburgh	West Virginia DEP	State Program	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

# Sample Summary

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-10882-1	WC-MWP-04-06	Solid	05/17/12 11:48	05/18/12 09:45
180-10882-2	WC-MWP-14-06	Solid	05/17/12 11:50	05/18/12 09:45
180-10882-3	WC-MWP-04-1224	Solid	05/17/12 12:25	05/18/12 09:45
180-10882-4	WC-MWP-01-06	Solid	05/17/12 10:14	05/18/12 09:45
180-10882-5	WC-MWP-01-1224	Solid	05/17/12 10:49	05/18/12 09:45
180-10882-6	WC-MWP-02-06	Solid	05/17/12 15:15	05/18/12 09:45
180-10882-7	WC-MWP-02-1224	Solid	05/17/12 15:36	05/18/12 09:45
180-10882-8	WC-MWP-03-06	Solid	05/17/12 14:20	05/18/12 09:45
180-10882-9	WC-MWP-03-1224	Solid	05/17/12 14:35	05/18/12 09:45
180-10882-10	WC-MWP-FB1	Water	05/17/12 16:05	05/18/12 09:45
180-10882-11	WC-MWP-EB1	Water	05/17/12 16:22	05/18/12 09:45



# Method Summary

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
7471A	Mercury (CVAA)	SW846	TAL PIT
9012A	Cyanide, Total and/or Amenable	SW846	TAL PIT
Moisture	Percent Moisture	EPA	TAL PIT

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-06**

**Lab Sample ID: 180-10882-1**

**Date Collected: 05/17/12 11:48**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 81.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		15	3.8	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Benzene	ND		3.8	0.51	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Bromodichloromethane	ND		3.8	0.43	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Bromoform	ND		3.8	0.34	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Bromomethane	ND		3.8	0.56	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
2-Butanone (MEK)	ND		3.8	0.67	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Carbon disulfide	ND		3.8	0.39	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Carbon tetrachloride	ND		3.8	0.34	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Chlorobenzene	ND		3.8	0.58	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Chloroethane	ND		3.8	1.2	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Chloroform	ND		3.8	0.45	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Chloromethane	ND		3.8	0.65	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Dibromochloromethane	ND		3.8	0.54	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,1-Dichloroethane	ND		3.8	0.44	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,2-Dichloroethane	ND		3.8	0.47	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,1-Dichloroethene	ND		3.8	0.65	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,2-Dichloropropane	ND		3.8	0.41	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
cis-1,3-Dichloropropene	ND		3.8	0.52	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
trans-1,3-Dichloropropene	ND		3.8	0.46	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Ethylbenzene	ND		3.8	0.49	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
2-Hexanone	ND		3.8	0.53	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Methylene Chloride	ND		3.8	0.51	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
4-Methyl-2-pentanone (MIBK)	ND		3.8	0.50	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Styrene	ND		3.8	0.54	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,1,2,2-Tetrachloroethane	ND		3.8	0.55	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Tetrachloroethene	ND		3.8	0.52	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,1,1-Trichloroethane	ND		3.8	0.37	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,1,2-Trichloroethane	ND		3.8	0.63	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Trichloroethene	ND		3.8	0.50	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Vinyl chloride	ND		3.8	0.36	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Xylenes, Total	ND		11	1.7	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Cyclohexane	ND		3.8	0.28	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,2-Dibromo-3-Chloropropane	ND		3.8	0.57	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,2-Dibromoethane (EDB)	ND		3.8	0.66	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Dichlorodifluoromethane	ND		3.8	0.51	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
cis-1,2-Dichloroethene	ND		3.8	0.54	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
trans-1,2-Dichloroethene	ND		3.8	0.45	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Isopropylbenzene	ND		3.8	0.52	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Methyl acetate	ND		3.8	0.69	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Methylcyclohexane	ND		3.8	0.55	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Methyl tert-butyl ether	ND		3.8	0.57	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Trichlorofluoromethane	ND		3.8	0.70	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.8	0.81	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,2-Dichlorobenzene	ND		3.8	0.61	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,3-Dichlorobenzene	ND		3.8	0.50	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,4-Dichlorobenzene	ND		3.8	0.49	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
1,2,4-Trichlorobenzene	ND		3.8	0.67	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
Toluene	ND		3.8	0.56	ug/Kg	*	05/21/12 05:57	05/21/12 15:28	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	70		52 - 124				05/21/12 05:57	05/21/12 15:28	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-06**

**Lab Sample ID: 180-10882-1**

**Date Collected: 05/17/12 11:48**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 81.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		72 - 127	05/21/12 05:57	05/21/12 15:28	1
4-Bromofluorobenzene (Surr)	76		63 - 120	05/21/12 05:57	05/21/12 15:28	1
Dibromofluoromethane (Surr)	87		68 - 121	05/21/12 05:57	05/21/12 15:28	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 13:20	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 13:20	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 13:20	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 13:20	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 13:20	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 13:20	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 13:20	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 13:20	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 13:20	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 13:20	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 13:20	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 13:20	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 13:20	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 13:20	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 13:20	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 13:20	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 13:20	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 13:20	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 13:20	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 13:20	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 13:20	1
<b>Methylene Chloride</b>	<b>6.0</b>		5.0	1.1	ug/L			05/27/12 13:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 13:20	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 13:20	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 13:20	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 13:20	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 13:20	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 13:20	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 13:20	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 13:20	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 13:20	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 13:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 13:20	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 13:20	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 13:20	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 13:20	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 13:20	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 13:20	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 13:20	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 13:20	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 13:20	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 13:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 13:20	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 13:20	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 13:20	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-06**

**Lab Sample ID: 180-10882-1**

**Date Collected: 05/17/12 11:48**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

## Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 13:20	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 13:20	1
<b>Toluene</b>	<b>1.5</b>	<b>J</b>	5.0	0.85	ug/L			05/27/12 13:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		62 - 123					05/27/12 13:20	1
Toluene-d8 (Surr)	94		80 - 120					05/27/12 13:20	1
4-Bromofluorobenzene (Surr)	84		75 - 120					05/27/12 13:20	1
Dibromofluoromethane (Surr)	88		80 - 120					05/27/12 13:20	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		82	7.8	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Acetophenone	ND		400	34	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Acenaphthylene	ND		82	9.3	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Anthracene	ND		82	8.0	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Benzo[a]anthracene	ND		82	10	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Benzo[a]pyrene	ND		82	8.2	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Benzo[b]fluoranthene	ND		82	13	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Benzo[g,h,i]perylene	ND		82	8.1	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Benzo[k]fluoranthene	ND		82	16	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Bis(2-chloroethyl)ether	ND		82	11	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Bis(2-chloroethoxy)methane	ND		400	27	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
2,2'-oxybis[1-chloropropane]	ND		82	8.8	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Bis(2-ethylhexyl) phthalate	ND		820	66	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
4-Bromophenyl phenyl ether	ND		400	36	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Butyl benzyl phthalate	ND		400	56	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Carbazole	ND		82	7.5	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
4-Chloroaniline	ND		400	33	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
2-Chloronaphthalene	ND		82	8.5	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
4-Chlorophenyl phenyl ether	ND		400	45	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Chrysene	ND		82	9.7	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Dibenz(a,h)anthracene	ND		82	9.1	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Dibenzofuran	ND		400	40	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Di-n-butyl phthalate	ND		400	51	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
3,3'-Dichlorobenzidine	ND		400	43	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Diethyl phthalate	ND		400	45	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Dimethyl phthalate	ND		400	44	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
2,4-Dinitrotoluene	ND		400	33	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
2,6-Dinitrotoluene	ND		400	42	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Di-n-octyl phthalate	ND		400	43	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Fluoranthene	ND		82	8.7	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Fluorene	ND		82	11	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Hexachlorobenzene	ND		82	8.7	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Hexachlorobutadiene	ND		82	9.1	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Hexachlorocyclopentadiene	ND		400	44	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Hexachloroethane	ND		400	29	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Indeno[1,2,3-cd]pyrene	ND		82	8.4	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Isophorone	ND		400	31	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
2-Methylnaphthalene	ND		82	7.3	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1
Naphthalene	ND		82	7.0	ug/Kg	*	05/31/12 05:20	06/05/12 20:48	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-06**

**Lab Sample ID: 180-10882-1**

**Date Collected: 05/17/12 11:48**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 81.8**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		2100	180	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
3-Nitroaniline	ND		2100	170	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
4-Nitroaniline	ND		2100	170	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Nitrobenzene	ND		820	34	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
N-Nitrosodi-n-propylamine	ND		82	9.6	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
N-Nitrosodiphenylamine	ND		400	38	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Phenanthrene	ND		82	13	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Pyrene	ND		82	8.2	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
4-Chloro-3-methylphenol	ND		400	38	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2-Chlorophenol	ND		400	33	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2-Methylphenol	ND		400	29	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Methylphenol, 3 & 4	ND		400	40	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2,4-Dichlorophenol	ND		82	8.2	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2,4-Dimethylphenol	ND		400	64	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2,4-Dinitrophenol	ND		2100	490	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
4,6-Dinitro-2-methylphenol	ND		2100	160	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2-Nitrophenol	ND		400	45	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
4-Nitrophenol	ND		2100	150	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Pentachlorophenol	ND		400	36	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Phenol	ND		82	9.6	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2,4,5-Trichlorophenol	ND		400	44	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
2,4,6-Trichlorophenol	ND		400	61	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
1,1'-Biphenyl	ND		400	36	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Caprolactam	ND		2100	310	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Benzaldehyde	ND		400	61	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1
Atrazine	ND		400	40	ug/Kg	☼	05/31/12 05:20	06/05/12 20:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	57		25 - 104	05/31/12 05:20	06/05/12 20:48	1
2-Fluorobiphenyl	65		35 - 105	05/31/12 05:20	06/05/12 20:48	1
Terphenyl-d14	71		25 - 127	05/31/12 05:20	06/05/12 20:48	1
Phenol-d5	64		25 - 105	05/31/12 05:20	06/05/12 20:48	1
2-Fluorophenol	67		39 - 103	05/31/12 05:20	06/05/12 20:48	1
2,4,6-Tribromophenol	60		35 - 124	05/31/12 05:20	06/05/12 20:48	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 14:22	1
Acetophenone	ND		9.9	0.79	ug/L		05/24/12 08:19	05/29/12 14:22	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 14:22	1
Anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 14:22	1
Benzo[a]anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 14:22	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/24/12 08:19	05/29/12 14:22	1
Benzo[b]fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 14:22	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 14:22	1
Benzo[k]fluoranthene	ND		2.0	0.54	ug/L		05/24/12 08:19	05/29/12 14:22	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/29/12 14:22	1
Bis(2-chloroethoxy)methane	ND		9.9	0.58	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 14:22	1
Bis(2-ethylhexyl) phthalate	ND		20	12	ug/L		05/24/12 08:19	05/29/12 14:22	1
4-Bromophenyl phenyl ether	ND		9.9	0.63	ug/L		05/24/12 08:19	05/29/12 14:22	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-06**

**Lab Sample ID: 180-10882-1**

**Date Collected: 05/17/12 11:48**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	ND		9.9	1.4	ug/L		05/24/12 08:19	05/29/12 14:22	1
Carbazole	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 14:22	1
4-Chloroaniline	ND		9.9	0.88	ug/L		05/24/12 08:19	05/29/12 14:22	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 14:22	1
4-Chlorophenyl phenyl ether	ND		9.9	0.50	ug/L		05/24/12 08:19	05/29/12 14:22	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 14:22	1
Dibenz(a,h)anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 14:22	1
Dibenzofuran	ND		9.9	0.61	ug/L		05/24/12 08:19	05/29/12 14:22	1
Di-n-butyl phthalate	ND		9.9	1.2	ug/L		05/24/12 08:19	05/29/12 14:22	1
3,3'-Dichlorobenzidine	ND		9.9	1.1	ug/L		05/24/12 08:19	05/29/12 14:22	1
Diethyl phthalate	ND		9.9	1.4	ug/L		05/24/12 08:19	05/29/12 14:22	1
Dimethyl phthalate	ND		9.9	0.76	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,4-Dinitrotoluene	ND		9.9	0.53	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,6-Dinitrotoluene	ND		9.9	0.79	ug/L		05/24/12 08:19	05/29/12 14:22	1
Di-n-octyl phthalate	ND		9.9	2.0	ug/L		05/24/12 08:19	05/29/12 14:22	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 14:22	1
Fluorene	ND		2.0	0.21	ug/L		05/24/12 08:19	05/29/12 14:22	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/29/12 14:22	1
Hexachlorobutadiene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 14:22	1
Hexachlorocyclopentadiene	ND		9.9	0.51	ug/L		05/24/12 08:19	05/29/12 14:22	1
Hexachloroethane	ND		9.9	0.62	ug/L		05/24/12 08:19	05/29/12 14:22	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 14:22	1
Isophorone	ND		9.9	0.64	ug/L		05/24/12 08:19	05/29/12 14:22	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/29/12 14:22	1
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 14:22	1
2-Nitroaniline	ND		50	3.5	ug/L		05/24/12 08:19	05/29/12 14:22	1
3-Nitroaniline	ND		50	3.2	ug/L		05/24/12 08:19	05/29/12 14:22	1
4-Nitroaniline	ND		50	1.7	ug/L		05/24/12 08:19	05/29/12 14:22	1
Nitrobenzene	ND		20	0.83	ug/L		05/24/12 08:19	05/29/12 14:22	1
N-Nitrosodi-n-propylamine	ND		2.0	0.30	ug/L		05/24/12 08:19	05/29/12 14:22	1
N-Nitrosodiphenylamine	ND		9.9	0.84	ug/L		05/24/12 08:19	05/29/12 14:22	1
Phenanthrene	ND		2.0	0.42	ug/L		05/24/12 08:19	05/29/12 14:22	1
Pyrene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 14:22	1
4-Chloro-3-methylphenol	ND		9.9	0.75	ug/L		05/24/12 08:19	05/29/12 14:22	1
2-Chlorophenol	ND		9.9	1.6	ug/L		05/24/12 08:19	05/29/12 14:22	1
2-Methylphenol	ND		9.9	0.85	ug/L		05/24/12 08:19	05/29/12 14:22	1
Methylphenol, 3 & 4	ND		9.9	0.89	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,4-Dimethylphenol	ND		9.9	0.84	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,4-Dinitrophenol	ND		50	6.1	ug/L		05/24/12 08:19	05/29/12 14:22	1
4,6-Dinitro-2-methylphenol	ND		50	2.2	ug/L		05/24/12 08:19	05/29/12 14:22	1
2-Nitrophenol	ND		9.9	1.7	ug/L		05/24/12 08:19	05/29/12 14:22	1
4-Nitrophenol	ND		50	6.4	ug/L		05/24/12 08:19	05/29/12 14:22	1
Pentachlorophenol	ND		9.9	0.66	ug/L		05/24/12 08:19	05/29/12 14:22	1
Phenol	ND		2.0	0.58	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,4,5-Trichlorophenol	ND		9.9	1.5	ug/L		05/24/12 08:19	05/29/12 14:22	1
2,4,6-Trichlorophenol	ND		9.9	1.7	ug/L		05/24/12 08:19	05/29/12 14:22	1
1,1'-Biphenyl	ND		9.9	0.41	ug/L		05/24/12 08:19	05/29/12 14:22	1
Caprolactam	ND		50	12	ug/L		05/24/12 08:19	05/29/12 14:22	1
Benzaldehyde	ND		9.9	1.5	ug/L		05/24/12 08:19	05/29/12 14:22	1
Atrazine	ND		9.9	0.88	ug/L		05/24/12 08:19	05/29/12 14:22	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-06**

**Lab Sample ID: 180-10882-1**

Date Collected: 05/17/12 11:48

Matrix: Solid

Date Received: 05/18/12 09:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	65		37 - 104	05/24/12 08:19	05/29/12 14:22	1
2-Fluorobiphenyl	57		35 - 108	05/24/12 08:19	05/29/12 14:22	1
Terphenyl-d14	70		25 - 130	05/24/12 08:19	05/29/12 14:22	1
Phenol-d5	65		30 - 102	05/24/12 08:19	05/29/12 14:22	1
2-Fluorophenol	64		26 - 100	05/24/12 08:19	05/29/12 14:22	1
2,4,6-Tribromophenol	72		33 - 122	05/24/12 08:19	05/29/12 14:22	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.33		0.12	0.022	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1
Barium	390	B	1.2	0.013	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1
Cadmium	1.3		0.12	0.0086	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1
Chromium	25	B	0.24	0.0075	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1
Lead	1.3	B	0.12	0.0046	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1
Selenium	0.88		0.61	0.061	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1
Silver	0.18		0.12	0.0048	mg/Kg	☼	05/23/12 08:20	06/04/12 15:03	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 13:45	1
Barium	2.4	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 13:45	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 13:45	1
Chromium	6.3		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 13:45	1
Lead	0.98	J B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 13:45	1
Selenium	0.48	J	5.0	0.42	ug/L		05/24/12 16:35	06/04/12 13:45	1
Silver	0.14	J B	1.0	0.036	ug/L		05/24/12 16:35	06/04/12 13:45	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:48	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.013	mg/Kg	☼	06/06/12 03:29	06/06/12 08:51	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.9		0.62	0.12	mg/Kg	☼	05/30/12 09:15	05/30/12 11:44	1
Percent Moisture	18		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

Date Collected: 05/17/12 11:50

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 93.8

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		15	3.9	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Benzene	ND		3.9	0.52	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Bromodichloromethane	ND		3.9	0.43	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

**Date Collected: 05/17/12 11:50**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 93.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		3.9	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Bromomethane	ND		3.9	0.57	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
2-Butanone (MEK)	ND		3.9	0.68	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Carbon disulfide	ND		3.9	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Carbon tetrachloride	ND		3.9	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Chlorobenzene	ND		3.9	0.59	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Chloroethane	ND		3.9	1.2	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Chloroform	ND		3.9	0.45	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Chloromethane	ND		3.9	0.66	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Dibromochloromethane	ND		3.9	0.55	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,1-Dichloroethane	ND		3.9	0.44	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,2-Dichloroethane	ND		3.9	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,1-Dichloroethene	ND		3.9	0.66	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,2-Dichloropropane	ND		3.9	0.42	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
cis-1,3-Dichloropropene	ND		3.9	0.52	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
trans-1,3-Dichloropropene	ND		3.9	0.46	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Ethylbenzene	ND		3.9	0.50	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
2-Hexanone	ND		3.9	0.53	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Methylene Chloride	ND		3.9	0.52	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
4-Methyl-2-pentanone (MIBK)	ND		3.9	0.50	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Styrene	ND		3.9	0.55	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,1,2,2-Tetrachloroethane	ND		3.9	0.56	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Tetrachloroethene	ND		3.9	0.53	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,1,1-Trichloroethane	ND		3.9	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,1,2-Trichloroethane	ND		3.9	0.64	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Trichloroethene	ND		3.9	0.51	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Vinyl chloride	ND		3.9	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Xylenes, Total	ND		12	1.7	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Cyclohexane	ND		3.9	0.29	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,2-Dibromo-3-Chloropropane	ND		3.9	0.58	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,2-Dibromoethane (EDB)	ND		3.9	0.67	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Dichlorodifluoromethane	ND		3.9	0.51	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
cis-1,2-Dichloroethene	ND		3.9	0.54	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
trans-1,2-Dichloroethene	ND		3.9	0.46	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Isopropylbenzene	ND		3.9	0.52	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Methyl acetate	ND		3.9	0.70	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Methylcyclohexane	ND		3.9	0.56	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Methyl tert-butyl ether	ND		3.9	0.58	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Trichlorofluoromethane	ND		3.9	0.71	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9	0.83	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,2-Dichlorobenzene	ND		3.9	0.62	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,3-Dichlorobenzene	ND		3.9	0.51	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,4-Dichlorobenzene	ND		3.9	0.49	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
1,2,4-Trichlorobenzene	ND		3.9	0.68	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Toluene	ND		3.9	0.56	ug/Kg	☼	05/21/12 05:57	05/21/12 15:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	76		52 - 124				05/21/12 05:57	05/21/12 15:51	1
Toluene-d8 (Surr)	111		72 - 127				05/21/12 05:57	05/21/12 15:51	1
4-Bromofluorobenzene (Surr)	101		63 - 120				05/21/12 05:57	05/21/12 15:51	1
Dibromofluoromethane (Surr)	93		68 - 121				05/21/12 05:57	05/21/12 15:51	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

Date Collected: 05/17/12 11:50

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 14:08	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 14:08	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 14:08	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 14:08	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 14:08	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 14:08	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 14:08	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 14:08	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 14:08	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 14:08	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 14:08	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 14:08	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 14:08	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 14:08	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 14:08	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 14:08	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 14:08	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 14:08	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 14:08	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 14:08	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 14:08	1
<b>Methylene Chloride</b>	<b>6.1</b>		5.0	1.1	ug/L			05/27/12 14:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 14:08	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 14:08	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 14:08	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 14:08	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 14:08	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 14:08	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 14:08	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 14:08	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 14:08	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 14:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 14:08	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 14:08	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 14:08	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 14:08	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 14:08	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 14:08	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 14:08	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 14:08	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 14:08	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 14:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 14:08	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 14:08	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 14:08	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 14:08	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 14:08	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 14:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		62 - 123		05/27/12 14:08	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

Date Collected: 05/17/12 11:50

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/27/12 14:08	1
4-Bromofluorobenzene (Surr)	87		75 - 120		05/27/12 14:08	1
Dibromofluoromethane (Surr)	87		80 - 120		05/27/12 14:08	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		71	6.8	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Acetophenone	ND		350	29	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Acenaphthylene	ND		71	8.1	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Anthracene	ND		71	6.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Benzo[a]anthracene	ND		71	8.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Benzo[a]pyrene	ND		71	7.1	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Benzo[b]fluoranthene	ND		71	11	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Benzo[g,h,i]perylene	ND		71	7.0	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Benzo[k]fluoranthene	ND		71	14	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Bis(2-chloroethyl)ether	ND		71	9.5	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Bis(2-chloroethoxy)methane	ND		350	23	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,2'-oxybis[1-chloropropane]	ND		71	7.6	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Bis(2-ethylhexyl) phthalate	ND		710	57	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4-Bromophenyl phenyl ether	ND		350	31	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Butyl benzyl phthalate	ND		350	48	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Carbazole	ND		71	6.5	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4-Chloroaniline	ND		350	28	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2-Chloronaphthalene	ND		71	7.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4-Chlorophenyl phenyl ether	ND		350	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Chrysene	ND		71	8.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Dibenz(a,h)anthracene	ND		71	7.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Dibenzofuran	ND		350	35	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Di-n-butyl phthalate	ND		350	44	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
3,3'-Dichlorobenzidine	ND		350	37	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Diethyl phthalate	ND		350	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Dimethyl phthalate	ND		350	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,4-Dinitrotoluene	ND		350	29	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,6-Dinitrotoluene	ND		350	36	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Di-n-octyl phthalate	ND		350	37	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Fluoranthene	ND		71	7.6	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Fluorene	ND		71	9.3	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Hexachlorobenzene	ND		71	7.5	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Hexachlorobutadiene	ND		71	7.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Hexachlorocyclopentadiene	ND		350	38	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Hexachloroethane	ND		350	25	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Indeno[1,2,3-cd]pyrene	ND		71	7.3	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Isophorone	ND		350	27	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2-Methylnaphthalene	ND		71	6.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Naphthalene	ND		71	6.1	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2-Nitroaniline	ND		1800	160	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
3-Nitroaniline	ND		1800	150	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4-Nitroaniline	ND		1800	140	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Nitrobenzene	ND		710	29	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
N-Nitrosodi-n-propylamine	ND		71	8.3	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
N-Nitrosodiphenylamine	ND		350	33	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

**Date Collected: 05/17/12 11:50**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 93.8**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		71	11	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Pyrene	ND		71	7.1	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4-Chloro-3-methylphenol	ND		350	33	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2-Chlorophenol	ND		350	29	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2-Methylphenol	ND		350	25	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Methylphenol, 3 & 4	ND		350	35	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,4-Dichlorophenol	ND		71	7.1	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,4-Dimethylphenol	ND		350	55	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,4-Dinitrophenol	ND		1800	420	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4,6-Dinitro-2-methylphenol	ND		1800	140	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2-Nitrophenol	ND		350	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
4-Nitrophenol	ND		1800	130	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Pentachlorophenol	ND		350	32	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Phenol	ND		71	8.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,4,5-Trichlorophenol	ND		350	38	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
2,4,6-Trichlorophenol	ND		350	53	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
1,1'-Biphenyl	ND		350	32	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Caprolactam	ND		1800	270	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Benzaldehyde	ND		350	53	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1
Atrazine	ND		350	34	ug/Kg	☼	05/31/12 05:20	06/05/12 21:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	60		25 - 104	05/31/12 05:20	06/05/12 21:11	1
2-Fluorobiphenyl	65		35 - 105	05/31/12 05:20	06/05/12 21:11	1
Terphenyl-d14	70		25 - 127	05/31/12 05:20	06/05/12 21:11	1
Phenol-d5	64		25 - 105	05/31/12 05:20	06/05/12 21:11	1
2-Fluorophenol	65		39 - 103	05/31/12 05:20	06/05/12 21:11	1
2,4,6-Tribromophenol	58		35 - 124	05/31/12 05:20	06/05/12 21:11	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 14:45	1
Acetophenone	ND		9.7	0.78	ug/L		05/24/12 08:19	05/29/12 14:45	1
Acenaphthylene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
Anthracene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
Benzo[a]anthracene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 14:45	1
Benzo[a]pyrene	ND		1.9	0.13	ug/L		05/24/12 08:19	05/29/12 14:45	1
Benzo[b]fluoranthene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
Benzo[g,h,i]perylene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
Benzo[k]fluoranthene	ND		1.9	0.53	ug/L		05/24/12 08:19	05/29/12 14:45	1
Bis(2-chloroethyl)ether	ND		1.9	0.24	ug/L		05/24/12 08:19	05/29/12 14:45	1
Bis(2-chloroethoxy)methane	ND		9.7	0.56	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,2'-oxybis[1-chloropropane]	ND		1.9	0.19	ug/L		05/24/12 08:19	05/29/12 14:45	1
Bis(2-ethylhexyl) phthalate	ND		19	12	ug/L		05/24/12 08:19	05/29/12 14:45	1
4-Bromophenyl phenyl ether	ND		9.7	0.62	ug/L		05/24/12 08:19	05/29/12 14:45	1
Butyl benzyl phthalate	ND		9.7	1.4	ug/L		05/24/12 08:19	05/29/12 14:45	1
Carbazole	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
4-Chloroaniline	ND		9.7	0.86	ug/L		05/24/12 08:19	05/29/12 14:45	1
2-Chloronaphthalene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
4-Chlorophenyl phenyl ether	ND		9.7	0.49	ug/L		05/24/12 08:19	05/29/12 14:45	1
Chrysene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 14:45	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

Date Collected: 05/17/12 11:50

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
Dibenzofuran	ND		9.7	0.60	ug/L		05/24/12 08:19	05/29/12 14:45	1
Di-n-butyl phthalate	ND		9.7	1.2	ug/L		05/24/12 08:19	05/29/12 14:45	1
3,3'-Dichlorobenzidine	ND		9.7	1.1	ug/L		05/24/12 08:19	05/29/12 14:45	1
Diethyl phthalate	ND		9.7	1.4	ug/L		05/24/12 08:19	05/29/12 14:45	1
Dimethyl phthalate	ND		9.7	0.74	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,4-Dinitrotoluene	ND		9.7	0.52	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,6-Dinitrotoluene	ND		9.7	0.77	ug/L		05/24/12 08:19	05/29/12 14:45	1
Di-n-octyl phthalate	ND		9.7	2.0	ug/L		05/24/12 08:19	05/29/12 14:45	1
Fluoranthene	ND		1.9	0.16	ug/L		05/24/12 08:19	05/29/12 14:45	1
Fluorene	ND		1.9	0.21	ug/L		05/24/12 08:19	05/29/12 14:45	1
Hexachlorobenzene	ND		1.9	0.18	ug/L		05/24/12 08:19	05/29/12 14:45	1
Hexachlorobutadiene	ND		1.9	0.16	ug/L		05/24/12 08:19	05/29/12 14:45	1
Hexachlorocyclopentadiene	ND		9.7	0.50	ug/L		05/24/12 08:19	05/29/12 14:45	1
Hexachloroethane	ND		9.7	0.61	ug/L		05/24/12 08:19	05/29/12 14:45	1
Indeno[1,2,3-cd]pyrene	ND		1.9	0.19	ug/L		05/24/12 08:19	05/29/12 14:45	1
Isophorone	ND		9.7	0.63	ug/L		05/24/12 08:19	05/29/12 14:45	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/24/12 08:19	05/29/12 14:45	1
Naphthalene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 14:45	1
2-Nitroaniline	ND		49	3.4	ug/L		05/24/12 08:19	05/29/12 14:45	1
3-Nitroaniline	ND		49	3.1	ug/L		05/24/12 08:19	05/29/12 14:45	1
4-Nitroaniline	ND		49	1.7	ug/L		05/24/12 08:19	05/29/12 14:45	1
Nitrobenzene	ND		19	0.82	ug/L		05/24/12 08:19	05/29/12 14:45	1
N-Nitrosodi-n-propylamine	ND		1.9	0.30	ug/L		05/24/12 08:19	05/29/12 14:45	1
N-Nitrosodiphenylamine	ND		9.7	0.83	ug/L		05/24/12 08:19	05/29/12 14:45	1
Phenanthrene	ND		1.9	0.41	ug/L		05/24/12 08:19	05/29/12 14:45	1
Pyrene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 14:45	1
4-Chloro-3-methylphenol	ND		9.7	0.73	ug/L		05/24/12 08:19	05/29/12 14:45	1
2-Chlorophenol	ND		9.7	1.6	ug/L		05/24/12 08:19	05/29/12 14:45	1
2-Methylphenol	ND		9.7	0.84	ug/L		05/24/12 08:19	05/29/12 14:45	1
Methylphenol, 3 & 4	ND		9.7	0.88	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,4-Dichlorophenol	ND		1.9	0.32	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,4-Dimethylphenol	ND		9.7	0.83	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/24/12 08:19	05/29/12 14:45	1
4,6-Dinitro-2-methylphenol	ND		49	2.1	ug/L		05/24/12 08:19	05/29/12 14:45	1
2-Nitrophenol	ND		9.7	1.7	ug/L		05/24/12 08:19	05/29/12 14:45	1
4-Nitrophenol	ND		49	6.3	ug/L		05/24/12 08:19	05/29/12 14:45	1
Pentachlorophenol	ND		9.7	0.64	ug/L		05/24/12 08:19	05/29/12 14:45	1
Phenol	ND		1.9	0.56	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,4,5-Trichlorophenol	ND		9.7	1.5	ug/L		05/24/12 08:19	05/29/12 14:45	1
2,4,6-Trichlorophenol	ND		9.7	1.7	ug/L		05/24/12 08:19	05/29/12 14:45	1
1,1'-Biphenyl	ND		9.7	0.40	ug/L		05/24/12 08:19	05/29/12 14:45	1
Caprolactam	ND		49	12	ug/L		05/24/12 08:19	05/29/12 14:45	1
Benzaldehyde	ND		9.7	1.5	ug/L		05/24/12 08:19	05/29/12 14:45	1
Atrazine	ND		9.7	0.87	ug/L		05/24/12 08:19	05/29/12 14:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		37 - 104				05/24/12 08:19	05/29/12 14:45	1
2-Fluorobiphenyl	58		35 - 108				05/24/12 08:19	05/29/12 14:45	1
Terphenyl-d14	68		25 - 130				05/24/12 08:19	05/29/12 14:45	1
Phenol-d5	65		30 - 102				05/24/12 08:19	05/29/12 14:45	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-14-06**

**Lab Sample ID: 180-10882-2**

Date Collected: 05/17/12 11:50

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	63		26 - 100	05/24/12 08:19	05/29/12 14:45	1
2,4,6-Tribromophenol	74		33 - 122	05/24/12 08:19	05/29/12 14:45	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.39		0.11	0.019	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1
Barium	390	B	1.1	0.011	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1
Cadmium	1.2		0.11	0.0075	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1
Chromium	24	B	0.21	0.0065	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1
Lead	0.95	B	0.11	0.0041	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1
Selenium	1.0		0.53	0.054	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1
Silver	0.17		0.11	0.0042	mg/Kg	☼	05/23/12 08:20	06/04/12 15:07	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 13:49	1
Barium	2.7	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 13:49	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 13:49	1
Chromium	5.5		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 13:49	1
Lead	1.1	B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 13:49	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 13:49	1
Silver	0.059	J B	1.0	0.036	ug/L		05/24/12 16:35	06/04/12 13:49	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:50	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.035	0.011	mg/Kg	☼	06/06/12 03:29	06/06/12 08:52	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.3		0.53	0.10	mg/Kg	☼	05/30/12 09:15	05/30/12 11:44	1
Percent Moisture	6.2		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

Date Collected: 05/17/12 12:25

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 89.6

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		11	2.7	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Benzene	ND		2.7	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Bromodichloromethane	ND		2.7	0.30	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Bromoform	ND		2.7	0.24	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Bromomethane	ND		2.7	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
2-Butanone (MEK)	ND		2.7	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

**Date Collected: 05/17/12 12:25**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 89.6**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.7	0.27	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Carbon tetrachloride	ND		2.7	0.24	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Chlorobenzene	ND		2.7	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Chloroethane	ND		2.7	0.83	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Chloroform	ND		2.7	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Chloromethane	ND		2.7	0.45	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Dibromochloromethane	ND		2.7	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,1-Dichloroethane	ND		2.7	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,2-Dichloroethane	ND		2.7	0.33	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,1-Dichloroethene	ND		2.7	0.45	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,2-Dichloropropane	ND		2.7	0.29	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
cis-1,3-Dichloropropene	ND		2.7	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
trans-1,3-Dichloropropene	ND		2.7	0.32	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Ethylbenzene	ND		2.7	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
2-Hexanone	ND		2.7	0.37	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Methylene Chloride	ND		2.7	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
4-Methyl-2-pentanone (MIBK)	ND		2.7	0.35	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Styrene	ND		2.7	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,1,1,2-Tetrachloroethane	ND		2.7	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Tetrachloroethene	ND		2.7	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,1,1-Trichloroethane	ND		2.7	0.26	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,1,2-Trichloroethane	ND		2.7	0.44	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Trichloroethene	ND		2.7	0.35	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Vinyl chloride	ND		2.7	0.25	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Xylenes, Total	ND		8.0	1.2	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Cyclohexane	ND		2.7	0.20	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,2-Dibromo-3-Chloropropane	ND		2.7	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,2-Dibromoethane (EDB)	ND		2.7	0.46	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Dichlorodifluoromethane	ND		2.7	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
cis-1,2-Dichloroethene	ND		2.7	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
trans-1,2-Dichloroethene	ND		2.7	0.32	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Isopropylbenzene	ND		2.7	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Methyl acetate	ND		2.7	0.48	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Methylcyclohexane	ND		2.7	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Methyl tert-butyl ether	ND		2.7	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Trichlorofluoromethane	ND		2.7	0.49	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.7	0.57	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,2-Dichlorobenzene	ND		2.7	0.43	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,3-Dichlorobenzene	ND		2.7	0.35	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,4-Dichlorobenzene	ND		2.7	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
1,2,4-Trichlorobenzene	ND		2.7	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Toluene	ND		2.7	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 16:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	69		52 - 124				05/21/12 05:57	05/21/12 16:14	1
Toluene-d8 (Surr)	106		72 - 127				05/21/12 05:57	05/21/12 16:14	1
4-Bromofluorobenzene (Surr)	95		63 - 120				05/21/12 05:57	05/21/12 16:14	1
Dibromofluoromethane (Surr)	88		68 - 121				05/21/12 05:57	05/21/12 16:14	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

Date Collected: 05/17/12 12:25

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 14:32	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 14:32	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 14:32	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 14:32	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 14:32	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 14:32	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 14:32	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 14:32	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 14:32	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 14:32	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 14:32	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 14:32	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 14:32	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 14:32	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 14:32	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 14:32	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 14:32	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 14:32	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 14:32	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 14:32	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 14:32	1
<b>Methylene Chloride</b>	<b>5.4</b>		5.0	1.1	ug/L			05/27/12 14:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 14:32	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 14:32	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 14:32	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 14:32	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 14:32	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 14:32	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 14:32	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 14:32	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 14:32	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 14:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 14:32	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 14:32	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 14:32	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 14:32	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 14:32	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 14:32	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 14:32	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 14:32	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 14:32	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 14:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 14:32	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 14:32	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 14:32	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 14:32	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 14:32	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 14:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		62 - 123					05/27/12 14:32	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

Date Collected: 05/17/12 12:25

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		05/27/12 14:32	1
4-Bromofluorobenzene (Surr)	83		75 - 120		05/27/12 14:32	1
Dibromofluoromethane (Surr)	94		80 - 120		05/27/12 14:32	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		74	7.1	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Acetophenone	ND		370	30	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Acenaphthylene	ND		74	8.5	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Anthracene	ND		74	7.2	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Benzo[a]anthracene	ND		74	9.3	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Benzo[a]pyrene	ND		74	7.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Benzo[b]fluoranthene	ND		74	12	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Benzo[g,h,i]perylene	ND		74	7.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Benzo[k]fluoranthene	ND		74	15	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Bis(2-chloroethyl)ether	ND		74	9.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Bis(2-chloroethoxy)methane	ND		370	24	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,2'-oxybis[1-chloropropane]	ND		74	8.0	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Bis(2-ethylhexyl) phthalate	ND		740	60	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4-Bromophenyl phenyl ether	ND		370	32	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Butyl benzyl phthalate	ND		370	51	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Carbazole	ND		74	6.8	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4-Chloroaniline	ND		370	30	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2-Chloronaphthalene	ND		74	7.7	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4-Chlorophenyl phenyl ether	ND		370	41	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Chrysene	ND		74	8.8	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Dibenz(a,h)anthracene	ND		74	8.2	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Dibenzofuran	ND		370	36	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Di-n-butyl phthalate	ND		370	46	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
3,3'-Dichlorobenzidine	ND		370	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Diethyl phthalate	ND		370	40	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Dimethyl phthalate	ND		370	40	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,4-Dinitrotoluene	ND		370	30	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,6-Dinitrotoluene	ND		370	38	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Di-n-octyl phthalate	ND		370	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Fluoranthene	ND		74	7.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Fluorene	ND		74	9.8	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Hexachlorobenzene	ND		74	7.9	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Hexachlorobutadiene	ND		74	8.3	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Hexachlorocyclopentadiene	ND		370	40	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Hexachloroethane	ND		370	27	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Indeno[1,2,3-cd]pyrene	ND		74	7.6	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Isophorone	ND		370	28	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2-Methylnaphthalene	ND		74	6.7	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Naphthalene	ND		74	6.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2-Nitroaniline	ND		1900	170	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
3-Nitroaniline	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4-Nitroaniline	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Nitrobenzene	ND		740	31	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
N-Nitrosodi-n-propylamine	ND		74	8.7	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
N-Nitrosodiphenylamine	ND		370	34	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

**Date Collected: 05/17/12 12:25**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 89.6**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		74	12	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Pyrene	ND		74	7.5	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4-Chloro-3-methylphenol	ND		370	34	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2-Chlorophenol	ND		370	30	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2-Methylphenol	ND		370	26	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Methylphenol, 3 & 4	ND		370	36	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,4-Dichlorophenol	ND		74	7.4	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,4-Dimethylphenol	ND		370	58	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,4-Dinitrophenol	ND		1900	440	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4,6-Dinitro-2-methylphenol	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2-Nitrophenol	ND		370	41	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
4-Nitrophenol	ND		1900	130	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Pentachlorophenol	ND		370	33	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Phenol	ND		74	8.7	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,4,5-Trichlorophenol	ND		370	39	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
2,4,6-Trichlorophenol	ND		370	55	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
1,1'-Biphenyl	ND		370	33	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Caprolactam	ND		1900	280	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Benzaldehyde	ND		370	55	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1
Atrazine	ND		370	36	ug/Kg	☼	05/31/12 05:20	06/05/12 21:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	55		25 - 104	05/31/12 05:20	06/05/12 21:34	1
2-Fluorobiphenyl	63		35 - 105	05/31/12 05:20	06/05/12 21:34	1
Terphenyl-d14	66		25 - 127	05/31/12 05:20	06/05/12 21:34	1
Phenol-d5	62		25 - 105	05/31/12 05:20	06/05/12 21:34	1
2-Fluorophenol	64		39 - 103	05/31/12 05:20	06/05/12 21:34	1
2,4,6-Tribromophenol	58		35 - 124	05/31/12 05:20	06/05/12 21:34	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:08	1
Acetophenone	ND		9.8	0.78	ug/L		05/24/12 08:19	05/29/12 15:08	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
Anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
Benzo[a]anthracene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:08	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/24/12 08:19	05/29/12 15:08	1
Benzo[b]fluoranthene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
Benzo[k]fluoranthene	ND		2.0	0.54	ug/L		05/24/12 08:19	05/29/12 15:08	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/29/12 15:08	1
Bis(2-chloroethoxy)methane	ND		9.8	0.57	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.19	ug/L		05/24/12 08:19	05/29/12 15:08	1
Bis(2-ethylhexyl) phthalate	ND		20	12	ug/L		05/24/12 08:19	05/29/12 15:08	1
4-Bromophenyl phenyl ether	ND		9.8	0.62	ug/L		05/24/12 08:19	05/29/12 15:08	1
Butyl benzyl phthalate	ND		9.8	1.4	ug/L		05/24/12 08:19	05/29/12 15:08	1
Carbazole	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
4-Chloroaniline	ND		9.8	0.87	ug/L		05/24/12 08:19	05/29/12 15:08	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
4-Chlorophenyl phenyl ether	ND		9.8	0.49	ug/L		05/24/12 08:19	05/29/12 15:08	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:08	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

Date Collected: 05/17/12 12:25

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
Dibenzofuran	ND		9.8	0.60	ug/L		05/24/12 08:19	05/29/12 15:08	1
Di-n-butyl phthalate	ND		9.8	1.2	ug/L		05/24/12 08:19	05/29/12 15:08	1
3,3'-Dichlorobenzidine	ND		9.8	1.1	ug/L		05/24/12 08:19	05/29/12 15:08	1
Diethyl phthalate	ND		9.8	1.4	ug/L		05/24/12 08:19	05/29/12 15:08	1
Dimethyl phthalate	ND		9.8	0.75	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,4-Dinitrotoluene	ND		9.8	0.53	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,6-Dinitrotoluene	ND		9.8	0.78	ug/L		05/24/12 08:19	05/29/12 15:08	1
Di-n-octyl phthalate	ND		9.8	2.0	ug/L		05/24/12 08:19	05/29/12 15:08	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:08	1
Fluorene	ND		2.0	0.21	ug/L		05/24/12 08:19	05/29/12 15:08	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/29/12 15:08	1
Hexachlorobutadiene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:08	1
Hexachlorocyclopentadiene	ND		9.8	0.51	ug/L		05/24/12 08:19	05/29/12 15:08	1
Hexachloroethane	ND		9.8	0.62	ug/L		05/24/12 08:19	05/29/12 15:08	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 15:08	1
Isophorone	ND		9.8	0.63	ug/L		05/24/12 08:19	05/29/12 15:08	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/29/12 15:08	1
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:08	1
2-Nitroaniline	ND		49	3.4	ug/L		05/24/12 08:19	05/29/12 15:08	1
3-Nitroaniline	ND		49	3.2	ug/L		05/24/12 08:19	05/29/12 15:08	1
4-Nitroaniline	ND		49	1.7	ug/L		05/24/12 08:19	05/29/12 15:08	1
Nitrobenzene	ND		20	0.83	ug/L		05/24/12 08:19	05/29/12 15:08	1
N-Nitrosodi-n-propylamine	ND		2.0	0.30	ug/L		05/24/12 08:19	05/29/12 15:08	1
N-Nitrosodiphenylamine	ND		9.8	0.84	ug/L		05/24/12 08:19	05/29/12 15:08	1
Phenanthrene	ND		2.0	0.42	ug/L		05/24/12 08:19	05/29/12 15:08	1
Pyrene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:08	1
4-Chloro-3-methylphenol	ND		9.8	0.74	ug/L		05/24/12 08:19	05/29/12 15:08	1
2-Chlorophenol	ND		9.8	1.6	ug/L		05/24/12 08:19	05/29/12 15:08	1
2-Methylphenol	ND		9.8	0.85	ug/L		05/24/12 08:19	05/29/12 15:08	1
Methylphenol, 3 & 4	ND		9.8	0.88	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,4-Dimethylphenol	ND		9.8	0.84	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/24/12 08:19	05/29/12 15:08	1
4,6-Dinitro-2-methylphenol	ND		49	2.2	ug/L		05/24/12 08:19	05/29/12 15:08	1
2-Nitrophenol	ND		9.8	1.7	ug/L		05/24/12 08:19	05/29/12 15:08	1
4-Nitrophenol	ND		49	6.3	ug/L		05/24/12 08:19	05/29/12 15:08	1
Pentachlorophenol	ND		9.8	0.65	ug/L		05/24/12 08:19	05/29/12 15:08	1
Phenol	ND		2.0	0.57	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,4,5-Trichlorophenol	ND		9.8	1.5	ug/L		05/24/12 08:19	05/29/12 15:08	1
2,4,6-Trichlorophenol	ND		9.8	1.7	ug/L		05/24/12 08:19	05/29/12 15:08	1
1,1'-Biphenyl	ND		9.8	0.41	ug/L		05/24/12 08:19	05/29/12 15:08	1
Caprolactam	ND		49	12	ug/L		05/24/12 08:19	05/29/12 15:08	1
Benzaldehyde	ND		9.8	1.5	ug/L		05/24/12 08:19	05/29/12 15:08	1
Atrazine	ND		9.8	0.87	ug/L		05/24/12 08:19	05/29/12 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		37 - 104	05/24/12 08:19	05/29/12 15:08	1
2-Fluorobiphenyl	57		35 - 108	05/24/12 08:19	05/29/12 15:08	1
Terphenyl-d14	70		25 - 130	05/24/12 08:19	05/29/12 15:08	1
Phenol-d5	62		30 - 102	05/24/12 08:19	05/29/12 15:08	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-04-1224**

**Lab Sample ID: 180-10882-3**

Date Collected: 05/17/12 12:25

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	60		26 - 100	05/24/12 08:19	05/29/12 15:08	1
2,4,6-Tribromophenol	71		33 - 122	05/24/12 08:19	05/29/12 15:08	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.058	J	0.11	0.019	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1
Barium	360	B	1.1	0.011	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1
Cadmium	1.4		0.11	0.0075	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1
Chromium	35	B	0.21	0.0065	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1
Lead	0.82	B	0.11	0.0041	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1
Selenium	0.36	J	0.54	0.054	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1
Silver	0.19		0.11	0.0042	mg/Kg	☼	05/23/12 08:20	06/04/12 15:27	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 13:54	1
Barium	1.7	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 13:54	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 13:54	1
Chromium	6.6		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 13:54	1
Lead	1.4	B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 13:54	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 13:54	1
Silver	0.038	J B	1.0	0.036	ug/L		05/24/12 16:35	06/04/12 13:54	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:52	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.036	0.012	mg/Kg	☼	06/06/12 03:29	06/06/12 08:54	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.0		0.54	0.10	mg/Kg	☼	05/30/12 09:15	05/30/12 11:44	1
Percent Moisture	10		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

Date Collected: 05/17/12 10:14

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 97.6

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		9.1	2.3	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Benzene	ND		2.3	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Bromodichloromethane	ND		2.3	0.26	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Bromoform	ND		2.3	0.20	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Bromomethane	ND		2.3	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
2-Butanone (MEK)	ND		2.3	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

**Date Collected: 05/17/12 10:14**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 97.6**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.3	0.23	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Carbon tetrachloride	ND		2.3	0.20	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Chlorobenzene	ND		2.3	0.35	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Chloroethane	ND		2.3	0.71	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Chloroform	ND		2.3	0.27	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Chloromethane	ND		2.3	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Dibromochloromethane	ND		2.3	0.32	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,1-Dichloroethane	ND		2.3	0.26	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,2-Dichloroethane	ND		2.3	0.28	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,1-Dichloroethene	ND		2.3	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,2-Dichloropropane	ND		2.3	0.25	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
cis-1,3-Dichloropropene	ND		2.3	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
trans-1,3-Dichloropropene	ND		2.3	0.27	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Ethylbenzene	ND		2.3	0.29	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
2-Hexanone	ND		2.3	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Methylene Chloride	ND		2.3	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
4-Methyl-2-pentanone (MIBK)	ND		2.3	0.30	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Styrene	ND		2.3	0.32	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,1,1,2-Tetrachloroethane	ND		2.3	0.33	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Tetrachloroethene	ND		2.3	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,1,1-Trichloroethane	ND		2.3	0.22	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,1,2-Trichloroethane	ND		2.3	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Trichloroethene	ND		2.3	0.30	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Vinyl chloride	ND		2.3	0.21	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Xylenes, Total	ND		6.8	1.0	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Cyclohexane	ND		2.3	0.17	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,2-Dibromo-3-Chloropropane	ND		2.3	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,2-Dibromoethane (EDB)	ND		2.3	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Dichlorodifluoromethane	ND		2.3	0.30	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
cis-1,2-Dichloroethene	ND		2.3	0.32	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
trans-1,2-Dichloroethene	ND		2.3	0.27	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Isopropylbenzene	ND		2.3	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Methyl acetate	ND		2.3	0.41	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Methylcyclohexane	ND		2.3	0.33	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Methyl tert-butyl ether	ND		2.3	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Trichlorofluoromethane	ND		2.3	0.42	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.3	0.49	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,2-Dichlorobenzene	ND		2.3	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,3-Dichlorobenzene	ND		2.3	0.30	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,4-Dichlorobenzene	ND		2.3	0.29	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
1,2,4-Trichlorobenzene	ND		2.3	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Toluene	ND		2.3	0.33	ug/Kg	☼	05/21/12 05:57	05/21/12 16:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	65		52 - 124				05/21/12 05:57	05/21/12 16:37	1
Toluene-d8 (Surr)	102		72 - 127				05/21/12 05:57	05/21/12 16:37	1
4-Bromofluorobenzene (Surr)	92		63 - 120				05/21/12 05:57	05/21/12 16:37	1
Dibromofluoromethane (Surr)	92		68 - 121				05/21/12 05:57	05/21/12 16:37	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

**Date Collected: 05/17/12 10:14**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 14:57	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 14:57	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 14:57	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 14:57	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 14:57	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 14:57	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 14:57	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 14:57	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 14:57	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 14:57	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 14:57	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 14:57	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 14:57	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 14:57	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 14:57	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 14:57	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 14:57	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 14:57	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 14:57	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 14:57	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 14:57	1
<b>Methylene Chloride</b>	<b>4.6</b>	<b>J</b>	5.0	1.1	ug/L			05/27/12 14:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 14:57	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 14:57	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 14:57	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 14:57	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 14:57	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 14:57	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 14:57	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 14:57	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 14:57	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 14:57	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 14:57	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 14:57	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 14:57	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 14:57	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 14:57	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 14:57	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 14:57	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 14:57	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 14:57	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 14:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 14:57	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 14:57	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 14:57	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 14:57	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 14:57	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		62 - 123		05/27/12 14:57	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

Date Collected: 05/17/12 10:14

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/27/12 14:57	1
4-Bromofluorobenzene (Surr)	85		75 - 120		05/27/12 14:57	1
Dibromofluoromethane (Surr)	91		80 - 120		05/27/12 14:57	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		68	6.5	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Acetophenone	ND		330	28	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Acenaphthylene	ND		68	7.7	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Anthracene	ND		68	6.6	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Benzo[a]anthracene	ND		68	8.4	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Benzo[a]pyrene	ND		68	6.7	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Benzo[b]fluoranthene	ND		68	11	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Benzo[g,h,i]perylene	ND		68	6.7	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Benzo[k]fluoranthene	ND		68	14	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Bis(2-chloroethyl)ether	ND		68	9.0	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Bis(2-chloroethoxy)methane	ND		330	22	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,2'-oxybis[1-chloropropane]	ND		68	7.3	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Bis(2-ethylhexyl) phthalate	ND		680	54	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4-Bromophenyl phenyl ether	ND		330	29	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Butyl benzyl phthalate	ND		330	46	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Carbazole	ND		68	6.2	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4-Chloroaniline	ND		330	27	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2-Chloronaphthalene	ND		68	7.0	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4-Chlorophenyl phenyl ether	ND		330	37	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
<b>Chrysene</b>	<b>9.2</b>	<b>J</b>	68	8.0	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Dibenz(a,h)anthracene	ND		68	7.5	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Dibenzofuran	ND		330	33	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Di-n-butyl phthalate	ND		330	42	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
3,3'-Dichlorobenzidine	ND		330	36	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Diethyl phthalate	ND		330	37	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Dimethyl phthalate	ND		330	37	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,4-Dinitrotoluene	ND		330	27	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,6-Dinitrotoluene	ND		330	35	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Di-n-octyl phthalate	ND		330	36	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
<b>Fluoranthene</b>	<b>8.4</b>	<b>J</b>	68	7.2	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Fluorene	ND		68	8.9	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Hexachlorobenzene	ND		68	7.2	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Hexachlorobutadiene	ND		68	7.5	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Hexachlorocyclopentadiene	ND		330	36	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Hexachloroethane	ND		330	24	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Indeno[1,2,3-cd]pyrene	ND		68	6.9	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Isophorone	ND		330	25	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2-Methylnaphthalene	ND		68	6.1	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Naphthalene	ND		68	5.8	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2-Nitroaniline	ND		1700	150	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
3-Nitroaniline	ND		1700	140	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4-Nitroaniline	ND		1700	140	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Nitrobenzene	ND		680	28	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
N-Nitrosodi-n-propylamine	ND		68	7.9	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
N-Nitrosodiphenylamine	ND		330	31	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

**Date Collected: 05/17/12 10:14**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 97.6**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		68	11	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
<b>Pyrene</b>	<b>7.4</b>	<b>J</b>	68	6.8	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4-Chloro-3-methylphenol	ND		330	31	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2-Chlorophenol	ND		330	28	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2-Methylphenol	ND		330	24	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Methylphenol, 3 & 4	ND		330	33	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,4-Dichlorophenol	ND		68	6.8	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,4-Dimethylphenol	ND		330	53	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,4-Dinitrophenol	ND		1700	400	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4,6-Dinitro-2-methylphenol	ND		1700	140	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2-Nitrophenol	ND		330	37	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
4-Nitrophenol	ND		1700	120	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Pentachlorophenol	ND		330	30	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Phenol	ND		68	8.0	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,4,5-Trichlorophenol	ND		330	36	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
2,4,6-Trichlorophenol	ND		330	50	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
1,1'-Biphenyl	ND		330	30	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Caprolactam	ND		1700	250	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Benzaldehyde	ND		330	51	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1
Atrazine	ND		330	33	ug/Kg	☼	05/31/12 05:20	06/06/12 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	56		25 - 104	05/31/12 05:20	06/06/12 14:51	1
2-Fluorobiphenyl	67		35 - 105	05/31/12 05:20	06/06/12 14:51	1
Terphenyl-d14	82		25 - 127	05/31/12 05:20	06/06/12 14:51	1
Phenol-d5	69		25 - 105	05/31/12 05:20	06/06/12 14:51	1
2-Fluorophenol	63		39 - 103	05/31/12 05:20	06/06/12 14:51	1
2,4,6-Tribromophenol	67		35 - 124	05/31/12 05:20	06/06/12 14:51	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:30	1
Acetophenone	ND		9.8	0.78	ug/L		05/24/12 08:19	05/29/12 15:30	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
Anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
Benzo[a]anthracene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:30	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/24/12 08:19	05/29/12 15:30	1
Benzo[b]fluoranthene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
Benzo[k]fluoranthene	ND		2.0	0.54	ug/L		05/24/12 08:19	05/29/12 15:30	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/29/12 15:30	1
Bis(2-chloroethoxy)methane	ND		9.8	0.57	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.19	ug/L		05/24/12 08:19	05/29/12 15:30	1
Bis(2-ethylhexyl) phthalate	ND		20	12	ug/L		05/24/12 08:19	05/29/12 15:30	1
4-Bromophenyl phenyl ether	ND		9.8	0.62	ug/L		05/24/12 08:19	05/29/12 15:30	1
Butyl benzyl phthalate	ND		9.8	1.4	ug/L		05/24/12 08:19	05/29/12 15:30	1
Carbazole	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
4-Chloroaniline	ND		9.8	0.87	ug/L		05/24/12 08:19	05/29/12 15:30	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
4-Chlorophenyl phenyl ether	ND		9.8	0.49	ug/L		05/24/12 08:19	05/29/12 15:30	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

**Date Collected: 05/17/12 10:14**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
Dibenzofuran	ND		9.8	0.60	ug/L		05/24/12 08:19	05/29/12 15:30	1
Di-n-butyl phthalate	ND		9.8	1.2	ug/L		05/24/12 08:19	05/29/12 15:30	1
3,3'-Dichlorobenzidine	ND		9.8	1.1	ug/L		05/24/12 08:19	05/29/12 15:30	1
Diethyl phthalate	ND		9.8	1.4	ug/L		05/24/12 08:19	05/29/12 15:30	1
Dimethyl phthalate	ND		9.8	0.75	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,4-Dinitrotoluene	ND		9.8	0.53	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,6-Dinitrotoluene	ND		9.8	0.78	ug/L		05/24/12 08:19	05/29/12 15:30	1
Di-n-octyl phthalate	ND		9.8	2.0	ug/L		05/24/12 08:19	05/29/12 15:30	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:30	1
Fluorene	ND		2.0	0.21	ug/L		05/24/12 08:19	05/29/12 15:30	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/29/12 15:30	1
Hexachlorobutadiene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:30	1
Hexachlorocyclopentadiene	ND		9.8	0.51	ug/L		05/24/12 08:19	05/29/12 15:30	1
Hexachloroethane	ND		9.8	0.62	ug/L		05/24/12 08:19	05/29/12 15:30	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 15:30	1
Isophorone	ND		9.8	0.63	ug/L		05/24/12 08:19	05/29/12 15:30	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/29/12 15:30	1
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:30	1
2-Nitroaniline	ND		49	3.4	ug/L		05/24/12 08:19	05/29/12 15:30	1
3-Nitroaniline	ND		49	3.2	ug/L		05/24/12 08:19	05/29/12 15:30	1
4-Nitroaniline	ND		49	1.7	ug/L		05/24/12 08:19	05/29/12 15:30	1
Nitrobenzene	ND		20	0.83	ug/L		05/24/12 08:19	05/29/12 15:30	1
N-Nitrosodi-n-propylamine	ND		2.0	0.30	ug/L		05/24/12 08:19	05/29/12 15:30	1
N-Nitrosodiphenylamine	ND		9.8	0.84	ug/L		05/24/12 08:19	05/29/12 15:30	1
Phenanthrene	ND		2.0	0.42	ug/L		05/24/12 08:19	05/29/12 15:30	1
Pyrene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:30	1
4-Chloro-3-methylphenol	ND		9.8	0.74	ug/L		05/24/12 08:19	05/29/12 15:30	1
2-Chlorophenol	ND		9.8	1.6	ug/L		05/24/12 08:19	05/29/12 15:30	1
2-Methylphenol	ND		9.8	0.85	ug/L		05/24/12 08:19	05/29/12 15:30	1
Methylphenol, 3 & 4	ND		9.8	0.88	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,4-Dimethylphenol	ND		9.8	0.84	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/24/12 08:19	05/29/12 15:30	1
4,6-Dinitro-2-methylphenol	ND		49	2.2	ug/L		05/24/12 08:19	05/29/12 15:30	1
2-Nitrophenol	ND		9.8	1.7	ug/L		05/24/12 08:19	05/29/12 15:30	1
4-Nitrophenol	ND		49	6.3	ug/L		05/24/12 08:19	05/29/12 15:30	1
Pentachlorophenol	ND		9.8	0.65	ug/L		05/24/12 08:19	05/29/12 15:30	1
Phenol	ND		2.0	0.57	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,4,5-Trichlorophenol	ND		9.8	1.5	ug/L		05/24/12 08:19	05/29/12 15:30	1
2,4,6-Trichlorophenol	ND		9.8	1.7	ug/L		05/24/12 08:19	05/29/12 15:30	1
1,1'-Biphenyl	ND		9.8	0.41	ug/L		05/24/12 08:19	05/29/12 15:30	1
Caprolactam	ND		49	12	ug/L		05/24/12 08:19	05/29/12 15:30	1
Benzaldehyde	ND		9.8	1.5	ug/L		05/24/12 08:19	05/29/12 15:30	1
Atrazine	ND		9.8	0.87	ug/L		05/24/12 08:19	05/29/12 15:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	62		37 - 104				05/24/12 08:19	05/29/12 15:30	1
2-Fluorobiphenyl	55		35 - 108				05/24/12 08:19	05/29/12 15:30	1
Terphenyl-d14	66		25 - 130				05/24/12 08:19	05/29/12 15:30	1
Phenol-d5	62		30 - 102				05/24/12 08:19	05/29/12 15:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-06**

**Lab Sample ID: 180-10882-4**

Date Collected: 05/17/12 10:14

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	59		26 - 100	05/24/12 08:19	05/29/12 15:30	1
2,4,6-Tribromophenol	70		33 - 122	05/24/12 08:19	05/29/12 15:30	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.11		0.10	0.018	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1
Barium	460	B	1.0	0.011	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1
Cadmium	1.0		0.10	0.0070	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1
Chromium	33	B	0.20	0.0061	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1
Lead	0.95	B	0.10	0.0038	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1
Selenium	0.71		0.50	0.050	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1
Silver	0.15		0.10	0.0039	mg/Kg	☼	05/23/12 08:20	06/04/12 15:31	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 13:58	1
Barium	4.3	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 13:58	1
Cadmium	0.11	J	1.0	0.11	ug/L		05/24/12 16:35	06/04/12 13:58	1
Chromium	6.3		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 13:58	1
Lead	2.0	B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 13:58	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 13:58	1
Silver	0.058	J B	1.0	0.036	ug/L		05/24/12 16:35	06/04/12 13:58	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:54	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.033	0.011	mg/Kg	☼	06/06/12 03:29	06/06/12 08:56	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.1		0.51	0.099	mg/Kg	☼	05/30/12 09:15	05/30/12 11:44	1
Percent Moisture	2.4		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.4	J	10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

Date Collected: 05/17/12 10:49

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 86.8

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		14	3.5	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Benzene	ND		3.5	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Bromodichloromethane	ND		3.5	0.39	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Bromoform	ND		3.5	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Bromomethane	ND		3.5	0.51	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
2-Butanone (MEK)	ND		3.5	0.61	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

**Date Collected: 05/17/12 10:49**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 86.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		3.5	0.36	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Carbon tetrachloride	ND		3.5	0.31	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Chlorobenzene	ND		3.5	0.53	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Chloroethane	ND		3.5	1.1	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Chloroform	ND		3.5	0.41	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Chloromethane	ND		3.5	0.59	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Dibromochloromethane	ND		3.5	0.49	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,1-Dichloroethane	ND		3.5	0.40	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,2-Dichloroethane	ND		3.5	0.43	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,1-Dichloroethene	ND		3.5	0.59	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,2-Dichloropropane	ND		3.5	0.38	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
cis-1,3-Dichloropropene	ND		3.5	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
trans-1,3-Dichloropropene	ND		3.5	0.42	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Ethylbenzene	ND		3.5	0.45	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
2-Hexanone	ND		3.5	0.48	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Methylene Chloride	ND		3.5	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
4-Methyl-2-pentanone (MIBK)	ND		3.5	0.45	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Styrene	ND		3.5	0.49	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,1,1,2-Tetrachloroethane	ND		3.5	0.50	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Tetrachloroethene	ND		3.5	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,1,1-Trichloroethane	ND		3.5	0.34	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,1,2-Trichloroethane	ND		3.5	0.58	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Trichloroethene	ND		3.5	0.46	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Vinyl chloride	ND		3.5	0.33	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Xylenes, Total	ND		10	1.6	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Cyclohexane	ND		3.5	0.26	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,2-Dibromo-3-Chloropropane	ND		3.5	0.52	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,2-Dibromoethane (EDB)	ND		3.5	0.60	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Dichlorodifluoromethane	ND		3.5	0.46	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
cis-1,2-Dichloroethene	ND		3.5	0.49	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
trans-1,2-Dichloroethene	ND		3.5	0.41	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Isopropylbenzene	ND		3.5	0.47	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Methyl acetate	ND		3.5	0.63	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Methylcyclohexane	ND		3.5	0.50	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Methyl tert-butyl ether	ND		3.5	0.52	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Trichlorofluoromethane	ND		3.5	0.64	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.5	0.74	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,2-Dichlorobenzene	ND		3.5	0.56	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,3-Dichlorobenzene	ND		3.5	0.46	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,4-Dichlorobenzene	ND		3.5	0.44	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
1,2,4-Trichlorobenzene	ND		3.5	0.61	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Toluene	ND		3.5	0.51	ug/Kg	☼	05/21/12 05:57	05/21/12 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		52 - 124				05/21/12 05:57	05/21/12 17:01	1
Toluene-d8 (Surr)	114		72 - 127				05/21/12 05:57	05/21/12 17:01	1
4-Bromofluorobenzene (Surr)	80		63 - 120				05/21/12 05:57	05/21/12 17:01	1
Dibromofluoromethane (Surr)	93		68 - 121				05/21/12 05:57	05/21/12 17:01	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

Date Collected: 05/17/12 10:49

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 15:22	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 15:22	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 15:22	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 15:22	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 15:22	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 15:22	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 15:22	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 15:22	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 15:22	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 15:22	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 15:22	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 15:22	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 15:22	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 15:22	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 15:22	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 15:22	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 15:22	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 15:22	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 15:22	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 15:22	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 15:22	1
<b>Methylene Chloride</b>	<b>2.3</b>	<b>J</b>	5.0	1.1	ug/L			05/27/12 15:22	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 15:22	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 15:22	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 15:22	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 15:22	1
1,1,1-Trichloroethane	ND	*	5.0	1.0	ug/L			05/27/12 15:22	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 15:22	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 15:22	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 15:22	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 15:22	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 15:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 15:22	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 15:22	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 15:22	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 15:22	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 15:22	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 15:22	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 15:22	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 15:22	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 15:22	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 15:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 15:22	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 15:22	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 15:22	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 15:22	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 15:22	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 15:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		62 - 123		05/27/12 15:22	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

Date Collected: 05/17/12 10:49

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		05/27/12 15:22	1
4-Bromofluorobenzene (Surr)	88		75 - 120		05/27/12 15:22	1
Dibromofluoromethane (Surr)	88		80 - 120		05/27/12 15:22	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>13</b>	<b>J</b>	77	7.3	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Acetophenone	ND		380	31	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Acenaphthylene	ND		77	8.7	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Anthracene</b>	<b>53</b>	<b>J</b>	77	7.5	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Benzo[a]anthracene</b>	<b>200</b>		77	9.6	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Benzo[a]pyrene</b>	<b>180</b>		77	7.6	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Benzo[b]fluoranthene</b>	<b>220</b>		77	12	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Benzo[g,h,i]perylene</b>	<b>150</b>		77	7.6	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Benzo[k]fluoranthene	ND		77	15	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Bis(2-chloroethyl)ether	ND		77	10	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Bis(2-chloroethoxy)methane	ND		380	25	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,2'-oxybis[1-chloropropane]	ND		77	8.2	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Bis(2-ethylhexyl) phthalate	ND		770	62	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4-Bromophenyl phenyl ether	ND		380	33	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Butyl benzyl phthalate	ND		380	52	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Carbazole</b>	<b>19</b>	<b>J</b>	77	7.0	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4-Chloroaniline	ND		380	31	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2-Chloronaphthalene	ND		77	8.0	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4-Chlorophenyl phenyl ether	ND		380	42	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Chrysene</b>	<b>230</b>		77	9.1	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Dibenz(a,h)anthracene</b>	<b>65</b>	<b>J</b>	77	8.5	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Dibenzofuran	ND		380	38	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Di-n-butyl phthalate	ND		380	48	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
3,3'-Dichlorobenzidine	ND		380	40	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Diethyl phthalate	ND		380	42	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Dimethyl phthalate	ND		380	42	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,4-Dinitrotoluene	ND		380	31	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,6-Dinitrotoluene	ND		380	39	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Di-n-octyl phthalate	ND		380	40	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Fluoranthene</b>	<b>120</b>		77	8.2	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Fluorene	ND		77	10	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Hexachlorobenzene	ND		77	8.1	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Hexachlorobutadiene	ND		77	8.5	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Hexachlorocyclopentadiene	ND		380	41	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Hexachloroethane	ND		380	27	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>80</b>		77	7.9	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Isophorone	ND		380	29	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>2-Methylnaphthalene</b>	<b>73</b>	<b>J</b>	77	6.9	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
<b>Naphthalene</b>	<b>40</b>	<b>J</b>	77	6.6	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2-Nitroaniline	ND		1900	170	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
3-Nitroaniline	ND		1900	160	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4-Nitroaniline	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Nitrobenzene	ND		770	32	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
N-Nitrosodi-n-propylamine	ND		77	9.0	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
N-Nitrosodiphenylamine	ND		380	35	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

Date Collected: 05/17/12 10:49

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 86.8

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	190		77	12	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Pyrene	180		77	7.7	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4-Chloro-3-methylphenol	ND		380	35	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2-Chlorophenol	ND		380	31	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2-Methylphenol	ND		380	27	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Methylphenol, 3 & 4	ND		380	37	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,4-Dichlorophenol	ND		77	7.7	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,4-Dimethylphenol	ND		380	60	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,4-Dinitrophenol	ND		1900	450	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4,6-Dinitro-2-methylphenol	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2-Nitrophenol	ND		380	42	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
4-Nitrophenol	ND		1900	140	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Pentachlorophenol	ND		380	34	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Phenol	ND		77	9.0	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,4,5-Trichlorophenol	ND		380	41	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
2,4,6-Trichlorophenol	ND		380	57	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
1,1'-Biphenyl	ND		380	34	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Caprolactam	ND		1900	290	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Benzaldehyde	ND		380	57	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1
Atrazine	ND		380	37	ug/Kg	☼	05/31/12 05:20	06/06/12 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	56		25 - 104	05/31/12 05:20	06/06/12 15:17	1
2-Fluorobiphenyl	67		35 - 105	05/31/12 05:20	06/06/12 15:17	1
Terphenyl-d14	80		25 - 127	05/31/12 05:20	06/06/12 15:17	1
Phenol-d5	64		25 - 105	05/31/12 05:20	06/06/12 15:17	1
2-Fluorophenol	61		39 - 103	05/31/12 05:20	06/06/12 15:17	1
2,4,6-Tribromophenol	65		35 - 124	05/31/12 05:20	06/06/12 15:17	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:54	1
Acetophenone	ND		10	0.80	ug/L		05/24/12 08:19	05/29/12 15:54	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:54	1
Anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:54	1
Benzo[a]anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:54	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/24/12 08:19	05/29/12 15:54	1
Benzo[b]fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:54	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:54	1
Benzo[k]fluoranthene	ND		2.0	0.55	ug/L		05/24/12 08:19	05/29/12 15:54	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/29/12 15:54	1
Bis(2-chloroethoxy)methane	ND		10	0.58	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 15:54	1
Bis(2-ethylhexyl) phthalate	ND		20	13	ug/L		05/24/12 08:19	05/29/12 15:54	1
4-Bromophenyl phenyl ether	ND		10	0.64	ug/L		05/24/12 08:19	05/29/12 15:54	1
Butyl benzyl phthalate	ND		10	1.4	ug/L		05/24/12 08:19	05/29/12 15:54	1
Carbazole	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:54	1
4-Chloroaniline	ND		10	0.89	ug/L		05/24/12 08:19	05/29/12 15:54	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 15:54	1
4-Chlorophenyl phenyl ether	ND		10	0.50	ug/L		05/24/12 08:19	05/29/12 15:54	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:54	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

Date Collected: 05/17/12 10:49

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:54	1
Dibenzofuran	ND		10	0.62	ug/L		05/24/12 08:19	05/29/12 15:54	1
Di-n-butyl phthalate	ND		10	1.2	ug/L		05/24/12 08:19	05/29/12 15:54	1
3,3'-Dichlorobenzidine	ND		10	1.1	ug/L		05/24/12 08:19	05/29/12 15:54	1
Diethyl phthalate	ND		10	1.5	ug/L		05/24/12 08:19	05/29/12 15:54	1
Dimethyl phthalate	ND		10	0.77	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,4-Dinitrotoluene	ND		10	0.54	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,6-Dinitrotoluene	ND		10	0.80	ug/L		05/24/12 08:19	05/29/12 15:54	1
Di-n-octyl phthalate	ND		10	2.1	ug/L		05/24/12 08:19	05/29/12 15:54	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:54	1
Fluorene	ND		2.0	0.22	ug/L		05/24/12 08:19	05/29/12 15:54	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/29/12 15:54	1
Hexachlorobutadiene	ND		2.0	0.17	ug/L		05/24/12 08:19	05/29/12 15:54	1
Hexachlorocyclopentadiene	ND		10	0.52	ug/L		05/24/12 08:19	05/29/12 15:54	1
Hexachloroethane	ND		10	0.63	ug/L		05/24/12 08:19	05/29/12 15:54	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 15:54	1
Isophorone	ND		10	0.64	ug/L		05/24/12 08:19	05/29/12 15:54	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/29/12 15:54	1
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 15:54	1
2-Nitroaniline	ND		50	3.5	ug/L		05/24/12 08:19	05/29/12 15:54	1
3-Nitroaniline	ND		50	3.2	ug/L		05/24/12 08:19	05/29/12 15:54	1
4-Nitroaniline	ND		50	1.7	ug/L		05/24/12 08:19	05/29/12 15:54	1
Nitrobenzene	ND		20	0.84	ug/L		05/24/12 08:19	05/29/12 15:54	1
N-Nitrosodi-n-propylamine	ND		2.0	0.31	ug/L		05/24/12 08:19	05/29/12 15:54	1
N-Nitrosodiphenylamine	ND		10	0.85	ug/L		05/24/12 08:19	05/29/12 15:54	1
Phenanthrene	ND		2.0	0.43	ug/L		05/24/12 08:19	05/29/12 15:54	1
Pyrene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 15:54	1
4-Chloro-3-methylphenol	ND		10	0.75	ug/L		05/24/12 08:19	05/29/12 15:54	1
2-Chlorophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/29/12 15:54	1
2-Methylphenol	ND		10	0.86	ug/L		05/24/12 08:19	05/29/12 15:54	1
Methylphenol, 3 & 4	ND		10	0.90	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,4-Dimethylphenol	ND		10	0.85	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,4-Dinitrophenol	ND		50	6.1	ug/L		05/24/12 08:19	05/29/12 15:54	1
4,6-Dinitro-2-methylphenol	ND		50	2.2	ug/L		05/24/12 08:19	05/29/12 15:54	1
2-Nitrophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/29/12 15:54	1
4-Nitrophenol	ND		50	6.5	ug/L		05/24/12 08:19	05/29/12 15:54	1
Pentachlorophenol	ND		10	0.66	ug/L		05/24/12 08:19	05/29/12 15:54	1
Phenol	ND		2.0	0.58	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/L		05/24/12 08:19	05/29/12 15:54	1
2,4,6-Trichlorophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/29/12 15:54	1
1,1'-Biphenyl	ND		10	0.42	ug/L		05/24/12 08:19	05/29/12 15:54	1
Caprolactam	ND		50	12	ug/L		05/24/12 08:19	05/29/12 15:54	1
Benzaldehyde	ND		10	1.5	ug/L		05/24/12 08:19	05/29/12 15:54	1
Atrazine	ND		10	0.89	ug/L		05/24/12 08:19	05/29/12 15:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		37 - 104	05/24/12 08:19	05/29/12 15:54	1
2-Fluorobiphenyl	60		35 - 108	05/24/12 08:19	05/29/12 15:54	1
Terphenyl-d14	78		25 - 130	05/24/12 08:19	05/29/12 15:54	1
Phenol-d5	69		30 - 102	05/24/12 08:19	05/29/12 15:54	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-01-1224**

**Lab Sample ID: 180-10882-5**

Date Collected: 05/17/12 10:49

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	64		26 - 100	05/24/12 08:19	05/29/12 15:54	1
2,4,6-Tribromophenol	78		33 - 122	05/24/12 08:19	05/29/12 15:54	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.92		0.11	0.020	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1
Barium	380	B	1.1	0.012	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1
Cadmium	0.89		0.11	0.0078	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1
Chromium	47	B	0.22	0.0068	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1
Lead	1.4	B	0.11	0.0042	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1
Selenium	1.3		0.55	0.056	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1
Silver	0.15		0.11	0.0043	mg/Kg	☼	05/23/12 08:20	06/04/12 15:35	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 14:02	1
Barium	5.6	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 14:02	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 14:02	1
Chromium	6.3		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 14:02	1
Lead	0.095	J B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 14:02	1
Selenium	0.79	J	5.0	0.42	ug/L		05/24/12 16:35	06/04/12 14:02	1
Silver	ND		1.0	0.036	ug/L		05/24/12 16:35	06/04/12 14:02	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:55	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.036	0.012	mg/Kg	☼	06/06/12 03:29	06/06/12 08:58	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	1.1		0.58	0.11	mg/Kg	☼	05/30/12 09:15	05/30/12 11:44	1
Percent Moisture	13		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

Date Collected: 05/17/12 15:15

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 88.4

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	2.9	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Benzene	ND		2.9	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Bromodichloromethane	ND		2.9	0.32	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Bromoform	ND		2.9	0.25	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Bromomethane	ND		2.9	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
2-Butanone (MEK)	ND		2.9	0.51	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

**Date Collected: 05/17/12 15:15**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 88.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.9	0.29	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Carbon tetrachloride	ND		2.9	0.26	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Chlorobenzene	ND		2.9	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Chloroethane	ND		2.9	0.89	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Chloroform	ND		2.9	0.34	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Chloromethane	ND		2.9	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Dibromochloromethane	ND		2.9	0.41	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,1-Dichloroethane	ND		2.9	0.33	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,2-Dichloroethane	ND		2.9	0.35	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,1-Dichloroethene	ND		2.9	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,2-Dichloropropane	ND		2.9	0.31	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
cis-1,3-Dichloropropene	ND		2.9	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
trans-1,3-Dichloropropene	ND		2.9	0.34	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Ethylbenzene	ND		2.9	0.37	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
2-Hexanone	ND		2.9	0.40	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Methylene Chloride	ND		2.9	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
4-Methyl-2-pentanone (MIBK)	ND		2.9	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Styrene	ND		2.9	0.41	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,1,1,2-Tetrachloroethane	ND		2.9	0.41	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Tetrachloroethene	ND		2.9	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,1,1-Trichloroethane	ND		2.9	0.28	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,1,2-Trichloroethane	ND		2.9	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Trichloroethene	ND		2.9	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Vinyl chloride	ND		2.9	0.27	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Xylenes, Total	ND		8.6	1.3	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Cyclohexane	ND		2.9	0.21	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,2-Dibromo-3-Chloropropane	ND		2.9	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,2-Dibromoethane (EDB)	ND		2.9	0.50	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Dichlorodifluoromethane	ND		2.9	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
cis-1,2-Dichloroethene	ND		2.9	0.40	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
trans-1,2-Dichloroethene	ND		2.9	0.34	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Isopropylbenzene	ND		2.9	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Methyl acetate	ND		2.9	0.52	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Methylcyclohexane	ND		2.9	0.42	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Methyl tert-butyl ether	ND		2.9	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Trichlorofluoromethane	ND		2.9	0.53	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.9	0.61	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,2-Dichlorobenzene	ND		2.9	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,3-Dichlorobenzene	ND		2.9	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,4-Dichlorobenzene	ND		2.9	0.37	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
1,2,4-Trichlorobenzene	ND		2.9	0.51	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Toluene	ND		2.9	0.42	ug/Kg	☼	05/23/12 07:30	05/23/12 14:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	61		52 - 124				05/23/12 07:30	05/23/12 14:44	1
Toluene-d8 (Surr)	99		72 - 127				05/23/12 07:30	05/23/12 14:44	1
4-Bromofluorobenzene (Surr)	88		63 - 120				05/23/12 07:30	05/23/12 14:44	1
Dibromofluoromethane (Surr)	83		68 - 121				05/23/12 07:30	05/23/12 14:44	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

Date Collected: 05/17/12 15:15

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 13:44	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 13:44	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 13:44	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 13:44	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 13:44	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 13:44	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 13:44	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 13:44	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 13:44	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 13:44	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 13:44	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 13:44	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 13:44	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 13:44	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 13:44	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 13:44	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 13:44	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 13:44	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 13:44	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 13:44	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 13:44	1
<b>Methylene Chloride</b>	<b>6.3</b>		5.0	1.1	ug/L			05/27/12 13:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 13:44	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 13:44	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 13:44	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 13:44	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 13:44	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 13:44	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 13:44	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 13:44	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 13:44	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 13:44	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 13:44	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 13:44	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 13:44	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 13:44	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 13:44	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 13:44	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 13:44	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 13:44	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 13:44	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 13:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 13:44	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 13:44	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 13:44	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 13:44	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 13:44	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 13:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		62 - 123		05/27/12 13:44	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

Date Collected: 05/17/12 15:15

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		05/27/12 13:44	1
4-Bromofluorobenzene (Surr)	89		75 - 120		05/27/12 13:44	1
Dibromofluoromethane (Surr)	93		80 - 120		05/27/12 13:44	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		76	7.2	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Acetophenone	ND		370	31	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Acenaphthylene	ND		76	8.6	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Anthracene	ND		76	7.4	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Benzo[a]anthracene	ND		76	9.5	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Benzo[a]pyrene	ND		76	7.5	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Benzo[b]fluoranthene	ND		76	12	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Benzo[g,h,i]perylene	ND		76	7.5	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Benzo[k]fluoranthene	ND		76	15	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Bis(2-chloroethyl)ether	ND		76	10	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Bis(2-chloroethoxy)methane	ND		370	25	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,2'-oxybis[1-chloropropane]	ND		76	8.1	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Bis(2-ethylhexyl) phthalate	ND		760	61	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4-Bromophenyl phenyl ether	ND		370	33	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Butyl benzyl phthalate	ND		370	52	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Carbazole	ND		76	7.0	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4-Chloroaniline	ND		370	30	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2-Chloronaphthalene	ND		76	7.9	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4-Chlorophenyl phenyl ether	ND		370	42	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Chrysene	ND		76	9.0	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Dibenz(a,h)anthracene	ND		76	8.4	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Dibenzofuran	ND		370	37	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Di-n-butyl phthalate	ND		370	47	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
3,3'-Dichlorobenzidine	ND		370	40	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Diethyl phthalate	ND		370	41	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Dimethyl phthalate	ND		370	41	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,4-Dinitrotoluene	ND		370	30	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,6-Dinitrotoluene	ND		370	39	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Di-n-octyl phthalate	ND		370	40	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Fluoranthene	ND		76	8.1	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Fluorene	ND		76	9.9	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Hexachlorobenzene	ND		76	8.0	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Hexachlorobutadiene	ND		76	8.4	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Hexachlorocyclopentadiene	ND		370	41	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Hexachloroethane	ND		370	27	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Indeno[1,2,3-cd]pyrene	ND		76	7.8	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Isophorone	ND		370	28	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2-Methylnaphthalene	ND		76	6.8	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Naphthalene	ND		76	6.5	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2-Nitroaniline	ND		1900	170	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
3-Nitroaniline	ND		1900	160	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4-Nitroaniline	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Nitrobenzene	ND		760	31	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
N-Nitrosodi-n-propylamine	ND		76	8.8	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
N-Nitrosodiphenylamine	ND		370	35	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

**Date Collected: 05/17/12 15:15**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 88.4**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		76	12	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Pyrene	ND		76	7.6	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4-Chloro-3-methylphenol	ND		370	35	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2-Chlorophenol	ND		370	31	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2-Methylphenol	ND		370	26	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Methylphenol, 3 & 4	ND		370	37	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,4-Dichlorophenol	ND		76	7.6	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,4-Dimethylphenol	ND		370	59	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,4-Dinitrophenol	ND		1900	450	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4,6-Dinitro-2-methylphenol	ND		1900	150	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2-Nitrophenol	ND		370	42	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
4-Nitrophenol	ND		1900	140	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Pentachlorophenol	ND		370	34	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Phenol	ND		76	8.9	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,4,5-Trichlorophenol	ND		370	40	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
2,4,6-Trichlorophenol	ND		370	56	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
1,1'-Biphenyl	ND		370	34	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Caprolactam	ND		1900	280	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Benzaldehyde	ND		370	57	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1
Atrazine	ND		370	37	ug/Kg	☼	05/31/12 05:20	06/05/12 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	61		25 - 104	05/31/12 05:20	06/05/12 17:44	1
2-Fluorobiphenyl	72		35 - 105	05/31/12 05:20	06/05/12 17:44	1
Terphenyl-d14	74		25 - 127	05/31/12 05:20	06/05/12 17:44	1
Phenol-d5	71		25 - 105	05/31/12 05:20	06/05/12 17:44	1
2-Fluorophenol	73		39 - 103	05/31/12 05:20	06/05/12 17:44	1
2,4,6-Tribromophenol	73		35 - 124	05/31/12 05:20	06/05/12 17:44	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 16:17	1
Acetophenone	ND		10	0.81	ug/L		05/24/12 08:19	05/29/12 16:17	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 16:17	1
Anthracene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 16:17	1
Benzo[a]anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 16:17	1
Benzo[a]pyrene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 16:17	1
Benzo[b]fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 16:17	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 16:17	1
Benzo[k]fluoranthene	ND		2.0	0.55	ug/L		05/24/12 08:19	05/29/12 16:17	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/29/12 16:17	1
Bis(2-chloroethoxy)methane	ND		10	0.59	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 16:17	1
Bis(2-ethylhexyl) phthalate	ND		20	13	ug/L		05/24/12 08:19	05/29/12 16:17	1
4-Bromophenyl phenyl ether	ND		10	0.64	ug/L		05/24/12 08:19	05/29/12 16:17	1
Butyl benzyl phthalate	ND		10	1.4	ug/L		05/24/12 08:19	05/29/12 16:17	1
Carbazole	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 16:17	1
4-Chloroaniline	ND		10	0.89	ug/L		05/24/12 08:19	05/29/12 16:17	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/29/12 16:17	1
4-Chlorophenyl phenyl ether	ND		10	0.51	ug/L		05/24/12 08:19	05/29/12 16:17	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 16:17	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

Date Collected: 05/17/12 15:15

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 16:17	1
Dibenzofuran	ND		10	0.62	ug/L		05/24/12 08:19	05/29/12 16:17	1
Di-n-butyl phthalate	ND		10	1.3	ug/L		05/24/12 08:19	05/29/12 16:17	1
3,3'-Dichlorobenzidine	ND		10	1.1	ug/L		05/24/12 08:19	05/29/12 16:17	1
Diethyl phthalate	ND		10	1.5	ug/L		05/24/12 08:19	05/29/12 16:17	1
Dimethyl phthalate	ND		10	0.77	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,4-Dinitrotoluene	ND		10	0.54	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,6-Dinitrotoluene	ND		10	0.81	ug/L		05/24/12 08:19	05/29/12 16:17	1
Di-n-octyl phthalate	ND		10	2.1	ug/L		05/24/12 08:19	05/29/12 16:17	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 16:17	1
Fluorene	ND		2.0	0.22	ug/L		05/24/12 08:19	05/29/12 16:17	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/29/12 16:17	1
Hexachlorobutadiene	ND		2.0	0.17	ug/L		05/24/12 08:19	05/29/12 16:17	1
Hexachlorocyclopentadiene	ND		10	0.52	ug/L		05/24/12 08:19	05/29/12 16:17	1
Hexachloroethane	ND		10	0.63	ug/L		05/24/12 08:19	05/29/12 16:17	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/29/12 16:17	1
Isophorone	ND		10	0.65	ug/L		05/24/12 08:19	05/29/12 16:17	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/29/12 16:17	1
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/29/12 16:17	1
2-Nitroaniline	ND		51	3.6	ug/L		05/24/12 08:19	05/29/12 16:17	1
3-Nitroaniline	ND		51	3.2	ug/L		05/24/12 08:19	05/29/12 16:17	1
4-Nitroaniline	ND		51	1.7	ug/L		05/24/12 08:19	05/29/12 16:17	1
Nitrobenzene	ND		20	0.85	ug/L		05/24/12 08:19	05/29/12 16:17	1
N-Nitrosodi-n-propylamine	ND		2.0	0.31	ug/L		05/24/12 08:19	05/29/12 16:17	1
N-Nitrosodiphenylamine	ND		10	0.86	ug/L		05/24/12 08:19	05/29/12 16:17	1
Phenanthrene	ND		2.0	0.43	ug/L		05/24/12 08:19	05/29/12 16:17	1
Pyrene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/29/12 16:17	1
4-Chloro-3-methylphenol	ND		10	0.76	ug/L		05/24/12 08:19	05/29/12 16:17	1
2-Chlorophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/29/12 16:17	1
2-Methylphenol	ND		10	0.87	ug/L		05/24/12 08:19	05/29/12 16:17	1
Methylphenol, 3 & 4	ND		10	0.91	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,4-Dichlorophenol	ND		2.0	0.34	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,4-Dimethylphenol	ND		10	0.86	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,4-Dinitrophenol	ND		51	6.2	ug/L		05/24/12 08:19	05/29/12 16:17	1
4,6-Dinitro-2-methylphenol	ND		51	2.2	ug/L		05/24/12 08:19	05/29/12 16:17	1
2-Nitrophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/29/12 16:17	1
4-Nitrophenol	ND		51	6.5	ug/L		05/24/12 08:19	05/29/12 16:17	1
Pentachlorophenol	ND		10	0.67	ug/L		05/24/12 08:19	05/29/12 16:17	1
Phenol	ND		2.0	0.59	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/L		05/24/12 08:19	05/29/12 16:17	1
2,4,6-Trichlorophenol	ND		10	1.8	ug/L		05/24/12 08:19	05/29/12 16:17	1
1,1'-Biphenyl	ND		10	0.42	ug/L		05/24/12 08:19	05/29/12 16:17	1
Caprolactam	ND		51	12	ug/L		05/24/12 08:19	05/29/12 16:17	1
Benzaldehyde	ND		10	1.5	ug/L		05/24/12 08:19	05/29/12 16:17	1
Atrazine	ND		10	0.90	ug/L		05/24/12 08:19	05/29/12 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		37 - 104	05/24/12 08:19	05/29/12 16:17	1
2-Fluorobiphenyl	58		35 - 108	05/24/12 08:19	05/29/12 16:17	1
Terphenyl-d14	78		25 - 130	05/24/12 08:19	05/29/12 16:17	1
Phenol-d5	71		30 - 102	05/24/12 08:19	05/29/12 16:17	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-06**

**Lab Sample ID: 180-10882-6**

Date Collected: 05/17/12 15:15

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	66		26 - 100	05/24/12 08:19	05/29/12 16:17	1
2,4,6-Tribromophenol	77		33 - 122	05/24/12 08:19	05/29/12 16:17	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.70		0.11	0.020	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1
Barium	360	B	1.1	0.012	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1
Cadmium	1.2		0.11	0.0078	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1
Chromium	26	B	0.22	0.0068	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1
Lead	2.3	B	0.11	0.0043	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1
Selenium	1.6		0.56	0.056	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1
Silver	0.19		0.11	0.0044	mg/Kg	☼	05/23/12 08:20	06/04/12 14:46	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.9		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 13:28	1
Barium	6.4	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 13:28	1
Cadmium	0.12	J	1.0	0.11	ug/L		05/24/12 16:35	06/04/12 13:28	1
Chromium	4.8		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 13:28	1
Lead	0.58	J B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 13:28	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 13:28	1
Silver	0.86	J B	1.0	0.036	ug/L		05/24/12 16:35	06/04/12 13:28	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:57	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.037	0.012	mg/Kg	☼	06/06/12 03:29	06/06/12 08:59	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.0		0.55	0.11	mg/Kg	☼	05/30/12 09:15	05/30/12 11:44	1
Percent Moisture	12		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

Date Collected: 05/17/12 15:36

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 79.1

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		13	3.4	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Benzene	ND		3.4	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Bromodichloromethane	ND		3.4	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Bromoform	ND		3.4	0.30	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Bromomethane	ND		3.4	0.50	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
2-Butanone (MEK)	ND		3.4	0.59	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

**Date Collected: 05/17/12 15:36**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 79.1**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		3.4	0.34	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Carbon tetrachloride	ND		3.4	0.30	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Chlorobenzene	ND		3.4	0.51	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Chloroethane	ND		3.4	1.0	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Chloroform	ND		3.4	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Chloromethane	ND		3.4	0.57	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Dibromochloromethane	ND		3.4	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,1-Dichloroethane	ND		3.4	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,2-Dichloroethane	ND		3.4	0.41	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,1-Dichloroethene	ND		3.4	0.57	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,2-Dichloropropane	ND		3.4	0.37	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
cis-1,3-Dichloropropene	ND		3.4	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
trans-1,3-Dichloropropene	ND		3.4	0.40	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Ethylbenzene	ND		3.4	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
2-Hexanone	ND		3.4	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Methylene Chloride	ND		3.4	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
4-Methyl-2-pentanone (MIBK)	ND		3.4	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Styrene	ND		3.4	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,1,2,2-Tetrachloroethane	ND		3.4	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Tetrachloroethene	ND		3.4	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,1,1-Trichloroethane	ND		3.4	0.33	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,1,2-Trichloroethane	ND		3.4	0.56	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Trichloroethene	ND		3.4	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Vinyl chloride	ND		3.4	0.32	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Xylenes, Total	ND		10	1.5	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Cyclohexane	ND		3.4	0.25	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,2-Dibromo-3-Chloropropane	ND		3.4	0.50	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,2-Dibromoethane (EDB)	ND		3.4	0.58	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Dichlorodifluoromethane	ND		3.4	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
cis-1,2-Dichloroethene	ND		3.4	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
trans-1,2-Dichloroethene	ND		3.4	0.40	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Isopropylbenzene	ND		3.4	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Methyl acetate	ND		3.4	0.61	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Methylcyclohexane	ND		3.4	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Methyl tert-butyl ether	ND		3.4	0.50	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Trichlorofluoromethane	ND		3.4	0.62	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.4	0.72	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,2-Dichlorobenzene	ND		3.4	0.54	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,3-Dichlorobenzene	ND		3.4	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,4-Dichlorobenzene	ND		3.4	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
1,2,4-Trichlorobenzene	ND		3.4	0.59	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1
Toluene	ND		3.4	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 18:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		52 - 124	05/23/12 07:30	05/23/12 18:13	1
Toluene-d8 (Surr)	110		72 - 127	05/23/12 07:30	05/23/12 18:13	1
4-Bromofluorobenzene (Surr)	93		63 - 120	05/23/12 07:30	05/23/12 18:13	1
Dibromofluoromethane (Surr)	92		68 - 121	05/23/12 07:30	05/23/12 18:13	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

Date Collected: 05/17/12 15:36

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 15:46	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 15:46	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 15:46	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 15:46	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 15:46	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 15:46	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 15:46	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 15:46	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 15:46	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 15:46	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 15:46	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 15:46	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 15:46	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 15:46	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 15:46	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 15:46	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 15:46	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 15:46	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 15:46	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 15:46	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 15:46	1
<b>Methylene Chloride</b>	<b>6.8</b>		5.0	1.1	ug/L			05/27/12 15:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 15:46	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 15:46	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 15:46	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 15:46	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 15:46	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 15:46	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 15:46	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 15:46	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 15:46	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 15:46	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 15:46	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 15:46	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 15:46	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 15:46	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 15:46	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 15:46	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 15:46	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 15:46	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 15:46	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 15:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 15:46	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 15:46	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 15:46	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 15:46	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 15:46	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		62 - 123		05/27/12 15:46	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

Date Collected: 05/17/12 15:36

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		05/27/12 15:46	1
4-Bromofluorobenzene (Surr)	84		75 - 120		05/27/12 15:46	1
Dibromofluoromethane (Surr)	91		80 - 120		05/27/12 15:46	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		84	8.0	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Acetophenone	ND		410	34	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Acenaphthylene	ND		84	9.6	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Anthracene</b>	<b>16</b>	<b>J</b>	84	8.2	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Benzo[a]anthracene</b>	<b>75</b>	<b>J</b>	84	10	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Benzo[a]pyrene</b>	<b>58</b>	<b>J</b>	84	8.4	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Benzo[b]fluoranthene</b>	<b>74</b>	<b>J</b>	84	13	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Benzo[g,h,i]perylene</b>	<b>43</b>	<b>J</b>	84	8.3	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Benzo[k]fluoranthene	ND		84	17	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Bis(2-chloroethyl)ether	ND		84	11	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Bis(2-chloroethoxy)methane	ND		410	28	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,2'-oxybis[1-chloropropane]	ND		84	9.0	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Bis(2-ethylhexyl) phthalate	ND		840	68	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4-Bromophenyl phenyl ether	ND		410	36	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Butyl benzyl phthalate	ND		410	57	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Carbazole	ND		84	7.7	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4-Chloroaniline	ND		410	34	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2-Chloronaphthalene	ND		84	8.7	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4-Chlorophenyl phenyl ether	ND		410	47	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Chrysene</b>	<b>76</b>	<b>J</b>	84	10	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Dibenz(a,h)anthracene	ND		84	9.3	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Dibenzofuran	ND		410	41	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Di-n-butyl phthalate	ND		410	52	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
3,3'-Dichlorobenzidine	ND		410	44	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Diethyl phthalate	ND		410	46	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Dimethyl phthalate	ND		410	46	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,4-Dinitrotoluene	ND		410	34	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,6-Dinitrotoluene	ND		410	43	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Di-n-octyl phthalate	ND		410	44	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>Fluoranthene</b>	<b>42</b>	<b>J</b>	84	9.0	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Fluorene	ND		84	11	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Hexachlorobenzene	ND		84	8.9	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Hexachlorobutadiene	ND		84	9.4	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Hexachlorocyclopentadiene	ND		410	45	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Hexachloroethane	ND		410	30	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Indeno[1,2,3-cd]pyrene	ND		84	8.6	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Isophorone	ND		410	32	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
<b>2-Methylnaphthalene</b>	<b>19</b>	<b>J</b>	84	7.5	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Naphthalene	ND		84	7.2	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2-Nitroaniline	ND		2100	190	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
3-Nitroaniline	ND		2100	170	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4-Nitroaniline	ND		2100	170	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Nitrobenzene	ND		840	35	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
N-Nitrosodi-n-propylamine	ND		84	9.8	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
N-Nitrosodiphenylamine	ND		410	39	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

**Date Collected: 05/17/12 15:36**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 79.1**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	60	J	84	13	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Pyrene	53	J	84	8.5	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4-Chloro-3-methylphenol	ND		410	39	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2-Chlorophenol	ND		410	34	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2-Methylphenol	ND		410	29	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Methylphenol, 3 & 4	ND		410	41	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,4-Dichlorophenol	ND		84	8.4	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,4-Dimethylphenol	ND		410	65	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,4-Dinitrophenol	ND		2100	500	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4,6-Dinitro-2-methylphenol	ND		2100	170	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2-Nitrophenol	ND		410	46	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
4-Nitrophenol	ND		2100	150	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Pentachlorophenol	ND		410	37	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Phenol	ND		84	9.9	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,4,5-Trichlorophenol	ND		410	45	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
2,4,6-Trichlorophenol	ND		410	63	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
1,1'-Biphenyl	ND		410	37	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Caprolactam	ND		2100	320	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Benzaldehyde	ND		410	63	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1
Atrazine	ND		410	41	ug/Kg	☼	05/31/12 05:20	06/07/12 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		25 - 104	05/31/12 05:20	06/07/12 13:30	1
2-Fluorobiphenyl	68		35 - 105	05/31/12 05:20	06/07/12 13:30	1
Terphenyl-d14	83		25 - 127	05/31/12 05:20	06/07/12 13:30	1
Phenol-d5	68		25 - 105	05/31/12 05:20	06/07/12 13:30	1
2-Fluorophenol	71		39 - 103	05/31/12 05:20	06/07/12 13:30	1
2,4,6-Tribromophenol	65		35 - 124	05/31/12 05:20	06/07/12 13:30	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 17:28	1
Acetophenone	ND		9.6	0.77	ug/L		05/24/12 08:19	05/29/12 17:28	1
Acenaphthylene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
Anthracene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
Benzo[a]anthracene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 17:28	1
Benzo[a]pyrene	ND		1.9	0.13	ug/L		05/24/12 08:19	05/29/12 17:28	1
Benzo[b]fluoranthene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
Benzo[g,h,i]perylene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
Benzo[k]fluoranthene	ND		1.9	0.53	ug/L		05/24/12 08:19	05/29/12 17:28	1
Bis(2-chloroethyl)ether	ND		1.9	0.24	ug/L		05/24/12 08:19	05/29/12 17:28	1
Bis(2-chloroethoxy)methane	ND		9.6	0.56	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,2'-oxybis[1-chloropropane]	ND		1.9	0.19	ug/L		05/24/12 08:19	05/29/12 17:28	1
Bis(2-ethylhexyl) phthalate	ND		19	12	ug/L		05/24/12 08:19	05/29/12 17:28	1
4-Bromophenyl phenyl ether	ND		9.6	0.61	ug/L		05/24/12 08:19	05/29/12 17:28	1
Butyl benzyl phthalate	ND		9.6	1.4	ug/L		05/24/12 08:19	05/29/12 17:28	1
Carbazole	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
4-Chloroaniline	ND		9.6	0.85	ug/L		05/24/12 08:19	05/29/12 17:28	1
2-Chloronaphthalene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
4-Chlorophenyl phenyl ether	ND		9.6	0.48	ug/L		05/24/12 08:19	05/29/12 17:28	1
Chrysene	ND		1.9	0.13	ug/L		05/24/12 08:19	05/29/12 17:28	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

**Date Collected: 05/17/12 15:36**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
Dibenzofuran	ND		9.6	0.59	ug/L		05/24/12 08:19	05/29/12 17:28	1
Di-n-butyl phthalate	ND		9.6	1.2	ug/L		05/24/12 08:19	05/29/12 17:28	1
3,3'-Dichlorobenzidine	ND		9.6	1.1	ug/L		05/24/12 08:19	05/29/12 17:28	1
Diethyl phthalate	ND		9.6	1.4	ug/L		05/24/12 08:19	05/29/12 17:28	1
Dimethyl phthalate	ND		9.6	0.74	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,4-Dinitrotoluene	ND		9.6	0.52	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,6-Dinitrotoluene	ND		9.6	0.77	ug/L		05/24/12 08:19	05/29/12 17:28	1
Di-n-octyl phthalate	ND		9.6	2.0	ug/L		05/24/12 08:19	05/29/12 17:28	1
Fluoranthene	ND		1.9	0.16	ug/L		05/24/12 08:19	05/29/12 17:28	1
Fluorene	ND		1.9	0.21	ug/L		05/24/12 08:19	05/29/12 17:28	1
Hexachlorobenzene	ND		1.9	0.18	ug/L		05/24/12 08:19	05/29/12 17:28	1
Hexachlorobutadiene	ND		1.9	0.16	ug/L		05/24/12 08:19	05/29/12 17:28	1
Hexachlorocyclopentadiene	ND		9.6	0.50	ug/L		05/24/12 08:19	05/29/12 17:28	1
Hexachloroethane	ND		9.6	0.60	ug/L		05/24/12 08:19	05/29/12 17:28	1
Indeno[1,2,3-cd]pyrene	ND		1.9	0.19	ug/L		05/24/12 08:19	05/29/12 17:28	1
Isophorone	ND		9.6	0.62	ug/L		05/24/12 08:19	05/29/12 17:28	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/24/12 08:19	05/29/12 17:28	1
Naphthalene	ND		1.9	0.13	ug/L		05/24/12 08:19	05/29/12 17:28	1
2-Nitroaniline	ND		48	3.4	ug/L		05/24/12 08:19	05/29/12 17:28	1
3-Nitroaniline	ND		48	3.1	ug/L		05/24/12 08:19	05/29/12 17:28	1
4-Nitroaniline	ND		48	1.7	ug/L		05/24/12 08:19	05/29/12 17:28	1
Nitrobenzene	ND		19	0.81	ug/L		05/24/12 08:19	05/29/12 17:28	1
N-Nitrosodi-n-propylamine	ND		1.9	0.30	ug/L		05/24/12 08:19	05/29/12 17:28	1
N-Nitrosodiphenylamine	ND		9.6	0.82	ug/L		05/24/12 08:19	05/29/12 17:28	1
Phenanthrene	ND		1.9	0.41	ug/L		05/24/12 08:19	05/29/12 17:28	1
Pyrene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:28	1
4-Chloro-3-methylphenol	ND		9.6	0.73	ug/L		05/24/12 08:19	05/29/12 17:28	1
2-Chlorophenol	ND		9.6	1.6	ug/L		05/24/12 08:19	05/29/12 17:28	1
2-Methylphenol	ND		9.6	0.83	ug/L		05/24/12 08:19	05/29/12 17:28	1
Methylphenol, 3 & 4	ND		9.6	0.87	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,4-Dichlorophenol	ND		1.9	0.32	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,4-Dimethylphenol	ND		9.6	0.82	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,4-Dinitrophenol	ND		48	5.9	ug/L		05/24/12 08:19	05/29/12 17:28	1
4,6-Dinitro-2-methylphenol	ND		48	2.1	ug/L		05/24/12 08:19	05/29/12 17:28	1
2-Nitrophenol	ND		9.6	1.6	ug/L		05/24/12 08:19	05/29/12 17:28	1
4-Nitrophenol	ND		48	6.2	ug/L		05/24/12 08:19	05/29/12 17:28	1
Pentachlorophenol	ND		9.6	0.64	ug/L		05/24/12 08:19	05/29/12 17:28	1
Phenol	ND		1.9	0.56	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,4,5-Trichlorophenol	ND		9.6	1.5	ug/L		05/24/12 08:19	05/29/12 17:28	1
2,4,6-Trichlorophenol	ND		9.6	1.7	ug/L		05/24/12 08:19	05/29/12 17:28	1
1,1'-Biphenyl	ND		9.6	0.40	ug/L		05/24/12 08:19	05/29/12 17:28	1
Caprolactam	ND		48	11	ug/L		05/24/12 08:19	05/29/12 17:28	1
Benzaldehyde	ND		9.6	1.4	ug/L		05/24/12 08:19	05/29/12 17:28	1
Atrazine	ND		9.6	0.86	ug/L		05/24/12 08:19	05/29/12 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		37 - 104	05/24/12 08:19	05/29/12 17:28	1
2-Fluorobiphenyl	61		35 - 108	05/24/12 08:19	05/29/12 17:28	1
Terphenyl-d14	89		25 - 130	05/24/12 08:19	05/29/12 17:28	1
Phenol-d5	72		30 - 102	05/24/12 08:19	05/29/12 17:28	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-02-1224**

**Lab Sample ID: 180-10882-7**

Date Collected: 05/17/12 15:36

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	66		26 - 100	05/24/12 08:19	05/29/12 17:28	1
2,4,6-Tribromophenol	83		33 - 122	05/24/12 08:19	05/29/12 17:28	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.13	0.023	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1
Barium	380	B	1.3	0.014	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1
Cadmium	1.5		0.13	0.0088	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1
Chromium	29	B	0.25	0.0077	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1
Lead	4.7	B	0.13	0.0048	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1
Selenium	2.3		0.63	0.063	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1
Silver	0.23		0.13	0.0049	mg/Kg	☼	05/23/12 08:20	06/04/12 15:39	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 14:06	1
Barium	14		10	0.098	ug/L		05/24/12 16:35	06/04/12 14:06	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 14:06	1
Chromium	5.8		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 14:06	1
Lead	0.064	J B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 14:06	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 14:06	1
Silver	ND		1.0	0.036	ug/L		05/24/12 16:35	06/04/12 14:06	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 19:02	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.042	0.014	mg/Kg	☼	06/06/12 03:29	06/06/12 09:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.0		0.63	0.12	mg/Kg	☼	05/30/12 09:15	05/30/12 11:50	1
Percent Moisture	21		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:09	1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

Date Collected: 05/17/12 14:20

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 95.0

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		13	3.3	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Benzene	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Bromodichloromethane	ND		3.3	0.37	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Bromoform	ND		3.3	0.29	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Bromomethane	ND		3.3	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
2-Butanone (MEK)	ND		3.3	0.58	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

Date Collected: 05/17/12 14:20

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 95.0

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		3.3	0.33	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Carbon tetrachloride	ND		3.3	0.29	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Chlorobenzene	ND		3.3	0.50	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Chloroethane	ND		3.3	1.0	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Chloroform	ND		3.3	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Chloromethane	ND		3.3	0.56	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Dibromochloromethane	ND		3.3	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,1-Dichloroethane	ND		3.3	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,2-Dichloroethane	ND		3.3	0.40	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,1-Dichloroethene	ND		3.3	0.55	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,2-Dichloropropane	ND		3.3	0.36	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
cis-1,3-Dichloropropene	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
trans-1,3-Dichloropropene	ND		3.3	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Ethylbenzene	ND		3.3	0.42	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
2-Hexanone	ND		3.3	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Methylene Chloride	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
4-Methyl-2-pentanone (MIBK)	ND		3.3	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Styrene	ND		3.3	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,1,1,2-Tetrachloroethane	ND		3.3	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Tetrachloroethene	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,1,1-Trichloroethane	ND		3.3	0.32	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,1,2-Trichloroethane	ND		3.3	0.54	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Trichloroethene	ND		3.3	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Vinyl chloride	ND		3.3	0.31	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Xylenes, Total	ND		9.8	1.5	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Cyclohexane	ND		3.3	0.24	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,2-Dibromo-3-Chloropropane	ND		3.3	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,2-Dibromoethane (EDB)	ND		3.3	0.56	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Dichlorodifluoromethane	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
cis-1,2-Dichloroethene	ND		3.3	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
trans-1,2-Dichloroethene	ND		3.3	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Isopropylbenzene	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Methyl acetate	ND		3.3	0.59	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Methylcyclohexane	ND		3.3	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Methyl tert-butyl ether	ND		3.3	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Trichlorofluoromethane	ND		3.3	0.60	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.3	0.70	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,2-Dichlorobenzene	ND		3.3	0.52	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,3-Dichlorobenzene	ND		3.3	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,4-Dichlorobenzene	ND		3.3	0.42	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
1,2,4-Trichlorobenzene	ND		3.3	0.58	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Toluene	ND		3.3	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 15:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	63		52 - 124				05/23/12 07:30	05/23/12 15:30	1
Toluene-d8 (Surr)	110		72 - 127				05/23/12 07:30	05/23/12 15:30	1
4-Bromofluorobenzene (Surr)	89		63 - 120				05/23/12 07:30	05/23/12 15:30	1
Dibromofluoromethane (Surr)	83		68 - 121				05/23/12 07:30	05/23/12 15:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

Date Collected: 05/17/12 14:20

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 16:10	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 16:10	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 16:10	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 16:10	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 16:10	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 16:10	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 16:10	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 16:10	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 16:10	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 16:10	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 16:10	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 16:10	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 16:10	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 16:10	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 16:10	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 16:10	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 16:10	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 16:10	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 16:10	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 16:10	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 16:10	1
<b>Methylene Chloride</b>	<b>5.1</b>		5.0	1.1	ug/L			05/27/12 16:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 16:10	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 16:10	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 16:10	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 16:10	1
1,1,1-Trichloroethane	ND *		5.0	1.0	ug/L			05/27/12 16:10	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 16:10	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 16:10	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 16:10	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 16:10	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 16:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 16:10	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 16:10	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 16:10	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 16:10	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 16:10	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 16:10	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 16:10	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 16:10	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 16:10	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 16:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 16:10	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 16:10	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 16:10	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 16:10	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 16:10	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		62 - 123		05/27/12 16:10	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

Date Collected: 05/17/12 14:20

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		05/27/12 16:10	1
4-Bromofluorobenzene (Surr)	88		75 - 120		05/27/12 16:10	1
Dibromofluoromethane (Surr)	94		80 - 120		05/27/12 16:10	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		71	6.7	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Acetophenone	ND		350	29	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Acenaphthylene	ND		71	8.0	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Anthracene	ND		71	6.9	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Benzo[a]anthracene	ND		71	8.8	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Benzo[a]pyrene	ND		71	7.0	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Benzo[b]fluoranthene	ND		71	11	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Benzo[g,h,i]perylene	ND		71	7.0	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Benzo[k]fluoranthene	ND		71	14	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Bis(2-chloroethyl)ether	ND		71	9.4	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Bis(2-chloroethoxy)methane	ND		350	23	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,2'-oxybis[1-chloropropane]	ND		71	7.6	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Bis(2-ethylhexyl) phthalate	ND		710	57	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4-Bromophenyl phenyl ether	ND		350	31	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Butyl benzyl phthalate	ND		350	48	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Carbazole	ND		71	6.5	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4-Chloroaniline	ND		350	28	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2-Chloronaphthalene	ND		71	7.3	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4-Chlorophenyl phenyl ether	ND		350	39	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Chrysene	ND		71	8.4	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Dibenz(a,h)anthracene	ND		71	7.8	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Dibenzofuran	ND		350	35	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Di-n-butyl phthalate	ND		350	44	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
3,3'-Dichlorobenzidine	ND		350	37	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Diethyl phthalate	ND		350	38	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Dimethyl phthalate	ND		350	38	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,4-Dinitrotoluene	ND		350	28	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,6-Dinitrotoluene	ND		350	36	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Di-n-octyl phthalate	ND		350	37	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Fluoranthene	ND		71	7.5	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Fluorene	ND		71	9.3	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Hexachlorobenzene	ND		71	7.5	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Hexachlorobutadiene	ND		71	7.9	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Hexachlorocyclopentadiene	ND		350	38	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Hexachloroethane	ND		350	25	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Indeno[1,2,3-cd]pyrene	ND		71	7.2	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Isophorone	ND		350	26	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2-Methylnaphthalene	ND		71	6.3	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Naphthalene	ND		71	6.1	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2-Nitroaniline	ND		1800	160	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
3-Nitroaniline	ND		1800	140	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4-Nitroaniline	ND		1800	140	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Nitrobenzene	ND		710	29	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
N-Nitrosodi-n-propylamine	ND		71	8.2	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
N-Nitrosodiphenylamine	ND		350	33	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

**Date Collected: 05/17/12 14:20**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 95.0**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		71	11	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Pyrene	ND		71	7.1	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4-Chloro-3-methylphenol	ND		350	32	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2-Chlorophenol	ND		350	29	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2-Methylphenol	ND		350	25	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Methylphenol, 3 & 4	ND		350	34	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,4-Dichlorophenol	ND		71	7.0	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,4-Dimethylphenol	ND		350	55	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,4-Dinitrophenol	ND		1800	420	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4,6-Dinitro-2-methylphenol	ND		1800	140	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2-Nitrophenol	ND		350	39	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
4-Nitrophenol	ND		1800	130	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Pentachlorophenol	ND		350	31	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Phenol	ND		71	8.3	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,4,5-Trichlorophenol	ND		350	37	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
2,4,6-Trichlorophenol	ND		350	53	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
1,1'-Biphenyl	ND		350	31	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Caprolactam	ND		1800	270	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Benzaldehyde	ND		350	53	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1
Atrazine	ND		350	34	ug/Kg	☼	05/31/12 05:20	06/06/12 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		25 - 104	05/31/12 05:20	06/06/12 16:06	1
2-Fluorobiphenyl	66		35 - 105	05/31/12 05:20	06/06/12 16:06	1
Terphenyl-d14	88		25 - 127	05/31/12 05:20	06/06/12 16:06	1
Phenol-d5	72		25 - 105	05/31/12 05:20	06/06/12 16:06	1
2-Fluorophenol	68		39 - 103	05/31/12 05:20	06/06/12 16:06	1
2,4,6-Tribromophenol	69		35 - 124	05/31/12 05:20	06/06/12 16:06	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 17:52	1
Acetophenone	ND		9.7	0.78	ug/L		05/24/12 08:19	05/29/12 17:52	1
Acenaphthylene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
Anthracene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
Benzo[a]anthracene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 17:52	1
Benzo[a]pyrene	ND		1.9	0.13	ug/L		05/24/12 08:19	05/29/12 17:52	1
Benzo[b]fluoranthene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
Benzo[g,h,i]perylene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
Benzo[k]fluoranthene	ND		1.9	0.53	ug/L		05/24/12 08:19	05/29/12 17:52	1
Bis(2-chloroethyl)ether	ND		1.9	0.24	ug/L		05/24/12 08:19	05/29/12 17:52	1
Bis(2-chloroethoxy)methane	ND		9.7	0.56	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,2'-oxybis[1-chloropropane]	ND		1.9	0.19	ug/L		05/24/12 08:19	05/29/12 17:52	1
Bis(2-ethylhexyl) phthalate	ND		19	12	ug/L		05/24/12 08:19	05/29/12 17:52	1
4-Bromophenyl phenyl ether	ND		9.7	0.62	ug/L		05/24/12 08:19	05/29/12 17:52	1
Butyl benzyl phthalate	ND		9.7	1.4	ug/L		05/24/12 08:19	05/29/12 17:52	1
Carbazole	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
4-Chloroaniline	ND		9.7	0.86	ug/L		05/24/12 08:19	05/29/12 17:52	1
2-Chloronaphthalene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
4-Chlorophenyl phenyl ether	ND		9.7	0.49	ug/L		05/24/12 08:19	05/29/12 17:52	1
Chrysene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 17:52	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

Date Collected: 05/17/12 14:20

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
Dibenzofuran	ND		9.7	0.60	ug/L		05/24/12 08:19	05/29/12 17:52	1
Di-n-butyl phthalate	ND		9.7	1.2	ug/L		05/24/12 08:19	05/29/12 17:52	1
3,3'-Dichlorobenzidine	ND		9.7	1.1	ug/L		05/24/12 08:19	05/29/12 17:52	1
Diethyl phthalate	ND		9.7	1.4	ug/L		05/24/12 08:19	05/29/12 17:52	1
Dimethyl phthalate	ND		9.7	0.74	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,4-Dinitrotoluene	ND		9.7	0.52	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,6-Dinitrotoluene	ND		9.7	0.77	ug/L		05/24/12 08:19	05/29/12 17:52	1
Di-n-octyl phthalate	ND		9.7	2.0	ug/L		05/24/12 08:19	05/29/12 17:52	1
Fluoranthene	ND		1.9	0.16	ug/L		05/24/12 08:19	05/29/12 17:52	1
Fluorene	ND		1.9	0.21	ug/L		05/24/12 08:19	05/29/12 17:52	1
Hexachlorobenzene	ND		1.9	0.18	ug/L		05/24/12 08:19	05/29/12 17:52	1
Hexachlorobutadiene	ND		1.9	0.16	ug/L		05/24/12 08:19	05/29/12 17:52	1
Hexachlorocyclopentadiene	ND		9.7	0.50	ug/L		05/24/12 08:19	05/29/12 17:52	1
Hexachloroethane	ND		9.7	0.61	ug/L		05/24/12 08:19	05/29/12 17:52	1
Indeno[1,2,3-cd]pyrene	ND		1.9	0.19	ug/L		05/24/12 08:19	05/29/12 17:52	1
Isophorone	ND		9.7	0.63	ug/L		05/24/12 08:19	05/29/12 17:52	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/24/12 08:19	05/29/12 17:52	1
Naphthalene	ND		1.9	0.14	ug/L		05/24/12 08:19	05/29/12 17:52	1
2-Nitroaniline	ND		49	3.4	ug/L		05/24/12 08:19	05/29/12 17:52	1
3-Nitroaniline	ND		49	3.1	ug/L		05/24/12 08:19	05/29/12 17:52	1
4-Nitroaniline	ND		49	1.7	ug/L		05/24/12 08:19	05/29/12 17:52	1
Nitrobenzene	ND		19	0.82	ug/L		05/24/12 08:19	05/29/12 17:52	1
N-Nitrosodi-n-propylamine	ND		1.9	0.30	ug/L		05/24/12 08:19	05/29/12 17:52	1
N-Nitrosodiphenylamine	ND		9.7	0.83	ug/L		05/24/12 08:19	05/29/12 17:52	1
Phenanthrene	ND		1.9	0.41	ug/L		05/24/12 08:19	05/29/12 17:52	1
Pyrene	ND		1.9	0.15	ug/L		05/24/12 08:19	05/29/12 17:52	1
4-Chloro-3-methylphenol	ND		9.7	0.73	ug/L		05/24/12 08:19	05/29/12 17:52	1
2-Chlorophenol	ND		9.7	1.6	ug/L		05/24/12 08:19	05/29/12 17:52	1
2-Methylphenol	ND		9.7	0.84	ug/L		05/24/12 08:19	05/29/12 17:52	1
Methylphenol, 3 & 4	ND		9.7	0.88	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,4-Dichlorophenol	ND		1.9	0.32	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,4-Dimethylphenol	ND		9.7	0.83	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/24/12 08:19	05/29/12 17:52	1
4,6-Dinitro-2-methylphenol	ND		49	2.1	ug/L		05/24/12 08:19	05/29/12 17:52	1
2-Nitrophenol	ND		9.7	1.7	ug/L		05/24/12 08:19	05/29/12 17:52	1
4-Nitrophenol	ND		49	6.3	ug/L		05/24/12 08:19	05/29/12 17:52	1
Pentachlorophenol	ND		9.7	0.64	ug/L		05/24/12 08:19	05/29/12 17:52	1
Phenol	ND		1.9	0.56	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,4,5-Trichlorophenol	ND		9.7	1.5	ug/L		05/24/12 08:19	05/29/12 17:52	1
2,4,6-Trichlorophenol	ND		9.7	1.7	ug/L		05/24/12 08:19	05/29/12 17:52	1
1,1'-Biphenyl	ND		9.7	0.40	ug/L		05/24/12 08:19	05/29/12 17:52	1
Caprolactam	ND		49	12	ug/L		05/24/12 08:19	05/29/12 17:52	1
Benzaldehyde	ND		9.7	1.5	ug/L		05/24/12 08:19	05/29/12 17:52	1
Atrazine	ND		9.7	0.87	ug/L		05/24/12 08:19	05/29/12 17:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		37 - 104				05/24/12 08:19	05/29/12 17:52	1
2-Fluorobiphenyl	61		35 - 108				05/24/12 08:19	05/29/12 17:52	1
Terphenyl-d14	84		25 - 130				05/24/12 08:19	05/29/12 17:52	1
Phenol-d5	74		30 - 102				05/24/12 08:19	05/29/12 17:52	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-06**

**Lab Sample ID: 180-10882-8**

Date Collected: 05/17/12 14:20

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	68		26 - 100	05/24/12 08:19	05/29/12 17:52	1
2,4,6-Tribromophenol	82		33 - 122	05/24/12 08:19	05/29/12 17:52	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.16		0.10	0.019	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1
Barium	370	B	1.0	0.011	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1
Cadmium	1.3		0.10	0.0073	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1
Chromium	26	B	0.21	0.0064	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1
Lead	1.5	B	0.10	0.0040	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1
Selenium	1.0		0.52	0.052	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1
Silver	0.18		0.10	0.0041	mg/Kg	☼	05/23/12 08:20	06/04/12 15:44	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.86	J	1.0	0.29	ug/L		05/24/12 16:35	06/04/12 14:26	1
Barium	2.8	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 14:26	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 14:26	1
Chromium	4.9		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 14:26	1
Lead	1.7	B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 14:26	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 14:26	1
Silver	ND		1.0	0.036	ug/L		05/24/12 16:35	06/04/12 14:26	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 19:04	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.035	0.011	mg/Kg	☼	06/06/12 03:29	06/06/12 09:09	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.0		0.51	0.098	mg/Kg	☼	05/30/12 09:15	05/30/12 11:50	1
Percent Moisture	5.0		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:09	1

**Client Sample ID: WC-MWP-03-1224**

**Lab Sample ID: 180-10882-9**

Date Collected: 05/17/12 14:35

Matrix: Solid

Date Received: 05/18/12 09:45

Percent Solids: 84.8

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		13	3.3	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Benzene	ND		3.3	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Bromodichloromethane	ND		3.3	0.37	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Bromoform	ND		3.3	0.29	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Bromomethane	ND		3.3	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
2-Butanone (MEK)	ND		3.3	0.58	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-1224**

**Lab Sample ID: 180-10882-9**

**Date Collected: 05/17/12 14:35**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 84.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		3.3	0.34	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Carbon tetrachloride	ND		3.3	0.29	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Chlorobenzene	ND		3.3	0.50	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Chloroethane	ND		3.3	1.0	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Chloroform	ND		3.3	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Chloromethane	ND		3.3	0.56	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Dibromochloromethane	ND		3.3	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,1-Dichloroethane	ND		3.3	0.38	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,2-Dichloroethane	ND		3.3	0.41	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,1-Dichloroethene	ND		3.3	0.56	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,2-Dichloropropane	ND		3.3	0.36	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
cis-1,3-Dichloropropene	ND		3.3	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
trans-1,3-Dichloropropene	ND		3.3	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Ethylbenzene	ND		3.3	0.42	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
2-Hexanone	ND		3.3	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Methylene Chloride	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
4-Methyl-2-pentanone (MIBK)	ND		3.3	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Styrene	ND		3.3	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,1,1,2-Tetrachloroethane	ND		3.3	0.47	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Tetrachloroethene	ND		3.3	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,1,1-Trichloroethane	ND		3.3	0.32	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,1,2-Trichloroethane	ND		3.3	0.55	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Trichloroethene	ND		3.3	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Vinyl chloride	ND		3.3	0.31	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Xylenes, Total	ND		9.9	1.5	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Cyclohexane	ND		3.3	0.25	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,2-Dibromo-3-Chloropropane	ND		3.3	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,2-Dibromoethane (EDB)	ND		3.3	0.57	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Dichlorodifluoromethane	ND		3.3	0.44	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
cis-1,2-Dichloroethene	ND		3.3	0.46	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
trans-1,2-Dichloroethene	ND		3.3	0.39	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Isopropylbenzene	ND		3.3	0.45	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Methyl acetate	ND		3.3	0.60	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Methylcyclohexane	ND		3.3	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Methyl tert-butyl ether	ND		3.3	0.49	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Trichlorofluoromethane	ND		3.3	0.61	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.3	0.71	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,2-Dichlorobenzene	ND		3.3	0.53	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,3-Dichlorobenzene	ND		3.3	0.43	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,4-Dichlorobenzene	ND		3.3	0.42	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
1,2,4-Trichlorobenzene	ND		3.3	0.58	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Toluene	ND		3.3	0.48	ug/Kg	☼	05/23/12 07:30	05/23/12 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	58		52 - 124				05/23/12 07:30	05/23/12 15:53	1
Toluene-d8 (Surr)	112		72 - 127				05/23/12 07:30	05/23/12 15:53	1
4-Bromofluorobenzene (Surr)	85		63 - 120				05/23/12 07:30	05/23/12 15:53	1
Dibromofluoromethane (Surr)	77		68 - 121				05/23/12 07:30	05/23/12 15:53	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-1224**

**Lab Sample ID: 180-10882-9**

Date Collected: 05/17/12 14:35

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/27/12 16:35	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 16:35	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 16:35	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 16:35	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 16:35	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 16:35	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 16:35	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 16:35	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 16:35	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 16:35	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 16:35	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 16:35	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 16:35	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 16:35	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 16:35	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 16:35	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 16:35	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 16:35	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 16:35	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 16:35	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 16:35	1
<b>Methylene Chloride</b>	<b>4.9</b>	<b>J</b>	5.0	1.1	ug/L			05/27/12 16:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 16:35	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 16:35	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 16:35	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 16:35	1
1,1,1-Trichloroethane	ND	*	5.0	1.0	ug/L			05/27/12 16:35	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 16:35	1
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 16:35	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 16:35	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 16:35	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 16:35	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 16:35	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 16:35	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 16:35	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 16:35	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 16:35	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 16:35	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 16:35	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 16:35	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 16:35	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 16:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 16:35	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 16:35	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 16:35	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 16:35	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 16:35	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 16:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		62 - 123		05/27/12 16:35	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-1224**

**Lab Sample ID: 180-10882-9**

Date Collected: 05/17/12 14:35

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) - SPLP (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/27/12 16:35	1
4-Bromofluorobenzene (Surr)	84		75 - 120		05/27/12 16:35	1
Dibromofluoromethane (Surr)	96		80 - 120		05/27/12 16:35	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		78	7.5	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Acetophenone	ND		390	32	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Acenaphthylene	ND		78	8.9	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Anthracene	ND		78	7.6	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Benzo[a]anthracene	ND		78	9.8	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Benzo[a]pyrene	ND		78	7.8	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Benzo[b]fluoranthene	ND		78	12	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Benzo[g,h,i]perylene	ND		78	7.8	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Benzo[k]fluoranthene	ND		78	16	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Bis(2-chloroethyl)ether	ND		78	10	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Bis(2-chloroethoxy)methane	ND		390	26	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,2'-oxybis[1-chloropropane]	ND		78	8.4	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Bis(2-ethylhexyl) phthalate	ND		780	63	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4-Bromophenyl phenyl ether	ND		390	34	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Butyl benzyl phthalate	ND		390	53	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Carbazole	ND		78	7.2	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4-Chloroaniline	ND		390	31	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2-Chloronaphthalene	ND		78	8.2	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4-Chlorophenyl phenyl ether	ND		390	43	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Chrysene	ND		78	9.3	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Dibenz(a,h)anthracene	ND		78	8.7	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Dibenzofuran	ND		390	38	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Di-n-butyl phthalate	ND		390	49	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
3,3'-Dichlorobenzidine	ND		390	41	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Diethyl phthalate	ND		390	43	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Dimethyl phthalate	ND		390	43	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,4-Dinitrotoluene	ND		390	32	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,6-Dinitrotoluene	ND		390	40	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Di-n-octyl phthalate	ND		390	41	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Fluoranthene	ND		78	8.4	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Fluorene	ND		78	10	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Hexachlorobenzene	ND		78	8.3	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Hexachlorobutadiene	ND		78	8.7	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Hexachlorocyclopentadiene	ND		390	42	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Hexachloroethane	ND		390	28	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Indeno[1,2,3-cd]pyrene	ND		78	8.0	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Isophorone	ND		390	29	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2-Methylnaphthalene	ND		78	7.0	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Naphthalene	ND		78	6.7	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2-Nitroaniline	ND		2000	170	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
3-Nitroaniline	ND		2000	160	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4-Nitroaniline	ND		2000	160	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Nitrobenzene	ND		780	33	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
N-Nitrosodi-n-propylamine	ND		78	9.2	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
N-Nitrosodiphenylamine	ND		390	36	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-1224**

**Lab Sample ID: 180-10882-9**

**Date Collected: 05/17/12 14:35**

**Matrix: Solid**

**Date Received: 05/18/12 09:45**

**Percent Solids: 84.8**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		78	12	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Pyrene	ND		78	7.9	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4-Chloro-3-methylphenol	ND		390	36	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2-Chlorophenol	ND		390	32	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2-Methylphenol	ND		390	27	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Methylphenol, 3 & 4	ND		390	38	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,4-Dichlorophenol	ND		78	7.8	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,4-Dimethylphenol	ND		390	61	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,4-Dinitrophenol	ND		2000	460	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4,6-Dinitro-2-methylphenol	ND		2000	160	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2-Nitrophenol	ND		390	43	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
4-Nitrophenol	ND		2000	140	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Pentachlorophenol	ND		390	35	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Phenol	ND		78	9.2	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,4,5-Trichlorophenol	ND		390	42	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
2,4,6-Trichlorophenol	ND		390	58	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
1,1'-Biphenyl	ND		390	35	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Caprolactam	ND		2000	290	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Benzaldehyde	ND		390	59	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1
Atrazine	ND		390	38	ug/Kg	☼	05/31/12 05:20	06/06/12 16:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		25 - 104	05/31/12 05:20	06/06/12 16:30	1
2-Fluorobiphenyl	65		35 - 105	05/31/12 05:20	06/06/12 16:30	1
Terphenyl-d14	73		25 - 127	05/31/12 05:20	06/06/12 16:30	1
Phenol-d5	69		25 - 105	05/31/12 05:20	06/06/12 16:30	1
2-Fluorophenol	66		39 - 103	05/31/12 05:20	06/06/12 16:30	1
2,4,6-Tribromophenol	58		35 - 124	05/31/12 05:20	06/06/12 16:30	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1.9	0.14	ug/L		05/24/12 08:23	05/29/12 18:17	1
Acetophenone	ND		9.7	0.78	ug/L		05/24/12 08:23	05/29/12 18:17	1
Acenaphthylene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
Anthracene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
Benzo[a]anthracene	ND		1.9	0.14	ug/L		05/24/12 08:23	05/29/12 18:17	1
Benzo[a]pyrene	ND		1.9	0.13	ug/L		05/24/12 08:23	05/29/12 18:17	1
Benzo[b]fluoranthene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
Benzo[g,h,i]perylene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
Benzo[k]fluoranthene	ND		1.9	0.53	ug/L		05/24/12 08:23	05/29/12 18:17	1
Bis(2-chloroethyl)ether	ND		1.9	0.24	ug/L		05/24/12 08:23	05/29/12 18:17	1
Bis(2-chloroethoxy)methane	ND		9.7	0.56	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,2'-oxybis[1-chloropropane]	ND		1.9	0.19	ug/L		05/24/12 08:23	05/29/12 18:17	1
Bis(2-ethylhexyl) phthalate	ND		19	12	ug/L		05/24/12 08:23	05/29/12 18:17	1
4-Bromophenyl phenyl ether	ND		9.7	0.62	ug/L		05/24/12 08:23	05/29/12 18:17	1
Butyl benzyl phthalate	ND		9.7	1.4	ug/L		05/24/12 08:23	05/29/12 18:17	1
Carbazole	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
4-Chloroaniline	ND		9.7	0.86	ug/L		05/24/12 08:23	05/29/12 18:17	1
2-Chloronaphthalene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
4-Chlorophenyl phenyl ether	ND		9.7	0.49	ug/L		05/24/12 08:23	05/29/12 18:17	1
Chrysene	ND		1.9	0.14	ug/L		05/24/12 08:23	05/29/12 18:17	1

# Client Sample Results

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 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-03-1224**

**Lab Sample ID: 180-10882-9**

Date Collected: 05/17/12 14:35

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
Dibenzofuran	ND		9.7	0.60	ug/L		05/24/12 08:23	05/29/12 18:17	1
Di-n-butyl phthalate	ND		9.7	1.2	ug/L		05/24/12 08:23	05/29/12 18:17	1
3,3'-Dichlorobenzidine	ND		9.7	1.1	ug/L		05/24/12 08:23	05/29/12 18:17	1
Diethyl phthalate	ND		9.7	1.4	ug/L		05/24/12 08:23	05/29/12 18:17	1
Dimethyl phthalate	ND		9.7	0.74	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,4-Dinitrotoluene	ND		9.7	0.52	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,6-Dinitrotoluene	ND		9.7	0.77	ug/L		05/24/12 08:23	05/29/12 18:17	1
Di-n-octyl phthalate	ND		9.7	2.0	ug/L		05/24/12 08:23	05/29/12 18:17	1
Fluoranthene	ND		1.9	0.16	ug/L		05/24/12 08:23	05/29/12 18:17	1
Fluorene	ND		1.9	0.21	ug/L		05/24/12 08:23	05/29/12 18:17	1
Hexachlorobenzene	ND		1.9	0.18	ug/L		05/24/12 08:23	05/29/12 18:17	1
Hexachlorobutadiene	ND		1.9	0.16	ug/L		05/24/12 08:23	05/29/12 18:17	1
Hexachlorocyclopentadiene	ND		9.7	0.50	ug/L		05/24/12 08:23	05/29/12 18:17	1
Hexachloroethane	ND		9.7	0.61	ug/L		05/24/12 08:23	05/29/12 18:17	1
Indeno[1,2,3-cd]pyrene	ND		1.9	0.19	ug/L		05/24/12 08:23	05/29/12 18:17	1
Isophorone	ND		9.7	0.63	ug/L		05/24/12 08:23	05/29/12 18:17	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/24/12 08:23	05/29/12 18:17	1
Naphthalene	ND		1.9	0.14	ug/L		05/24/12 08:23	05/29/12 18:17	1
2-Nitroaniline	ND		49	3.4	ug/L		05/24/12 08:23	05/29/12 18:17	1
3-Nitroaniline	ND		49	3.1	ug/L		05/24/12 08:23	05/29/12 18:17	1
4-Nitroaniline	ND		49	1.7	ug/L		05/24/12 08:23	05/29/12 18:17	1
Nitrobenzene	ND		19	0.82	ug/L		05/24/12 08:23	05/29/12 18:17	1
N-Nitrosodi-n-propylamine	ND		1.9	0.30	ug/L		05/24/12 08:23	05/29/12 18:17	1
N-Nitrosodiphenylamine	ND		9.7	0.83	ug/L		05/24/12 08:23	05/29/12 18:17	1
Phenanthrene	ND		1.9	0.41	ug/L		05/24/12 08:23	05/29/12 18:17	1
Pyrene	ND		1.9	0.15	ug/L		05/24/12 08:23	05/29/12 18:17	1
4-Chloro-3-methylphenol	ND		9.7	0.73	ug/L		05/24/12 08:23	05/29/12 18:17	1
2-Chlorophenol	ND		9.7	1.6	ug/L		05/24/12 08:23	05/29/12 18:17	1
2-Methylphenol	ND		9.7	0.84	ug/L		05/24/12 08:23	05/29/12 18:17	1
Methylphenol, 3 & 4	ND		9.7	0.88	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,4-Dichlorophenol	ND		1.9	0.32	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,4-Dimethylphenol	ND		9.7	0.83	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/24/12 08:23	05/29/12 18:17	1
4,6-Dinitro-2-methylphenol	ND		49	2.1	ug/L		05/24/12 08:23	05/29/12 18:17	1
2-Nitrophenol	ND		9.7	1.7	ug/L		05/24/12 08:23	05/29/12 18:17	1
4-Nitrophenol	ND		49	6.3	ug/L		05/24/12 08:23	05/29/12 18:17	1
Pentachlorophenol	ND		9.7	0.64	ug/L		05/24/12 08:23	05/29/12 18:17	1
Phenol	ND		1.9	0.56	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,4,5-Trichlorophenol	ND		9.7	1.5	ug/L		05/24/12 08:23	05/29/12 18:17	1
2,4,6-Trichlorophenol	ND		9.7	1.7	ug/L		05/24/12 08:23	05/29/12 18:17	1
1,1'-Biphenyl	ND		9.7	0.40	ug/L		05/24/12 08:23	05/29/12 18:17	1
Caprolactam	ND		49	12	ug/L		05/24/12 08:23	05/29/12 18:17	1
Benzaldehyde	ND		9.7	1.5	ug/L		05/24/12 08:23	05/29/12 18:17	1
Atrazine	ND		9.7	0.87	ug/L		05/24/12 08:23	05/29/12 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		37 - 104				05/24/12 08:23	05/29/12 18:17	1
2-Fluorobiphenyl	61		35 - 108				05/24/12 08:23	05/29/12 18:17	1
Terphenyl-d14	84		25 - 130				05/24/12 08:23	05/29/12 18:17	1
Phenol-d5	71		30 - 102				05/24/12 08:23	05/29/12 18:17	1

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**Client Sample ID: WC-MWP-03-1224**

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Date Collected: 05/17/12 14:35

Matrix: Solid

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - SPLP East (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	66		26 - 100	05/24/12 08:23	05/29/12 18:17	1
2,4,6-Tribromophenol	84		33 - 122	05/24/12 08:23	05/29/12 18:17	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.19		0.12	0.021	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1
Barium	370	B	1.2	0.012	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1
Cadmium	1.3		0.12	0.0081	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1
Chromium	26	B	0.23	0.0070	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1
Lead	0.93	B	0.12	0.0044	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1
Selenium	0.91		0.58	0.058	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1
Silver	0.19		0.12	0.0045	mg/Kg	☼	05/23/12 08:20	06/04/12 15:48	1

**Method: 6020 - Metals (ICP/MS) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 14:30	1
Barium	3.3	J	10	0.098	ug/L		05/24/12 16:35	06/04/12 14:30	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 14:30	1
Chromium	5.9		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 14:30	1
Lead	2.0	B	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 14:30	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 14:30	1
Silver	ND		1.0	0.036	ug/L		05/24/12 16:35	06/04/12 14:30	1

**Method: 7470A - Mercury (CVAA) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 19:09	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.039	0.013	mg/Kg	☼	06/06/12 03:29	06/06/12 09:11	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.1		0.58	0.11	mg/Kg	☼	05/30/12 09:15	05/30/12 11:50	1
Percent Moisture	15		0.10	0.10	%			05/21/12 09:14	1

**General Chemistry - SPLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.7	J	10	1.5	ug/L		06/06/12 08:50	06/06/12 10:09	1

**Client Sample ID: WC-MWP-FB1**

**Lab Sample ID: 180-10882-10**

Date Collected: 05/17/12 16:05

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/23/12 07:05	1
Benzene	ND		5.0	0.99	ug/L			05/23/12 07:05	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/23/12 07:05	1
Bromoform	ND		5.0	1.1	ug/L			05/23/12 07:05	1
Bromomethane	ND		5.0	1.6	ug/L			05/23/12 07:05	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/23/12 07:05	1

# Client Sample Results

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TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-FB1**

**Lab Sample ID: 180-10882-10**

Date Collected: 05/17/12 16:05

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	1.1	ug/L			05/23/12 07:05	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/23/12 07:05	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/23/12 07:05	1
Chloroethane	ND		5.0	0.75	ug/L			05/23/12 07:05	1
Chloroform	ND		5.0	1.0	ug/L			05/23/12 07:05	1
Chloromethane	ND		5.0	1.4	ug/L			05/23/12 07:05	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/23/12 07:05	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/23/12 07:05	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/23/12 07:05	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/23/12 07:05	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/23/12 07:05	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/23/12 07:05	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/23/12 07:05	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/23/12 07:05	1
2-Hexanone	ND		5.0	0.57	ug/L			05/23/12 07:05	1
Methylene Chloride	ND		5.0	1.1	ug/L			05/23/12 07:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/23/12 07:05	1
Styrene	ND		5.0	0.64	ug/L			05/23/12 07:05	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/23/12 07:05	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/23/12 07:05	1
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			05/23/12 07:05	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/23/12 07:05	1
Trichloroethene	ND		5.0	0.80	ug/L			05/23/12 07:05	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/23/12 07:05	1
Xylenes, Total	ND		15	2.0	ug/L			05/23/12 07:05	1
Cyclohexane	ND		5.0	0.60	ug/L			05/23/12 07:05	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/23/12 07:05	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/23/12 07:05	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/23/12 07:05	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/23/12 07:05	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/23/12 07:05	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/23/12 07:05	1
Methyl acetate	ND		5.0	1.2	ug/L			05/23/12 07:05	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/23/12 07:05	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/23/12 07:05	1
Trichlorofluoromethane	ND	*	5.0	1.1	ug/L			05/23/12 07:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/23/12 07:05	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/23/12 07:05	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/23/12 07:05	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/23/12 07:05	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/23/12 07:05	1
Toluene	ND		5.0	0.85	ug/L			05/23/12 07:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		62 - 123					05/23/12 07:05	1
Toluene-d8 (Surr)	93		80 - 120					05/23/12 07:05	1
4-Bromofluorobenzene (Surr)	86		75 - 120					05/23/12 07:05	1
Dibromofluoromethane (Surr)	96		80 - 120					05/23/12 07:05	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-FB1**

**Lab Sample ID: 180-10882-10**

Date Collected: 05/17/12 16:05

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1.9	0.14	ug/L		05/23/12 08:53	05/28/12 19:14	1
Acetophenone	ND		9.6	0.77	ug/L		05/23/12 08:53	05/28/12 19:14	1
Acenaphthylene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
Anthracene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
Benzo[a]anthracene	ND		1.9	0.14	ug/L		05/23/12 08:53	05/28/12 19:14	1
Benzo[a]pyrene	ND		1.9	0.13	ug/L		05/23/12 08:53	05/28/12 19:14	1
Benzo[b]fluoranthene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
Benzo[g,h,i]perylene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
Benzo[k]fluoranthene	ND		1.9	0.53	ug/L		05/23/12 08:53	05/28/12 19:14	1
Bis(2-chloroethyl)ether	ND		1.9	0.24	ug/L		05/23/12 08:53	05/28/12 19:14	1
Bis(2-chloroethoxy)methane	ND		9.6	0.56	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,2'-oxybis[1-chloropropane]	ND		1.9	0.19	ug/L		05/23/12 08:53	05/28/12 19:14	1
Bis(2-ethylhexyl) phthalate	ND		19	12	ug/L		05/23/12 08:53	05/28/12 19:14	1
4-Bromophenyl phenyl ether	ND		9.6	0.61	ug/L		05/23/12 08:53	05/28/12 19:14	1
Butyl benzyl phthalate	ND		9.6	1.4	ug/L		05/23/12 08:53	05/28/12 19:14	1
Carbazole	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
4-Chloroaniline	ND		9.6	0.85	ug/L		05/23/12 08:53	05/28/12 19:14	1
2-Chloronaphthalene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
4-Chlorophenyl phenyl ether	ND		9.6	0.48	ug/L		05/23/12 08:53	05/28/12 19:14	1
Chrysene	ND		1.9	0.13	ug/L		05/23/12 08:53	05/28/12 19:14	1
Dibenz(a,h)anthracene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
Dibenzofuran	ND		9.6	0.59	ug/L		05/23/12 08:53	05/28/12 19:14	1
Di-n-butyl phthalate	ND		9.6	1.2	ug/L		05/23/12 08:53	05/28/12 19:14	1
3,3'-Dichlorobenzidine	ND		9.6	1.1	ug/L		05/23/12 08:53	05/28/12 19:14	1
Diethyl phthalate	ND		9.6	1.4	ug/L		05/23/12 08:53	05/28/12 19:14	1
Dimethyl phthalate	ND		9.6	0.74	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,4-Dinitrotoluene	ND		9.6	0.52	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,6-Dinitrotoluene	ND		9.6	0.77	ug/L		05/23/12 08:53	05/28/12 19:14	1
Di-n-octyl phthalate	ND		9.6	2.0	ug/L		05/23/12 08:53	05/28/12 19:14	1
Fluoranthene	ND		1.9	0.16	ug/L		05/23/12 08:53	05/28/12 19:14	1
Fluorene	ND		1.9	0.21	ug/L		05/23/12 08:53	05/28/12 19:14	1
Hexachlorobenzene	ND		1.9	0.18	ug/L		05/23/12 08:53	05/28/12 19:14	1
Hexachlorobutadiene	ND		1.9	0.16	ug/L		05/23/12 08:53	05/28/12 19:14	1
Hexachlorocyclopentadiene	ND		9.6	0.50	ug/L		05/23/12 08:53	05/28/12 19:14	1
Hexachloroethane	ND		9.6	0.60	ug/L		05/23/12 08:53	05/28/12 19:14	1
Indeno[1,2,3-cd]pyrene	ND		1.9	0.19	ug/L		05/23/12 08:53	05/28/12 19:14	1
Isophorone	ND		9.6	0.62	ug/L		05/23/12 08:53	05/28/12 19:14	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/23/12 08:53	05/28/12 19:14	1
Naphthalene	ND		1.9	0.13	ug/L		05/23/12 08:53	05/28/12 19:14	1
2-Nitroaniline	ND		48	3.4	ug/L		05/23/12 08:53	05/28/12 19:14	1
3-Nitroaniline	ND		48	3.1	ug/L		05/23/12 08:53	05/28/12 19:14	1
4-Nitroaniline	ND		48	1.7	ug/L		05/23/12 08:53	05/28/12 19:14	1
Nitrobenzene	ND		19	0.81	ug/L		05/23/12 08:53	05/28/12 19:14	1
N-Nitrosodi-n-propylamine	ND		1.9	0.30	ug/L		05/23/12 08:53	05/28/12 19:14	1
N-Nitrosodiphenylamine	ND		9.6	0.82	ug/L		05/23/12 08:53	05/28/12 19:14	1
Phenanthrene	ND		1.9	0.41	ug/L		05/23/12 08:53	05/28/12 19:14	1
Pyrene	ND		1.9	0.15	ug/L		05/23/12 08:53	05/28/12 19:14	1
4-Chloro-3-methylphenol	ND		9.6	0.73	ug/L		05/23/12 08:53	05/28/12 19:14	1
2-Chlorophenol	ND		9.6	1.6	ug/L		05/23/12 08:53	05/28/12 19:14	1
2-Methylphenol	ND		9.6	0.83	ug/L		05/23/12 08:53	05/28/12 19:14	1
Methylphenol, 3 & 4	ND		9.6	0.87	ug/L		05/23/12 08:53	05/28/12 19:14	1



# Client Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-FB1**

**Lab Sample ID: 180-10882-10**

Date Collected: 05/17/12 16:05

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		1.9	0.32	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,4-Dimethylphenol	ND		9.6	0.82	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,4-Dinitrophenol	ND		48	5.9	ug/L		05/23/12 08:53	05/28/12 19:14	1
4,6-Dinitro-2-methylphenol	ND		48	2.1	ug/L		05/23/12 08:53	05/28/12 19:14	1
2-Nitrophenol	ND		9.6	1.6	ug/L		05/23/12 08:53	05/28/12 19:14	1
4-Nitrophenol	ND		48	6.2	ug/L		05/23/12 08:53	05/28/12 19:14	1
Pentachlorophenol	ND		9.6	0.64	ug/L		05/23/12 08:53	05/28/12 19:14	1
Phenol	ND		1.9	0.56	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,4,5-Trichlorophenol	ND		9.6	1.5	ug/L		05/23/12 08:53	05/28/12 19:14	1
2,4,6-Trichlorophenol	ND		9.6	1.7	ug/L		05/23/12 08:53	05/28/12 19:14	1
1,1'-Biphenyl	ND		9.6	0.40	ug/L		05/23/12 08:53	05/28/12 19:14	1
Caprolactam	ND		48	11	ug/L		05/23/12 08:53	05/28/12 19:14	1
<b>Benzaldehyde</b>	<b>11</b>		9.6	1.4	ug/L		05/23/12 08:53	05/28/12 19:14	1
Atrazine	ND		9.6	0.86	ug/L		05/23/12 08:53	05/28/12 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		37 - 104	05/23/12 08:53	05/28/12 19:14	1
2-Fluorobiphenyl	66		35 - 108	05/23/12 08:53	05/28/12 19:14	1
Terphenyl-d14	80		25 - 130	05/23/12 08:53	05/28/12 19:14	1
Phenol-d5	69		30 - 102	05/23/12 08:53	05/28/12 19:14	1
2-Fluorophenol	68		26 - 100	05/23/12 08:53	05/28/12 19:14	1
2,4,6-Tribromophenol	83		33 - 122	05/23/12 08:53	05/28/12 19:14	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>0.95</b>	<b>J</b>	1.0	0.29	ug/L		05/21/12 09:15	05/25/12 22:41	1
<b>Barium</b>	<b>15</b>	<b>B</b>	10	0.098	ug/L		05/21/12 09:15	05/25/12 22:41	1
<b>Cadmium</b>	<b>0.12</b>	<b>J</b>	1.0	0.11	ug/L		05/21/12 09:15	05/25/12 22:41	1
<b>Chromium</b>	<b>3.3</b>		2.0	0.54	ug/L		05/21/12 09:15	05/25/12 22:41	1
<b>Lead</b>	<b>0.41</b>	<b>J B</b>	1.0	0.019	ug/L		05/21/12 09:15	05/25/12 22:41	1
<b>Selenium</b>	<b>1.1</b>	<b>J</b>	5.0	0.42	ug/L		05/21/12 09:15	05/25/12 22:41	1
Silver	ND		1.0	0.036	ug/L		05/21/12 09:15	05/25/12 22:41	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.040</b>	<b>J</b>	0.20	0.038	ug/L		05/30/12 12:52	05/30/12 18:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>3.6</b>	<b>J B</b>	10	1.5	ug/L		05/25/12 13:45	05/25/12 14:33	1

**Client Sample ID: WC-MWP-EB1**

**Lab Sample ID: 180-10882-11**

Date Collected: 05/17/12 16:22

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/L			05/23/12 07:30	1
Benzene	ND		5.0	0.99	ug/L			05/23/12 07:30	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/23/12 07:30	1
Bromoform	ND		5.0	1.1	ug/L			05/23/12 07:30	1
Bromomethane	ND		5.0	1.6	ug/L			05/23/12 07:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-EB1**

**Lab Sample ID: 180-10882-11**

**Date Collected: 05/17/12 16:22**

**Matrix: Water**

**Date Received: 05/18/12 09:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/23/12 07:30	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/23/12 07:30	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/23/12 07:30	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/23/12 07:30	1
Chloroethane	ND		5.0	0.75	ug/L			05/23/12 07:30	1
Chloroform	ND		5.0	1.0	ug/L			05/23/12 07:30	1
Chloromethane	ND		5.0	1.4	ug/L			05/23/12 07:30	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/23/12 07:30	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/23/12 07:30	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/23/12 07:30	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/23/12 07:30	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/23/12 07:30	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/23/12 07:30	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/23/12 07:30	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/23/12 07:30	1
2-Hexanone	ND		5.0	0.57	ug/L			05/23/12 07:30	1
Methylene Chloride	ND		5.0	1.1	ug/L			05/23/12 07:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/23/12 07:30	1
Styrene	ND		5.0	0.64	ug/L			05/23/12 07:30	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/23/12 07:30	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/23/12 07:30	1
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			05/23/12 07:30	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/23/12 07:30	1
Trichloroethene	ND		5.0	0.80	ug/L			05/23/12 07:30	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/23/12 07:30	1
Xylenes, Total	ND		15	2.0	ug/L			05/23/12 07:30	1
Cyclohexane	ND		5.0	0.60	ug/L			05/23/12 07:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/23/12 07:30	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/23/12 07:30	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/23/12 07:30	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/23/12 07:30	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/23/12 07:30	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/23/12 07:30	1
Methyl acetate	ND		5.0	1.2	ug/L			05/23/12 07:30	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/23/12 07:30	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/23/12 07:30	1
Trichlorofluoromethane	ND *		5.0	1.1	ug/L			05/23/12 07:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/23/12 07:30	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/23/12 07:30	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/23/12 07:30	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/23/12 07:30	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/23/12 07:30	1
Toluene	ND		5.0	0.85	ug/L			05/23/12 07:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		62 - 123					05/23/12 07:30	1
Toluene-d8 (Surr)	93		80 - 120					05/23/12 07:30	1
4-Bromofluorobenzene (Surr)	83		75 - 120					05/23/12 07:30	1
Dibromofluoromethane (Surr)	91		80 - 120					05/23/12 07:30	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-EB1**

**Lab Sample ID: 180-10882-11**

Date Collected: 05/17/12 16:22

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.14	ug/L		05/23/12 08:53	05/28/12 19:39	1
Acetophenone	ND		9.8	0.78	ug/L		05/23/12 08:53	05/28/12 19:39	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
Anthracene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
Benzo[a]anthracene	ND		2.0	0.14	ug/L		05/23/12 08:53	05/28/12 19:39	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/23/12 08:53	05/28/12 19:39	1
Benzo[b]fluoranthene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
Benzo[k]fluoranthene	ND		2.0	0.54	ug/L		05/23/12 08:53	05/28/12 19:39	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/23/12 08:53	05/28/12 19:39	1
Bis(2-chloroethoxy)methane	ND		9.8	0.57	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.19	ug/L		05/23/12 08:53	05/28/12 19:39	1
Bis(2-ethylhexyl) phthalate	ND		20	12	ug/L		05/23/12 08:53	05/28/12 19:39	1
4-Bromophenyl phenyl ether	ND		9.8	0.62	ug/L		05/23/12 08:53	05/28/12 19:39	1
Butyl benzyl phthalate	ND		9.8	1.4	ug/L		05/23/12 08:53	05/28/12 19:39	1
Carbazole	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
4-Chloroaniline	ND		9.8	0.87	ug/L		05/23/12 08:53	05/28/12 19:39	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
4-Chlorophenyl phenyl ether	ND		9.8	0.49	ug/L		05/23/12 08:53	05/28/12 19:39	1
Chrysene	ND		2.0	0.14	ug/L		05/23/12 08:53	05/28/12 19:39	1
Dibenz(a,h)anthracene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
Dibenzofuran	ND		9.8	0.60	ug/L		05/23/12 08:53	05/28/12 19:39	1
Di-n-butyl phthalate	ND		9.8	1.2	ug/L		05/23/12 08:53	05/28/12 19:39	1
3,3'-Dichlorobenzidine	ND		9.8	1.1	ug/L		05/23/12 08:53	05/28/12 19:39	1
Diethyl phthalate	ND		9.8	1.4	ug/L		05/23/12 08:53	05/28/12 19:39	1
Dimethyl phthalate	ND		9.8	0.75	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,4-Dinitrotoluene	ND		9.8	0.53	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,6-Dinitrotoluene	ND		9.8	0.78	ug/L		05/23/12 08:53	05/28/12 19:39	1
Di-n-octyl phthalate	ND		9.8	2.0	ug/L		05/23/12 08:53	05/28/12 19:39	1
Fluoranthene	ND		2.0	0.16	ug/L		05/23/12 08:53	05/28/12 19:39	1
Fluorene	ND		2.0	0.21	ug/L		05/23/12 08:53	05/28/12 19:39	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/23/12 08:53	05/28/12 19:39	1
Hexachlorobutadiene	ND		2.0	0.16	ug/L		05/23/12 08:53	05/28/12 19:39	1
Hexachlorocyclopentadiene	ND		9.8	0.51	ug/L		05/23/12 08:53	05/28/12 19:39	1
Hexachloroethane	ND		9.8	0.62	ug/L		05/23/12 08:53	05/28/12 19:39	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/23/12 08:53	05/28/12 19:39	1
Isophorone	ND		9.8	0.63	ug/L		05/23/12 08:53	05/28/12 19:39	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/23/12 08:53	05/28/12 19:39	1
Naphthalene	ND		2.0	0.14	ug/L		05/23/12 08:53	05/28/12 19:39	1
2-Nitroaniline	ND		49	3.4	ug/L		05/23/12 08:53	05/28/12 19:39	1
3-Nitroaniline	ND		49	3.2	ug/L		05/23/12 08:53	05/28/12 19:39	1
4-Nitroaniline	ND		49	1.7	ug/L		05/23/12 08:53	05/28/12 19:39	1
Nitrobenzene	ND		20	0.83	ug/L		05/23/12 08:53	05/28/12 19:39	1
N-Nitrosodi-n-propylamine	ND		2.0	0.30	ug/L		05/23/12 08:53	05/28/12 19:39	1
N-Nitrosodiphenylamine	ND		9.8	0.84	ug/L		05/23/12 08:53	05/28/12 19:39	1
Phenanthrene	ND		2.0	0.42	ug/L		05/23/12 08:53	05/28/12 19:39	1
Pyrene	ND		2.0	0.15	ug/L		05/23/12 08:53	05/28/12 19:39	1
4-Chloro-3-methylphenol	ND		9.8	0.74	ug/L		05/23/12 08:53	05/28/12 19:39	1
2-Chlorophenol	ND		9.8	1.6	ug/L		05/23/12 08:53	05/28/12 19:39	1
2-Methylphenol	ND		9.8	0.85	ug/L		05/23/12 08:53	05/28/12 19:39	1
Methylphenol, 3 & 4	ND		9.8	0.88	ug/L		05/23/12 08:53	05/28/12 19:39	1

# Client Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

**Client Sample ID: WC-MWP-EB1**

**Lab Sample ID: 180-10882-11**

Date Collected: 05/17/12 16:22

Matrix: Water

Date Received: 05/18/12 09:45

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,4-Dimethylphenol	ND		9.8	0.84	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/23/12 08:53	05/28/12 19:39	1
4,6-Dinitro-2-methylphenol	ND		49	2.2	ug/L		05/23/12 08:53	05/28/12 19:39	1
2-Nitrophenol	ND		9.8	1.7	ug/L		05/23/12 08:53	05/28/12 19:39	1
4-Nitrophenol	ND		49	6.3	ug/L		05/23/12 08:53	05/28/12 19:39	1
Pentachlorophenol	ND		9.8	0.65	ug/L		05/23/12 08:53	05/28/12 19:39	1
Phenol	ND		2.0	0.57	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,4,5-Trichlorophenol	ND		9.8	1.5	ug/L		05/23/12 08:53	05/28/12 19:39	1
2,4,6-Trichlorophenol	ND		9.8	1.7	ug/L		05/23/12 08:53	05/28/12 19:39	1
1,1'-Biphenyl	ND		9.8	0.41	ug/L		05/23/12 08:53	05/28/12 19:39	1
Caprolactam	ND		49	12	ug/L		05/23/12 08:53	05/28/12 19:39	1
<b>Benzaldehyde</b>	<b>11</b>		9.8	1.5	ug/L		05/23/12 08:53	05/28/12 19:39	1
Atrazine	ND		9.8	0.87	ug/L		05/23/12 08:53	05/28/12 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		37 - 104	05/23/12 08:53	05/28/12 19:39	1
2-Fluorobiphenyl	66		35 - 108	05/23/12 08:53	05/28/12 19:39	1
Terphenyl-d14	78		25 - 130	05/23/12 08:53	05/28/12 19:39	1
Phenol-d5	75		30 - 102	05/23/12 08:53	05/28/12 19:39	1
2-Fluorophenol	72		26 - 100	05/23/12 08:53	05/28/12 19:39	1
2,4,6-Tribromophenol	84		33 - 122	05/23/12 08:53	05/28/12 19:39	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>0.78</b>	<b>J</b>	1.0	0.29	ug/L		05/21/12 09:15	05/25/12 22:46	1
<b>Barium</b>	<b>0.27</b>	<b>J B</b>	10	0.098	ug/L		05/21/12 09:15	05/25/12 22:46	1
Cadmium	ND		1.0	0.11	ug/L		05/21/12 09:15	05/25/12 22:46	1
<b>Chromium</b>	<b>3.2</b>		2.0	0.54	ug/L		05/21/12 09:15	05/25/12 22:46	1
<b>Lead</b>	<b>0.090</b>	<b>J B</b>	1.0	0.019	ug/L		05/21/12 09:15	05/25/12 22:46	1
<b>Selenium</b>	<b>0.55</b>	<b>J</b>	5.0	0.42	ug/L		05/21/12 09:15	05/25/12 22:46	1
Silver	ND		1.0	0.036	ug/L		05/21/12 09:15	05/25/12 22:46	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.039</b>	<b>J</b>	0.20	0.038	ug/L		05/30/12 12:52	05/30/12 18:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>1.6</b>	<b>J B</b>	10	1.5	ug/L		05/25/12 13:45	05/25/12 14:33	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 180-36580/1-A**

**Matrix: Solid**

**Analysis Batch: 36588**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 36580**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	5.0	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Benzene	ND		5.0	0.68	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Bromodichloromethane	ND		5.0	0.56	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Bromoform	ND		5.0	0.44	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Bromomethane	ND		5.0	0.74	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
2-Butanone (MEK)	ND		5.0	0.88	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Carbon disulfide	ND		5.0	0.51	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Carbon tetrachloride	ND		5.0	0.45	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Chlorobenzene	ND		5.0	0.76	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Chloroethane	ND		5.0	1.5	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Chloroform	ND		5.0	0.58	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Chloromethane	ND		5.0	0.85	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Dibromochloromethane	ND		5.0	0.71	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,1-Dichloroethane	ND		5.0	0.58	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,2-Dichloroethane	ND		5.0	0.61	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,1-Dichloroethene	ND		5.0	0.85	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,2-Dichloropropane	ND		5.0	0.54	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
cis-1,3-Dichloropropene	ND		5.0	0.68	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
trans-1,3-Dichloropropene	ND		5.0	0.60	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Ethylbenzene	ND		5.0	0.64	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
2-Hexanone	ND		5.0	0.69	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Methylene Chloride	ND		5.0	0.67	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.65	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Styrene	ND		5.0	0.71	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.72	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Tetrachloroethene	ND		5.0	0.68	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,1,1-Trichloroethane	ND		5.0	0.49	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,1,2-Trichloroethane	ND		5.0	0.83	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Trichloroethene	ND		5.0	0.66	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Vinyl chloride	ND		5.0	0.47	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Xylenes, Total	ND		15	2.2	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Cyclohexane	ND		5.0	0.37	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.75	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,2-Dibromoethane (EDB)	ND		5.0	0.86	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Dichlorodifluoromethane	ND		5.0	0.67	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
cis-1,2-Dichloroethene	ND		5.0	0.70	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
trans-1,2-Dichloroethene	ND		5.0	0.60	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Methyl acetate	ND		5.0	0.90	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Methylcyclohexane	ND		5.0	0.73	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Methyl tert-butyl ether	ND		5.0	0.75	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Trichlorofluoromethane	ND		5.0	0.92	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,2-Dichlorobenzene	ND		5.0	0.80	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,3-Dichlorobenzene	ND		5.0	0.66	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,4-Dichlorobenzene	ND		5.0	0.64	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
1,2,4-Trichlorobenzene	1.14	J	5.0	0.88	ug/Kg		05/21/12 05:57	05/21/12 07:33	1
Toluene	1.15	J	5.0	0.73	ug/Kg		05/21/12 05:57	05/21/12 07:33	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-36580/1-A**

**Matrix: Solid**

**Analysis Batch: 36588**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 36580**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	94		52 - 124	05/21/12 05:57	05/21/12 07:33	1
Toluene-d8 (Surr)	103		72 - 127	05/21/12 05:57	05/21/12 07:33	1
4-Bromofluorobenzene (Surr)	95		63 - 120	05/21/12 05:57	05/21/12 07:33	1
Dibromofluoromethane (Surr)	97		68 - 121	05/21/12 05:57	05/21/12 07:33	1

**Lab Sample ID: MB 180-36849/3**

**Matrix: Water**

**Analysis Batch: 36849**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		20	5.0	ug/L			05/23/12 03:18	1
Benzene	ND		5.0	0.99	ug/L			05/23/12 03:18	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/23/12 03:18	1
Bromoform	ND		5.0	1.1	ug/L			05/23/12 03:18	1
Bromomethane	ND		5.0	1.6	ug/L			05/23/12 03:18	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/23/12 03:18	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/23/12 03:18	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/23/12 03:18	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/23/12 03:18	1
Chloroethane	ND		5.0	0.75	ug/L			05/23/12 03:18	1
Chloroform	ND		5.0	1.0	ug/L			05/23/12 03:18	1
Chloromethane	ND		5.0	1.4	ug/L			05/23/12 03:18	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/23/12 03:18	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/23/12 03:18	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/23/12 03:18	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/23/12 03:18	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/23/12 03:18	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/23/12 03:18	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/23/12 03:18	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/23/12 03:18	1
2-Hexanone	ND		5.0	0.57	ug/L			05/23/12 03:18	1
Methylene Chloride	ND		5.0	1.1	ug/L			05/23/12 03:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/23/12 03:18	1
Styrene	ND		5.0	0.64	ug/L			05/23/12 03:18	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/23/12 03:18	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/23/12 03:18	1
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			05/23/12 03:18	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/23/12 03:18	1
Trichloroethene	ND		5.0	0.80	ug/L			05/23/12 03:18	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/23/12 03:18	1
Xylenes, Total	ND		15	2.0	ug/L			05/23/12 03:18	1
Cyclohexane	ND		5.0	0.60	ug/L			05/23/12 03:18	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/23/12 03:18	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/23/12 03:18	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/23/12 03:18	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/23/12 03:18	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/23/12 03:18	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/23/12 03:18	1
Methyl acetate	ND		5.0	1.2	ug/L			05/23/12 03:18	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-36849/3**

**Matrix: Water**

**Analysis Batch: 36849**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	ND		5.0	0.56	ug/L			05/23/12 03:18	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/23/12 03:18	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/23/12 03:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/23/12 03:18	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/23/12 03:18	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/23/12 03:18	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/23/12 03:18	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/23/12 03:18	1
Toluene	ND		5.0	0.85	ug/L			05/23/12 03:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		62 - 123		05/23/12 03:18	1
Toluene-d8 (Surr)	95		80 - 120		05/23/12 03:18	1
4-Bromofluorobenzene (Surr)	91		75 - 120		05/23/12 03:18	1
Dibromofluoromethane (Surr)	101		80 - 120		05/23/12 03:18	1

**Lab Sample ID: LCS 180-36849/5**

**Matrix: Water**

**Analysis Batch: 36849**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	23.5		ug/L		59	10 - 141
Benzene	40.0	35.5		ug/L		89	80 - 120
Bromodichloromethane	40.0	38.7		ug/L		97	71 - 119
Bromoform	40.0	27.2		ug/L		68	49 - 137
Bromomethane	40.0	36.5		ug/L		91	45 - 150
2-Butanone (MEK)	40.0	27.3		ug/L		68	31 - 139
Carbon disulfide	40.0	39.7		ug/L		99	62 - 126
Carbon tetrachloride	40.0	43.5		ug/L		109	63 - 139
Chlorobenzene	40.0	36.5		ug/L		91	83 - 120
Chloroethane	40.0	46.4		ug/L		116	33 - 150
Chloroform	40.0	40.2		ug/L		101	77 - 119
Chloromethane	40.0	37.2		ug/L		93	49 - 133
Dibromochloromethane	40.0	33.7		ug/L		84	64 - 124
1,1-Dichloroethane	40.0	37.7		ug/L		94	77 - 122
1,2-Dichloroethane	40.0	35.3		ug/L		88	63 - 140
1,1-Dichloroethane	40.0	38.4		ug/L		96	69 - 127
1,2-Dichloropropane	40.0	32.8		ug/L		82	75 - 114
cis-1,3-Dichloropropene	40.0	37.2		ug/L		93	74 - 123
trans-1,3-Dichloropropene	40.0	34.4		ug/L		86	63 - 122
Ethylbenzene	40.0	40.3		ug/L		101	79 - 124
2-Hexanone	40.0	31.8		ug/L		80	35 - 129
Methylene Chloride	40.0	37.1		ug/L		93	75 - 120
4-Methyl-2-pentanone (MIBK)	40.0	37.8		ug/L		95	33 - 135
Styrene	40.0	38.1		ug/L		95	78 - 124
1,1,1,2-Tetrachloroethane	40.0	31.8		ug/L		80	59 - 136
Tetrachloroethene	40.0	40.6		ug/L		101	78 - 126
1,1,1-Trichloroethane	40.0	43.2		ug/L		108	69 - 134
1,1,2-Trichloroethane	40.0	31.3		ug/L		78	75 - 126

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-36849/5**

**Matrix: Water**

**Analysis Batch: 36849**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	40.0	36.4		ug/L		91	80 - 120
Vinyl chloride	40.0	38.2		ug/L		95	57 - 128
Xylenes, Total	120	120		ug/L		100	81 - 121
Cyclohexane	40.0	31.4		ug/L		78	69 - 124
1,2-Dibromo-3-Chloropropane	40.0	23.2		ug/L		58	28 - 150
1,2-Dibromoethane (EDB)	40.0	31.1		ug/L		78	57 - 124
Dichlorodifluoromethane	40.0	44.6		ug/L		112	28 - 140
cis-1,2-Dichloroethene	40.0	38.3		ug/L		96	82 - 116
trans-1,2-Dichloroethene	40.0	39.6		ug/L		99	78 - 120
Isopropylbenzene	40.0	40.8		ug/L		102	73 - 130
Methyl acetate	40.0	21.1		ug/L		53	34 - 127
Methylcyclohexane	40.0	37.6		ug/L		94	67 - 120
Methyl tert-butyl ether	40.0	28.3		ug/L		71	53 - 122
Trichlorofluoromethane	40.0	64.2	*	ug/L		160	14 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	42.7		ug/L		107	70 - 131
1,2-Dichlorobenzene	40.0	35.7		ug/L		89	75 - 125
1,3-Dichlorobenzene	40.0	42.9		ug/L		107	76 - 125
1,4-Dichlorobenzene	40.0	40.4		ug/L		101	76 - 123
1,2,4-Trichlorobenzene	40.0	36.2		ug/L		91	35 - 150
Toluene	40.0	38.0		ug/L		95	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		62 - 123
Toluene-d8 (Surr)	94		80 - 120
4-Bromofluorobenzene (Surr)	86		75 - 120
Dibromofluoromethane (Surr)	94		80 - 120

**Lab Sample ID: LCSD 180-36849/6**

**Matrix: Water**

**Analysis Batch: 36849**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	40.0	24.1		ug/L		60	10 - 141	3	32
Benzene	40.0	35.2		ug/L		88	80 - 120	1	20
Bromodichloromethane	40.0	38.1		ug/L		95	71 - 119	2	20
Bromoform	40.0	26.8		ug/L		67	49 - 137	2	20
Bromomethane	40.0	38.5		ug/L		96	45 - 150	5	23
2-Butanone (MEK)	40.0	26.5		ug/L		66	31 - 139	3	35
Carbon disulfide	40.0	41.4		ug/L		104	62 - 126	4	20
Carbon tetrachloride	40.0	44.7		ug/L		112	63 - 139	3	25
Chlorobenzene	40.0	37.0		ug/L		93	83 - 120	1	20
Chloroethane	40.0	48.5		ug/L		121	33 - 150	4	24
Chloroform	40.0	40.1		ug/L		100	77 - 119	0	20
Chloromethane	40.0	34.4		ug/L		86	49 - 133	8	20
Dibromochloromethane	40.0	32.6		ug/L		81	64 - 124	3	20
1,1-Dichloroethane	40.0	38.0		ug/L		95	77 - 122	1	22
1,2-Dichloroethane	40.0	34.1		ug/L		85	63 - 140	3	25
1,1,1-Dichloroethane	40.0	40.0		ug/L		100	69 - 127	4	20
1,2-Dichloropropane	40.0	31.9		ug/L		80	75 - 114	3	20



# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 180-36849/6**

**Matrix: Water**

**Analysis Batch: 36849**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	RPD Limit
cis-1,3-Dichloropropene	40.0	35.2		ug/L		88	74 - 123	5	20	
trans-1,3-Dichloropropene	40.0	33.5		ug/L		84	63 - 122	3	20	
Ethylbenzene	40.0	41.2		ug/L		103	79 - 124	2	25	
2-Hexanone	40.0	31.6		ug/L		79	35 - 129	1	24	
Methylene Chloride	40.0	38.2		ug/L		95	75 - 120	3	20	
4-Methyl-2-pentanone (MIBK)	40.0	37.2		ug/L		93	33 - 135	2	29	
Styrene	40.0	38.7		ug/L		97	78 - 124	2	22	
1,1,2,2-Tetrachloroethane	40.0	31.4		ug/L		79	59 - 136	1	20	
Tetrachloroethene	40.0	41.9		ug/L		105	78 - 126	3	25	
1,1,1-Trichloroethane	40.0	44.8		ug/L		112	69 - 134	4	24	
1,1,2-Trichloroethane	40.0	30.2		ug/L		75	75 - 126	4	23	
Trichloroethene	40.0	36.4		ug/L		91	80 - 120	0	20	
Vinyl chloride	40.0	40.1		ug/L		100	57 - 128	5	26	
Xylenes, Total	120	125		ug/L		104	81 - 121	4	20	
Cyclohexane	40.0	32.8		ug/L		82	69 - 124	4	20	
1,2-Dibromo-3-Chloropropane	40.0	24.4		ug/L		61	28 - 150	5	20	
1,2-Dibromoethane (EDB)	40.0	30.4		ug/L		76	57 - 124	2	20	
Dichlorodifluoromethane	40.0	45.7		ug/L		114	28 - 140	2	20	
cis-1,2-Dichloroethene	40.0	38.6		ug/L		97	82 - 116	1	20	
trans-1,2-Dichloroethene	40.0	40.7		ug/L		102	78 - 120	3	20	
Isopropylbenzene	40.0	43.6		ug/L		109	73 - 130	6	20	
Methyl acetate	40.0	20.6		ug/L		51	34 - 127	3	29	
Methylcyclohexane	40.0	39.4		ug/L		99	67 - 120	5	20	
Methyl tert-butyl ether	40.0	27.1		ug/L		68	53 - 122	4	20	
Trichlorofluoromethane	40.0	66.7 *		ug/L		167	14 - 150	4	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	44.7		ug/L		112	70 - 131	5	30	
1,2-Dichlorobenzene	40.0	36.3		ug/L		91	75 - 125	2	20	
1,3-Dichlorobenzene	40.0	43.1		ug/L		108	76 - 125	1	21	
1,4-Dichlorobenzene	40.0	40.6		ug/L		101	76 - 123	0	20	
1,2,4-Trichlorobenzene	40.0	43.6		ug/L		109	35 - 150	18	30	
Toluene	40.0	39.2		ug/L		98	80 - 124	3	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	83		62 - 123
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	85		75 - 120
Dibromofluoromethane (Surr)	92		80 - 120

**Lab Sample ID: MB 180-36865/1-A**

**Matrix: Solid**

**Analysis Batch: 36886**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 36865**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		20	5.0	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Benzene	ND		5.0	0.68	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Bromodichloromethane	ND		5.0	0.56	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Bromoform	ND		5.0	0.44	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Bromomethane	ND		5.0	0.74	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
2-Butanone (MEK)	ND		5.0	0.88	ug/Kg		05/23/12 07:30	05/23/12 09:08	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-36865/1-A**

**Matrix: Solid**

**Analysis Batch: 36886**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 36865**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbon disulfide	ND		5.0	0.51	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Carbon tetrachloride	ND		5.0	0.45	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Chlorobenzene	ND		5.0	0.76	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Chloroethane	ND		5.0	1.5	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Chloroform	ND		5.0	0.58	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Chloromethane	ND		5.0	0.85	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Dibromochloromethane	ND		5.0	0.71	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,1-Dichloroethane	ND		5.0	0.58	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,2-Dichloroethane	ND		5.0	0.61	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,1-Dichloroethene	ND		5.0	0.85	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,2-Dichloropropane	ND		5.0	0.54	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
cis-1,3-Dichloropropene	ND		5.0	0.68	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
trans-1,3-Dichloropropene	ND		5.0	0.60	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Ethylbenzene	ND		5.0	0.64	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
2-Hexanone	ND		5.0	0.69	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Methylene Chloride	ND		5.0	0.67	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.65	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Styrene	ND		5.0	0.71	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.72	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Tetrachloroethene	ND		5.0	0.68	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,1,1-Trichloroethane	ND		5.0	0.49	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,1,2-Trichloroethane	ND		5.0	0.83	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Trichloroethene	ND		5.0	0.66	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Vinyl chloride	ND		5.0	0.47	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Xylenes, Total	ND		15	2.2	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Cyclohexane	ND		5.0	0.37	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.75	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,2-Dibromoethane (EDB)	ND		5.0	0.86	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Dichlorodifluoromethane	ND		5.0	0.67	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
cis-1,2-Dichloroethene	ND		5.0	0.70	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
trans-1,2-Dichloroethene	ND		5.0	0.60	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Methyl acetate	ND		5.0	0.90	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Methylcyclohexane	ND		5.0	0.73	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Methyl tert-butyl ether	ND		5.0	0.75	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Trichlorofluoromethane	ND		5.0	0.92	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,2-Dichlorobenzene	ND		5.0	0.80	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,3-Dichlorobenzene	ND		5.0	0.66	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,4-Dichlorobenzene	ND		5.0	0.64	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
1,2,4-Trichlorobenzene	2.10	J	5.0	0.88	ug/Kg		05/23/12 07:30	05/23/12 09:08	1
Toluene	ND		5.0	0.73	ug/Kg		05/23/12 07:30	05/23/12 09:08	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	77		52 - 124	05/23/12 07:30	05/23/12 09:08	1
Toluene-d8 (Surr)	107		72 - 127	05/23/12 07:30	05/23/12 09:08	1
4-Bromofluorobenzene (Surr)	94		63 - 120	05/23/12 07:30	05/23/12 09:08	1
Dibromofluoromethane (Surr)	89		68 - 121	05/23/12 07:30	05/23/12 09:08	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-36865/2-A**

**Matrix: Solid**

**Analysis Batch: 36886**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 36865**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	21.0		ug/Kg		52	20 - 150
Benzene	40.0	37.0		ug/Kg		92	77 - 120
Bromodichloromethane	40.0	31.4		ug/Kg		78	70 - 125
Bromoform	40.0	26.7		ug/Kg		67	53 - 140
Bromomethane	40.0	41.3		ug/Kg		103	25 - 150
2-Butanone (MEK)	40.0	21.9		ug/Kg		55	35 - 149
Carbon disulfide	40.0	38.3		ug/Kg		96	50 - 127
Carbon tetrachloride	40.0	39.7		ug/Kg		99	69 - 122
Chlorobenzene	40.0	40.3		ug/Kg		101	79 - 120
Chloroethane	40.0	48.1		ug/Kg		120	22 - 150
Chloroform	40.0	33.9		ug/Kg		85	72 - 120
Chloromethane	40.0	32.4		ug/Kg		81	44 - 131
Dibromochloromethane	40.0	32.7		ug/Kg		82	70 - 132
1,1-Dichloroethane	40.0	36.1		ug/Kg		90	66 - 124
1,2-Dichloroethane	40.0	29.9		ug/Kg		75	61 - 127
1,1-Dichloroethene	40.0	39.7		ug/Kg		99	59 - 129
1,2-Dichloropropane	40.0	33.2		ug/Kg		83	72 - 122
cis-1,3-Dichloropropene	40.0	31.9		ug/Kg		80	73 - 120
trans-1,3-Dichloropropene	40.0	29.6		ug/Kg		74	74 - 129
Ethylbenzene	40.0	39.8		ug/Kg		100	78 - 125
2-Hexanone	40.0	25.3		ug/Kg		63	32 - 150
Methylene Chloride	40.0	34.4		ug/Kg		86	58 - 127
4-Methyl-2-pentanone (MIBK)	40.0	31.1		ug/Kg		78	44 - 148
Styrene	40.0	35.8		ug/Kg		90	83 - 129
1,1,2,2-Tetrachloroethane	40.0	24.1		ug/Kg		60	60 - 139
Tetrachloroethene	40.0	46.6		ug/Kg		117	78 - 129
1,1,1-Trichloroethane	40.0	39.0		ug/Kg		97	67 - 126
1,1,2-Trichloroethane	40.0	28.5		ug/Kg		71	70 - 128
Trichloroethene	40.0	37.8		ug/Kg		94	76 - 119
Vinyl chloride	40.0	31.2		ug/Kg		78	63 - 124
Xylenes, Total	120	118		ug/Kg		99	83 - 126
Cyclohexane	40.0	40.5		ug/Kg		101	64 - 130
1,2-Dibromo-3-Chloropropane	40.0	21.7		ug/Kg		54	35 - 136
1,2-Dibromoethane (EDB)	40.0	29.8		ug/Kg		74	70 - 131
Dichlorodifluoromethane	40.0	31.6		ug/Kg		79	25 - 150
cis-1,2-Dichloroethene	40.0	36.3		ug/Kg		91	80 - 118
trans-1,2-Dichloroethene	40.0	38.3		ug/Kg		96	77 - 121
Isopropylbenzene	40.0	41.5		ug/Kg		104	70 - 133
Methyl acetate	40.0	21.1		ug/Kg		53	27 - 142
Methylcyclohexane	40.0	39.6		ug/Kg		99	66 - 135
Methyl tert-butyl ether	40.0	24.2		ug/Kg		60	48 - 132
Trichlorofluoromethane	40.0	39.1		ug/Kg		98	20 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	40.6		ug/Kg		102	55 - 130
1,2-Dichlorobenzene	40.0	33.6		ug/Kg		84	71 - 124
1,3-Dichlorobenzene	40.0	36.6		ug/Kg		91	75 - 118
1,4-Dichlorobenzene	40.0	36.3		ug/Kg		91	77 - 116
1,2,4-Trichlorobenzene	40.0	28.3		ug/Kg		71	51 - 136
Toluene	40.0	41.2		ug/Kg		103	78 - 124

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-36865/2-A

Matrix: Solid

Analysis Batch: 36886

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36865

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	79		52 - 124
Toluene-d8 (Surr)	108		72 - 127
4-Bromofluorobenzene (Surr)	86		63 - 120
Dibromofluoromethane (Surr)	92		68 - 121

Lab Sample ID: LCS 180-37287/9

Matrix: Solid

Analysis Batch: 37287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Acetone	40.0	22.7		ug/L		57	10 - 141
Benzene	40.0	40.5		ug/L		101	80 - 120
Bromodichloromethane	40.0	34.1		ug/L		85	71 - 119
Bromoform	40.0	34.3		ug/L		86	49 - 137
Bromomethane	40.0	23.8		ug/L		59	45 - 150
2-Butanone (MEK)	40.0	31.1		ug/L		78	31 - 139
Carbon disulfide	40.0	26.5		ug/L		66	62 - 126
Carbon tetrachloride	40.0	30.6		ug/L		77	63 - 139
Chlorobenzene	40.0	34.4		ug/L		86	83 - 120
Chloroethane	40.0	23.3		ug/L		58	33 - 150
Chloroform	40.0	33.4		ug/L		83	77 - 119
Chloromethane	40.0	32.9		ug/L		82	49 - 133
Dibromochloromethane	40.0	35.7		ug/L		89	64 - 124
1,1-Dichloroethane	40.0	34.7		ug/L		87	77 - 122
1,2-Dichloroethane	40.0	32.2		ug/L		81	63 - 140
1,1-Dichloroethene	40.0	37.5		ug/L		94	69 - 127
1,2-Dichloropropane	40.0	37.5		ug/L		94	75 - 114
cis-1,3-Dichloropropene	40.0	37.6		ug/L		94	74 - 123
trans-1,3-Dichloropropene	40.0	31.8		ug/L		80	63 - 122
Ethylbenzene	40.0	38.4		ug/L		96	79 - 124
2-Hexanone	40.0	31.0		ug/L		78	35 - 129
Methylene Chloride	40.0	38.1		ug/L		95	75 - 120
4-Methyl-2-pentanone (MIBK)	40.0	34.9		ug/L		87	33 - 135
Styrene	40.0	40.2		ug/L		101	78 - 124
1,1,2,2-Tetrachloroethane	40.0	42.1		ug/L		105	59 - 136
Tetrachloroethene	40.0	31.7		ug/L		79	78 - 126
1,1,1-Trichloroethane	40.0	25.4	*	ug/L		64	69 - 134
1,1,2-Trichloroethane	40.0	37.7		ug/L		94	75 - 126
Trichloroethene	40.0	37.3		ug/L		93	80 - 120
Vinyl chloride	40.0	36.1		ug/L		90	57 - 128
Xylenes, Total	120	115		ug/L		95	81 - 121
Cyclohexane	40.0	36.6		ug/L		91	69 - 124
1,2-Dibromo-3-Chloropropane	40.0	44.6		ug/L		112	28 - 150
1,2-Dibromoethane (EDB)	40.0	41.0		ug/L		102	57 - 124
Dichlorodifluoromethane	40.0	24.7		ug/L		62	28 - 140
cis-1,2-Dichloroethene	40.0	41.0		ug/L		103	82 - 116
trans-1,2-Dichloroethene	40.0	38.3		ug/L		96	78 - 120
Isopropylbenzene	40.0	35.6		ug/L		89	73 - 130
Methyl acetate	40.0	36.1		ug/L		90	34 - 127

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-37287/9**

**Matrix: Solid**

**Analysis Batch: 37287**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	40.0	34.8		ug/L		87	67 - 120
Methyl tert-butyl ether	40.0	38.7		ug/L		97	53 - 122
Trichlorofluoromethane	40.0	28.7		ug/L		72	14 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	40.1		ug/L		100	70 - 131
1,2-Dichlorobenzene	40.0	35.2		ug/L		88	75 - 125
1,3-Dichlorobenzene	40.0	36.0		ug/L		90	76 - 125
1,4-Dichlorobenzene	40.0	34.7		ug/L		87	76 - 123
1,2,4-Trichlorobenzene	40.0	44.1		ug/L		110	35 - 150
Toluene	40.0	37.7		ug/L		94	80 - 124

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	81		62 - 123
Toluene-d8 (Surr)	88		80 - 120
4-Bromofluorobenzene (Surr)	90		75 - 120
Dibromofluoromethane (Surr)	92		80 - 120

**Lab Sample ID: LB 180-37074/12-A LB**

**Matrix: Solid**

**Analysis Batch: 37287**

**Client Sample ID: Method Blank**

**Prep Type: SPLP**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		20	5.0	ug/L			05/27/12 10:43	1
Benzene	ND		5.0	0.99	ug/L			05/27/12 10:43	1
Bromodichloromethane	ND		5.0	0.93	ug/L			05/27/12 10:43	1
Bromoform	ND		5.0	1.1	ug/L			05/27/12 10:43	1
Bromomethane	ND		5.0	1.6	ug/L			05/27/12 10:43	1
2-Butanone (MEK)	ND		5.0	1.1	ug/L			05/27/12 10:43	1
Carbon disulfide	ND		5.0	1.1	ug/L			05/27/12 10:43	1
Carbon tetrachloride	ND		5.0	1.1	ug/L			05/27/12 10:43	1
Chlorobenzene	ND		5.0	0.53	ug/L			05/27/12 10:43	1
Chloroethane	ND		5.0	0.75	ug/L			05/27/12 10:43	1
Chloroform	ND		5.0	1.0	ug/L			05/27/12 10:43	1
Chloromethane	ND		5.0	1.4	ug/L			05/27/12 10:43	1
Dibromochloromethane	ND		5.0	0.65	ug/L			05/27/12 10:43	1
1,1-Dichloroethane	ND		5.0	1.0	ug/L			05/27/12 10:43	1
1,2-Dichloroethane	ND		5.0	0.96	ug/L			05/27/12 10:43	1
1,1-Dichloroethene	ND		5.0	1.1	ug/L			05/27/12 10:43	1
1,2-Dichloropropane	ND		5.0	1.3	ug/L			05/27/12 10:43	1
cis-1,3-Dichloropropene	ND		5.0	0.73	ug/L			05/27/12 10:43	1
trans-1,3-Dichloropropene	ND		5.0	0.58	ug/L			05/27/12 10:43	1
Ethylbenzene	ND		5.0	0.62	ug/L			05/27/12 10:43	1
2-Hexanone	ND		5.0	0.57	ug/L			05/27/12 10:43	1
Methylene Chloride	ND		5.0	1.1	ug/L			05/27/12 10:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.59	ug/L			05/27/12 10:43	1
Styrene	ND		5.0	0.64	ug/L			05/27/12 10:43	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.93	ug/L			05/27/12 10:43	1
Tetrachloroethene	ND		5.0	0.82	ug/L			05/27/12 10:43	1
1,1,1-Trichloroethane	ND		5.0	1.0	ug/L			05/27/12 10:43	1
1,1,2-Trichloroethane	ND		5.0	1.2	ug/L			05/27/12 10:43	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LB 180-37074/12-A LB**  
**Matrix: Solid**  
**Analysis Batch: 37287**

**Client Sample ID: Method Blank**  
**Prep Type: SPLP**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	ND		5.0	0.80	ug/L			05/27/12 10:43	1
Vinyl chloride	ND		5.0	1.3	ug/L			05/27/12 10:43	1
Xylenes, Total	ND		15	2.0	ug/L			05/27/12 10:43	1
Cyclohexane	ND		5.0	0.60	ug/L			05/27/12 10:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.35	ug/L			05/27/12 10:43	1
1,2-Dibromoethane (EDB)	ND		5.0	0.61	ug/L			05/27/12 10:43	1
Dichlorodifluoromethane	ND		5.0	0.64	ug/L			05/27/12 10:43	1
cis-1,2-Dichloroethene	ND		5.0	0.67	ug/L			05/27/12 10:43	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/L			05/27/12 10:43	1
Isopropylbenzene	ND		5.0	0.53	ug/L			05/27/12 10:43	1
Methyl acetate	ND		5.0	1.2	ug/L			05/27/12 10:43	1
Methylcyclohexane	ND		5.0	0.56	ug/L			05/27/12 10:43	1
Methyl tert-butyl ether	ND		5.0	1.0	ug/L			05/27/12 10:43	1
Trichlorofluoromethane	ND		5.0	1.1	ug/L			05/27/12 10:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.33	ug/L			05/27/12 10:43	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/L			05/27/12 10:43	1
1,3-Dichlorobenzene	ND		5.0	0.51	ug/L			05/27/12 10:43	1
1,4-Dichlorobenzene	ND		5.0	0.53	ug/L			05/27/12 10:43	1
1,2,4-Trichlorobenzene	ND		5.0	0.38	ug/L			05/27/12 10:43	1
Toluene	ND		5.0	0.85	ug/L			05/27/12 10:43	1

Surrogate	LB LB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	85		62 - 123		05/27/12 10:43	1
Toluene-d8 (Surr)	99		80 - 120		05/27/12 10:43	1
4-Bromofluorobenzene (Surr)	85		75 - 120		05/27/12 10:43	1
Dibromofluoromethane (Surr)	85		80 - 120		05/27/12 10:43	1

**Lab Sample ID: 180-10882-6 MS**  
**Matrix: Solid**  
**Analysis Batch: 37287**

**Client Sample ID: WC-MWP-02-06**  
**Prep Type: SPLP**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Acetone	ND		40.0	19.5	J	ug/L		49	10 - 141
Benzene	ND		40.0	40.6		ug/L		102	80 - 120
Bromodichloromethane	ND		40.0	34.7		ug/L		87	71 - 119
Bromoform	ND		40.0	33.9		ug/L		85	49 - 137
Bromomethane	ND		40.0	31.5		ug/L		79	45 - 150
2-Butanone (MEK)	ND		40.0	26.4		ug/L		66	31 - 139
Carbon disulfide	ND		40.0	29.7		ug/L		74	62 - 126
Carbon tetrachloride	ND		40.0	31.2		ug/L		78	63 - 139
Chlorobenzene	ND		40.0	35.1		ug/L		88	83 - 120
Chloroethane	ND		40.0	32.1		ug/L		80	33 - 150
Chloroform	ND		40.0	34.4		ug/L		86	77 - 119
Chloromethane	ND		40.0	33.4		ug/L		84	49 - 133
Dibromochloromethane	ND		40.0	35.4		ug/L		89	64 - 124
1,1-Dichloroethane	ND		40.0	35.4		ug/L		88	77 - 122
1,2-Dichloroethane	ND		40.0	31.4		ug/L		79	63 - 140
1,1-Dichloroethene	ND		40.0	38.5		ug/L		96	69 - 127
1,2-Dichloropropane	ND		40.0	37.2		ug/L		93	75 - 114

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-10882-6 MS**

**Matrix: Solid**

**Analysis Batch: 37287**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: SPLP**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
cis-1,3-Dichloropropene	ND		40.0	37.1		ug/L		93	74 - 123
trans-1,3-Dichloropropene	ND		40.0	31.2		ug/L		78	63 - 122
Ethylbenzene	ND		40.0	39.8		ug/L		99	79 - 124
2-Hexanone	ND		40.0	30.8		ug/L		77	35 - 129
Methylene Chloride	6.3		40.0	44.0		ug/L		94	75 - 120
4-Methyl-2-pentanone (MIBK)	ND		40.0	32.4		ug/L		81	33 - 135
Styrene	ND		40.0	41.0		ug/L		103	78 - 124
1,1,2,2-Tetrachloroethane	ND		40.0	40.0		ug/L		100	59 - 136
Tetrachloroethene	ND		40.0	32.7		ug/L		82	78 - 126
1,1,1-Trichloroethane	ND *		40.0	26.0	F	ug/L		65	69 - 134
1,1,2-Trichloroethane	ND		40.0	37.1		ug/L		93	75 - 126
Trichloroethene	ND		40.0	37.7		ug/L		94	80 - 120
Vinyl chloride	ND		40.0	37.6		ug/L		94	57 - 128
Xylenes, Total	ND		120	117		ug/L		97	81 - 121
Cyclohexane	ND		40.0	37.0		ug/L		93	69 - 124
1,2-Dibromo-3-Chloropropane	ND		40.0	41.3		ug/L		103	28 - 150
1,2-Dibromoethane (EDB)	ND		40.0	38.8		ug/L		97	57 - 124
Dichlorodifluoromethane	ND		40.0	25.5		ug/L		64	28 - 140
cis-1,2-Dichloroethene	ND		40.0	40.9		ug/L		102	82 - 116
trans-1,2-Dichloroethene	ND		40.0	39.7		ug/L		99	78 - 120
Isopropylbenzene	ND		40.0	37.2		ug/L		93	73 - 130
Methyl acetate	ND		40.0	32.8		ug/L		82	34 - 127
Methylcyclohexane	ND		40.0	35.1		ug/L		88	67 - 120
Methyl tert-butyl ether	ND		40.0	36.8		ug/L		92	53 - 122
Trichlorofluoromethane	ND		40.0	34.4		ug/L		86	14 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		40.0	40.7		ug/L		102	70 - 131
1,2-Dichlorobenzene	ND		40.0	34.4		ug/L		86	75 - 125
1,3-Dichlorobenzene	ND		40.0	36.6		ug/L		91	76 - 125
1,4-Dichlorobenzene	ND		40.0	34.8		ug/L		87	76 - 123
1,2,4-Trichlorobenzene	ND		40.0	40.9		ug/L		102	35 - 150
Toluene	ND		40.0	39.1		ug/L		98	80 - 124

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	81		62 - 123
Toluene-d8 (Surr)	88		80 - 120
4-Bromofluorobenzene (Surr)	91		75 - 120
Dibromofluoromethane (Surr)	89		80 - 120

**Lab Sample ID: 180-10882-6 MSD**

**Matrix: Solid**

**Analysis Batch: 37287**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: SPLP**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Acetone	ND		40.0	17.7	J	ug/L		44	10 - 141	9	32
Benzene	ND		40.0	41.1		ug/L		103	80 - 120	1	20
Bromodichloromethane	ND		40.0	35.5		ug/L		89	71 - 119	2	20
Bromoform	ND		40.0	31.4		ug/L		78	49 - 137	8	20
Bromomethane	ND		40.0	25.0		ug/L		63	45 - 150	23	23
2-Butanone (MEK)	ND		40.0	24.0		ug/L		60	31 - 139	10	35

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-10882-6 MSD

Client Sample ID: WC-MWP-02-06

Matrix: Solid

Prep Type: SPLP

Analysis Batch: 37287

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Carbon disulfide	ND		40.0	28.4		ug/L		71	62 - 126	5	20
Carbon tetrachloride	ND		40.0	30.1		ug/L		75	63 - 139	4	25
Chlorobenzene	ND		40.0	35.1		ug/L		88	83 - 120	0	20
Chloroethane	ND		40.0	25.8		ug/L		65	33 - 150	22	24
Chloroform	ND		40.0	34.3		ug/L		86	77 - 119	0	20
Chloromethane	ND		40.0	33.1		ug/L		83	49 - 133	1	20
Dibromochloromethane	ND		40.0	35.0		ug/L		88	64 - 124	1	20
1,1-Dichloroethane	ND		40.0	35.7		ug/L		89	77 - 122	1	22
1,2-Dichloroethane	ND		40.0	30.9		ug/L		77	63 - 140	2	25
1,1-Dichloroethene	ND		40.0	38.3		ug/L		96	69 - 127	0	20
1,2-Dichloropropane	ND		40.0	38.3		ug/L		96	75 - 114	3	20
cis-1,3-Dichloropropene	ND		40.0	37.6		ug/L		94	74 - 123	1	20
trans-1,3-Dichloropropene	ND		40.0	31.3		ug/L		78	63 - 122	0	20
Ethylbenzene	ND		40.0	39.3		ug/L		98	79 - 124	1	25
2-Hexanone	ND		40.0	27.0		ug/L		67	35 - 129	13	24
Methylene Chloride	6.3		40.0	43.7		ug/L		94	75 - 120	1	20
4-Methyl-2-pentanone (MIBK)	ND		40.0	29.6		ug/L		74	33 - 135	9	29
Styrene	ND		40.0	41.9		ug/L		105	78 - 124	2	22
1,1,2,2-Tetrachloroethane	ND		40.0	37.2		ug/L		93	59 - 136	7	20
Tetrachloroethene	ND		40.0	33.6		ug/L		84	78 - 126	3	25
1,1,1-Trichloroethane	ND	*	40.0	26.2	F	ug/L		66	69 - 134	1	24
1,1,2-Trichloroethane	ND		40.0	35.6		ug/L		89	75 - 126	4	23
Trichloroethene	ND		40.0	37.9		ug/L		95	80 - 120	1	20
Vinyl chloride	ND		40.0	37.6		ug/L		94	57 - 128	0	26
Xylenes, Total	ND		120	118		ug/L		98	81 - 121	1	20
Cyclohexane	ND		40.0	37.1		ug/L		93	69 - 124	0	20
1,2-Dibromo-3-Chloropropane	ND		40.0	35.7		ug/L		89	28 - 150	15	20
1,2-Dibromoethane (EDB)	ND		40.0	38.2		ug/L		95	57 - 124	2	20
Dichlorodifluoromethane	ND		40.0	24.2		ug/L		60	28 - 140	5	20
cis-1,2-Dichloroethene	ND		40.0	40.6		ug/L		101	82 - 116	1	20
trans-1,2-Dichloroethene	ND		40.0	38.9		ug/L		97	78 - 120	2	20
Isopropylbenzene	ND		40.0	37.7		ug/L		94	73 - 130	1	20
Methyl acetate	ND		40.0	31.5		ug/L		79	34 - 127	4	29
Methylcyclohexane	ND		40.0	34.9		ug/L		87	67 - 120	0	20
Methyl tert-butyl ether	ND		40.0	35.8		ug/L		89	53 - 122	3	20
Trichlorofluoromethane	ND		40.0	21.1	F	ug/L		53	14 - 150	48	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		40.0	41.0		ug/L		103	70 - 131	1	30
1,2-Dichlorobenzene	ND		40.0	34.9		ug/L		87	75 - 125	2	20
1,3-Dichlorobenzene	ND		40.0	37.9		ug/L		95	76 - 125	4	21
1,4-Dichlorobenzene	ND		40.0	35.7		ug/L		89	76 - 123	3	20
1,2,4-Trichlorobenzene	ND		40.0	41.2		ug/L		103	35 - 150	1	30
Toluene	ND		40.0	39.7		ug/L		99	80 - 124	1	20

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	79		62 - 123
Toluene-d8 (Surr)	90		80 - 120
4-Bromofluorobenzene (Surr)	91		75 - 120
Dibromofluoromethane (Surr)	89		80 - 120



# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 180-36872/1-A**

**Matrix: Water**

**Analysis Batch: 37272**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 36872**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.0	0.14	ug/L		05/23/12 08:45	05/25/12 10:33	1
Acetophenone	ND		10	0.80	ug/L		05/23/12 08:45	05/25/12 10:33	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/23/12 08:45	05/25/12 10:33	1
Anthracene	ND		2.0	0.15	ug/L		05/23/12 08:45	05/25/12 10:33	1
Benzo[a]anthracene	ND		2.0	0.15	ug/L		05/23/12 08:45	05/25/12 10:33	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/23/12 08:45	05/25/12 10:33	1
Benzo[b]fluoranthene	ND		2.0	0.16	ug/L		05/23/12 08:45	05/25/12 10:33	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/23/12 08:45	05/25/12 10:33	1
Benzo[k]fluoranthene	ND		2.0	0.55	ug/L		05/23/12 08:45	05/25/12 10:33	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/23/12 08:45	05/25/12 10:33	1
Bis(2-chloroethoxy)methane	ND		10	0.58	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.20	ug/L		05/23/12 08:45	05/25/12 10:33	1
Bis(2-ethylhexyl) phthalate	ND		20	13	ug/L		05/23/12 08:45	05/25/12 10:33	1
4-Bromophenyl phenyl ether	ND		10	0.64	ug/L		05/23/12 08:45	05/25/12 10:33	1
Butyl benzyl phthalate	ND		10	1.4	ug/L		05/23/12 08:45	05/25/12 10:33	1
Carbazole	ND		2.0	0.16	ug/L		05/23/12 08:45	05/25/12 10:33	1
4-Chloroaniline	ND		10	0.89	ug/L		05/23/12 08:45	05/25/12 10:33	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/23/12 08:45	05/25/12 10:33	1
4-Chlorophenyl phenyl ether	ND		10	0.50	ug/L		05/23/12 08:45	05/25/12 10:33	1
Chrysene	ND		2.0	0.14	ug/L		05/23/12 08:45	05/25/12 10:33	1
Dibenz(a,h)anthracene	ND		2.0	0.16	ug/L		05/23/12 08:45	05/25/12 10:33	1
Dibenzofuran	ND		10	0.62	ug/L		05/23/12 08:45	05/25/12 10:33	1
Di-n-butyl phthalate	ND		10	1.2	ug/L		05/23/12 08:45	05/25/12 10:33	1
3,3'-Dichlorobenzidine	ND		10	1.1	ug/L		05/23/12 08:45	05/25/12 10:33	1
Diethyl phthalate	ND		10	1.5	ug/L		05/23/12 08:45	05/25/12 10:33	1
Dimethyl phthalate	ND		10	0.77	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,4-Dinitrotoluene	ND		10	0.54	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,6-Dinitrotoluene	ND		10	0.80	ug/L		05/23/12 08:45	05/25/12 10:33	1
Di-n-octyl phthalate	ND		10	2.1	ug/L		05/23/12 08:45	05/25/12 10:33	1
Fluoranthene	ND		2.0	0.16	ug/L		05/23/12 08:45	05/25/12 10:33	1
Fluorene	ND		2.0	0.22	ug/L		05/23/12 08:45	05/25/12 10:33	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/23/12 08:45	05/25/12 10:33	1
Hexachlorobutadiene	ND		2.0	0.17	ug/L		05/23/12 08:45	05/25/12 10:33	1
Hexachlorocyclopentadiene	ND		10	0.52	ug/L		05/23/12 08:45	05/25/12 10:33	1
Hexachloroethane	ND		10	0.63	ug/L		05/23/12 08:45	05/25/12 10:33	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/23/12 08:45	05/25/12 10:33	1
Isophorone	ND		10	0.64	ug/L		05/23/12 08:45	05/25/12 10:33	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/23/12 08:45	05/25/12 10:33	1
Naphthalene	ND		2.0	0.14	ug/L		05/23/12 08:45	05/25/12 10:33	1
2-Nitroaniline	ND		50	3.5	ug/L		05/23/12 08:45	05/25/12 10:33	1
3-Nitroaniline	ND		50	3.2	ug/L		05/23/12 08:45	05/25/12 10:33	1
4-Nitroaniline	ND		50	1.7	ug/L		05/23/12 08:45	05/25/12 10:33	1
Nitrobenzene	ND		20	0.84	ug/L		05/23/12 08:45	05/25/12 10:33	1
N-Nitrosodi-n-propylamine	ND		2.0	0.31	ug/L		05/23/12 08:45	05/25/12 10:33	1
N-Nitrosodiphenylamine	ND		10	0.85	ug/L		05/23/12 08:45	05/25/12 10:33	1
Phenanthrene	ND		2.0	0.43	ug/L		05/23/12 08:45	05/25/12 10:33	1
Pyrene	ND		2.0	0.16	ug/L		05/23/12 08:45	05/25/12 10:33	1
4-Chloro-3-methylphenol	ND		10	0.75	ug/L		05/23/12 08:45	05/25/12 10:33	1
2-Chlorophenol	ND		10	1.7	ug/L		05/23/12 08:45	05/25/12 10:33	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-36872/1-A**

**Matrix: Water**

**Analysis Batch: 37272**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 36872**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		10	0.86	ug/L		05/23/12 08:45	05/25/12 10:33	1
Methylphenol, 3 & 4	ND		10	0.90	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,4-Dimethylphenol	ND		10	0.85	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,4-Dinitrophenol	ND		50	6.1	ug/L		05/23/12 08:45	05/25/12 10:33	1
4,6-Dinitro-2-methylphenol	ND		50	2.2	ug/L		05/23/12 08:45	05/25/12 10:33	1
2-Nitrophenol	ND		10	1.7	ug/L		05/23/12 08:45	05/25/12 10:33	1
4-Nitrophenol	ND		50	6.5	ug/L		05/23/12 08:45	05/25/12 10:33	1
Pentachlorophenol	ND		10	0.66	ug/L		05/23/12 08:45	05/25/12 10:33	1
Phenol	ND		2.0	0.58	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/L		05/23/12 08:45	05/25/12 10:33	1
2,4,6-Trichlorophenol	ND		10	1.7	ug/L		05/23/12 08:45	05/25/12 10:33	1
1,1'-Biphenyl	ND		10	0.42	ug/L		05/23/12 08:45	05/25/12 10:33	1
Caprolactam	ND		50	12	ug/L		05/23/12 08:45	05/25/12 10:33	1
Benzaldehyde	ND		10	1.5	ug/L		05/23/12 08:45	05/25/12 10:33	1
Atrazine	ND		10	0.89	ug/L		05/23/12 08:45	05/25/12 10:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		37 - 104	05/23/12 08:45	05/25/12 10:33	1
2-Fluorobiphenyl	62		35 - 108	05/23/12 08:45	05/25/12 10:33	1
Terphenyl-d14	75		25 - 130	05/23/12 08:45	05/25/12 10:33	1
Phenol-d5	72		30 - 102	05/23/12 08:45	05/25/12 10:33	1
2-Fluorophenol	68		26 - 100	05/23/12 08:45	05/25/12 10:33	1
2,4,6-Tribromophenol	78		33 - 122	05/23/12 08:45	05/25/12 10:33	1

**Lab Sample ID: LCS 180-36872/2-A**

**Matrix: Water**

**Analysis Batch: 37272**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 36872**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	139		ug/L		69	39 - 106
Acetophenone	200	143		ug/L		72	30 - 150
Acenaphthylene	200	155		ug/L		77	40 - 113
Anthracene	200	143		ug/L		71	37 - 108
Benzo[a]anthracene	200	154		ug/L		77	40 - 103
Benzo[a]pyrene	200	160		ug/L		80	37 - 105
Benzo[b]fluoranthene	200	151		ug/L		75	35 - 100
Benzo[g,h,i]perylene	200	145		ug/L		73	31 - 118
Benzo[k]fluoranthene	200	143		ug/L		72	37 - 108
Bis(2-chloroethyl)ether	200	138		ug/L		69	34 - 96
Bis(2-chloroethoxy)methane	200	132		ug/L		66	36 - 101
2,2'-oxybis[1-chloropropane]	200	131		ug/L		65	30 - 100
Bis(2-ethylhexyl) phthalate	200	156		ug/L		78	35 - 112
4-Bromophenyl phenyl ether	200	149		ug/L		74	38 - 108
Butyl benzyl phthalate	200	162		ug/L		81	34 - 110
Carbazole	200	144		ug/L		72	35 - 113
4-Chloroaniline	200	147		ug/L		73	26 - 99
2-Chloronaphthalene	200	134		ug/L		67	37 - 102
4-Chlorophenyl phenyl ether	200	136		ug/L		68	39 - 107

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-36872/2-A**

**Matrix: Water**

**Analysis Batch: 37272**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 36872**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	200	144		ug/L		72	39 - 103
Dibenz(a,h)anthracene	200	137		ug/L		68	32 - 117
Dibenzofuran	200	135		ug/L		68	37 - 107
Di-n-butyl phthalate	200	154		ug/L		77	36 - 113
3,3'-Dichlorobenzidine	200	152		ug/L		76	11 - 106
Diethyl phthalate	200	144		ug/L		72	39 - 112
Dimethyl phthalate	200	138		ug/L		69	40 - 110
2,4-Dinitrotoluene	200	157		ug/L		79	41 - 117
2,6-Dinitrotoluene	200	152		ug/L		76	42 - 118
Di-n-octyl phthalate	200	164		ug/L		82	27 - 118
Fluoranthene	200	151		ug/L		75	35 - 111
Fluorene	200	136		ug/L		68	39 - 107
Hexachlorobenzene	200	151		ug/L		76	35 - 106
Hexachlorobutadiene	200	140		ug/L		70	30 - 103
Hexachlorocyclopentadiene	200	152		ug/L		76	19 - 116
Hexachloroethane	200	133		ug/L		67	27 - 94
Indeno[1,2,3-cd]pyrene	200	147		ug/L		74	32 - 116
Isophorone	200	134		ug/L		67	39 - 108
2-Methylnaphthalene	200	142		ug/L		71	36 - 101
Naphthalene	200	135		ug/L		67	35 - 98
2-Nitroaniline	200	145		ug/L		72	37 - 114
3-Nitroaniline	200	149		ug/L		75	32 - 117
4-Nitroaniline	200	148		ug/L		74	32 - 117
Nitrobenzene	200	134		ug/L		67	37 - 103
N-Nitrosodi-n-propylamine	200	131		ug/L		66	37 - 106
N-Nitrosodiphenylamine	200	152		ug/L		76	34 - 108
Phenanthrene	200	150		ug/L		75	34 - 107
Pyrene	200	151		ug/L		76	36 - 115
4-Chloro-3-methylphenol	200	151		ug/L		76	40 - 107
2-Chlorophenol	200	134		ug/L		67	34 - 100
2-Methylphenol	200	130		ug/L		65	34 - 101
Methylphenol, 3 & 4	400	275		ug/L		69	34 - 104
2,4-Dichlorophenol	200	141		ug/L		70	34 - 106
2,4-Dimethylphenol	200	142		ug/L		71	34 - 98
2,4-Dinitrophenol	200	130		ug/L		65	3 - 125
4,6-Dinitro-2-methylphenol	200	155		ug/L		77	24 - 121
2-Nitrophenol	200	148		ug/L		74	33 - 108
4-Nitrophenol	200	127		ug/L		64	29 - 120
Pentachlorophenol	200	138		ug/L		69	10 - 118
Phenol	200	124		ug/L		62	35 - 98
2,4,5-Trichlorophenol	200	134		ug/L		67	31 - 111
2,4,6-Trichlorophenol	200	150		ug/L		75	34 - 110
1,1'-Biphenyl	200	139		ug/L		69	10 - 140
Caprolactam	200	158		ug/L		79	10 - 140
Benzaldehyde	200	83.2		ug/L		42	30 - 150
Atrazine	200	246		ug/L		123	30 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	72		37 - 104

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCS 180-36872/2-A  
**Matrix:** Water  
**Analysis Batch:** 37272

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 36872

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	72		35 - 108
Terphenyl-d14	88		25 - 130
Phenol-d5	71		30 - 102
2-Fluorophenol	71		26 - 100
2,4,6-Tribromophenol	85		33 - 122

**Lab Sample ID:** MB 180-37009/1-A  
**Matrix:** Solid  
**Analysis Batch:** 37308

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 37009

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 10:33	1
Acetophenone	ND		10	0.80	ug/L		05/24/12 08:19	05/28/12 10:33	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 10:33	1
Anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 10:33	1
Benzo[a]anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 10:33	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/24/12 08:19	05/28/12 10:33	1
Benzo[b]fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 10:33	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 10:33	1
Benzo[k]fluoranthene	ND		2.0	0.55	ug/L		05/24/12 08:19	05/28/12 10:33	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/28/12 10:33	1
Bis(2-chloroethoxy)methane	ND		10	0.58	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.20	ug/L		05/24/12 08:19	05/28/12 10:33	1
Bis(2-ethylhexyl) phthalate	ND		20	13	ug/L		05/24/12 08:19	05/28/12 10:33	1
4-Bromophenyl phenyl ether	ND		10	0.64	ug/L		05/24/12 08:19	05/28/12 10:33	1
Butyl benzyl phthalate	ND		10	1.4	ug/L		05/24/12 08:19	05/28/12 10:33	1
Carbazole	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 10:33	1
4-Chloroaniline	ND		10	0.89	ug/L		05/24/12 08:19	05/28/12 10:33	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 10:33	1
4-Chlorophenyl phenyl ether	ND		10	0.50	ug/L		05/24/12 08:19	05/28/12 10:33	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 10:33	1
Dibenz(a,h)anthracene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 10:33	1
Dibenzofuran	ND		10	0.62	ug/L		05/24/12 08:19	05/28/12 10:33	1
Di-n-butyl phthalate	ND		10	1.2	ug/L		05/24/12 08:19	05/28/12 10:33	1
3,3'-Dichlorobenzidine	ND		10	1.1	ug/L		05/24/12 08:19	05/28/12 10:33	1
Diethyl phthalate	ND		10	1.5	ug/L		05/24/12 08:19	05/28/12 10:33	1
Dimethyl phthalate	ND		10	0.77	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,4-Dinitrotoluene	ND		10	0.54	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,6-Dinitrotoluene	ND		10	0.80	ug/L		05/24/12 08:19	05/28/12 10:33	1
Di-n-octyl phthalate	ND		10	2.1	ug/L		05/24/12 08:19	05/28/12 10:33	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 10:33	1
Fluorene	ND		2.0	0.22	ug/L		05/24/12 08:19	05/28/12 10:33	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/28/12 10:33	1
Hexachlorobutadiene	ND		2.0	0.17	ug/L		05/24/12 08:19	05/28/12 10:33	1
Hexachlorocyclopentadiene	ND		10	0.52	ug/L		05/24/12 08:19	05/28/12 10:33	1
Hexachloroethane	ND		10	0.63	ug/L		05/24/12 08:19	05/28/12 10:33	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/28/12 10:33	1
Isophorone	ND		10	0.64	ug/L		05/24/12 08:19	05/28/12 10:33	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/28/12 10:33	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-37009/1-A**

**Matrix: Solid**

**Analysis Batch: 37308**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 37009**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 10:33	1
2-Nitroaniline	ND		50	3.5	ug/L		05/24/12 08:19	05/28/12 10:33	1
3-Nitroaniline	ND		50	3.2	ug/L		05/24/12 08:19	05/28/12 10:33	1
4-Nitroaniline	ND		50	1.7	ug/L		05/24/12 08:19	05/28/12 10:33	1
Nitrobenzene	ND		20	0.84	ug/L		05/24/12 08:19	05/28/12 10:33	1
N-Nitrosodi-n-propylamine	ND		2.0	0.31	ug/L		05/24/12 08:19	05/28/12 10:33	1
N-Nitrosodiphenylamine	ND		10	0.85	ug/L		05/24/12 08:19	05/28/12 10:33	1
Phenanthrene	ND		2.0	0.43	ug/L		05/24/12 08:19	05/28/12 10:33	1
Pyrene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 10:33	1
4-Chloro-3-methylphenol	ND		10	0.75	ug/L		05/24/12 08:19	05/28/12 10:33	1
2-Chlorophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/28/12 10:33	1
2-Methylphenol	ND		10	0.86	ug/L		05/24/12 08:19	05/28/12 10:33	1
Methylphenol, 3 & 4	ND		10	0.90	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,4-Dimethylphenol	ND		10	0.85	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,4-Dinitrophenol	ND		50	6.1	ug/L		05/24/12 08:19	05/28/12 10:33	1
4,6-Dinitro-2-methylphenol	ND		50	2.2	ug/L		05/24/12 08:19	05/28/12 10:33	1
2-Nitrophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/28/12 10:33	1
4-Nitrophenol	ND		50	6.5	ug/L		05/24/12 08:19	05/28/12 10:33	1
Pentachlorophenol	ND		10	0.66	ug/L		05/24/12 08:19	05/28/12 10:33	1
Phenol	ND		2.0	0.58	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/L		05/24/12 08:19	05/28/12 10:33	1
2,4,6-Trichlorophenol	ND		10	1.7	ug/L		05/24/12 08:19	05/28/12 10:33	1
1,1'-Biphenyl	ND		10	0.42	ug/L		05/24/12 08:19	05/28/12 10:33	1
Caprolactam	ND		50	12	ug/L		05/24/12 08:19	05/28/12 10:33	1
Benzaldehyde	ND		10	1.5	ug/L		05/24/12 08:19	05/28/12 10:33	1
Atrazine	ND		10	0.89	ug/L		05/24/12 08:19	05/28/12 10:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		37 - 104	05/24/12 08:19	05/28/12 10:33	1
2-Fluorobiphenyl	62		35 - 108	05/24/12 08:19	05/28/12 10:33	1
Terphenyl-d14	76		25 - 130	05/24/12 08:19	05/28/12 10:33	1
Phenol-d5	70		30 - 102	05/24/12 08:19	05/28/12 10:33	1
2-Fluorophenol	65		26 - 100	05/24/12 08:19	05/28/12 10:33	1
2,4,6-Tribromophenol	78		33 - 122	05/24/12 08:19	05/28/12 10:33	1

**Lab Sample ID: LCS 180-37009/2-A**

**Matrix: Solid**

**Analysis Batch: 37308**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 37009**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	141		ug/L		70	39 - 106
Acetophenone	200	148		ug/L		74	30 - 150
Acenaphthylene	200	155		ug/L		77	40 - 113
Anthracene	200	145		ug/L		73	37 - 108
Benzo[a]anthracene	200	170		ug/L		85	40 - 103
Benzo[a]pyrene	200	161		ug/L		80	37 - 105
Benzo[b]fluoranthene	200	153		ug/L		76	35 - 100
Benzo[g,h,i]perylene	200	142		ug/L		71	31 - 118

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-37009/2-A**

**Matrix: Solid**

**Analysis Batch: 37308**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 37009**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[k]fluoranthene	200	150		ug/L		75	37 - 108
Bis(2-chloroethyl)ether	200	137		ug/L		68	34 - 96
Bis(2-chloroethoxy)methane	200	132		ug/L		66	36 - 101
2,2'-oxybis[1-chloropropane]	200	128		ug/L		64	30 - 100
Bis(2-ethylhexyl) phthalate	200	152		ug/L		76	35 - 112
4-Bromophenyl phenyl ether	200	148		ug/L		74	38 - 108
Butyl benzyl phthalate	200	178		ug/L		89	34 - 110
Carbazole	200	147		ug/L		73	35 - 113
4-Chloroaniline	200	139		ug/L		70	26 - 99
2-Chloronaphthalene	200	130		ug/L		65	37 - 102
4-Chlorophenyl phenyl ether	200	142		ug/L		71	39 - 107
Chrysene	200	144		ug/L		72	39 - 103
Dibenz(a,h)anthracene	200	134		ug/L		67	32 - 117
Dibenzofuran	200	141		ug/L		70	37 - 107
Di-n-butyl phthalate	200	143		ug/L		72	36 - 113
3,3'-Dichlorobenzidine	200	163		ug/L		81	11 - 106
Diethyl phthalate	200	151		ug/L		76	39 - 112
Dimethyl phthalate	200	146		ug/L		73	40 - 110
2,4-Dinitrotoluene	200	159		ug/L		79	41 - 117
2,6-Dinitrotoluene	200	160		ug/L		80	42 - 118
Di-n-octyl phthalate	200	163		ug/L		82	27 - 118
Fluoranthene	200	141		ug/L		70	35 - 111
Fluorene	200	139		ug/L		69	39 - 107
Hexachlorobenzene	200	153		ug/L		76	35 - 106
Hexachlorobutadiene	200	141		ug/L		70	30 - 103
Hexachlorocyclopentadiene	200	148		ug/L		74	19 - 116
Hexachloroethane	200	134		ug/L		67	27 - 94
Indeno[1,2,3-cd]pyrene	200	144		ug/L		72	32 - 116
Isophorone	200	141		ug/L		71	39 - 108
2-Methylnaphthalene	200	142		ug/L		71	36 - 101
Naphthalene	200	136		ug/L		68	35 - 98
2-Nitroaniline	200	149		ug/L		74	37 - 114
3-Nitroaniline	200	155		ug/L		77	32 - 117
4-Nitroaniline	200	150		ug/L		75	32 - 117
Nitrobenzene	200	131		ug/L		66	37 - 103
N-Nitrosodi-n-propylamine	200	137		ug/L		68	37 - 106
N-Nitrosodiphenylamine	200	152		ug/L		76	34 - 108
Phenanthrene	200	147		ug/L		74	34 - 107
Pyrene	200	145		ug/L		73	36 - 115
4-Chloro-3-methylphenol	200	158		ug/L		79	40 - 107
2-Chlorophenol	200	137		ug/L		68	34 - 100
2-Methylphenol	200	135		ug/L		67	34 - 101
Methylphenol, 3 & 4	400	302		ug/L		75	34 - 104
2,4-Dichlorophenol	200	142		ug/L		71	34 - 106
2,4-Dimethylphenol	200	146		ug/L		73	34 - 98
2,4-Dinitrophenol	200	145		ug/L		73	3 - 125
4,6-Dinitro-2-methylphenol	200	164		ug/L		82	24 - 121
2-Nitrophenol	200	147		ug/L		73	33 - 108
4-Nitrophenol	200	131		ug/L		66	29 - 120
Pentachlorophenol	200	144		ug/L		72	10 - 118

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-37009/2-A**

**Matrix: Solid**

**Analysis Batch: 37308**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 37009**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	200	123		ug/L		62	35 - 98
2,4,5-Trichlorophenol	200	141		ug/L		70	31 - 111
2,4,6-Trichlorophenol	200	154		ug/L		77	34 - 110
1,1'-Biphenyl	200	136		ug/L		68	10 - 140
Caprolactam	200	174		ug/L		87	10 - 140
Benzaldehyde	200	82.5		ug/L		41	30 - 150
Atrazine	200	248		ug/L		124	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	72		37 - 104
2-Fluorobiphenyl	70		35 - 108
Terphenyl-d14	97		25 - 130
Phenol-d5	71		30 - 102
2-Fluorophenol	73		26 - 100
2,4,6-Tribromophenol	86		33 - 122

**Lab Sample ID: MB 180-37554/1-A**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		67	6.4	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Acetophenone	ND		330	27	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Acenaphthylene	ND		67	7.6	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Anthracene	ND		67	6.5	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Benzo[a]anthracene	ND		67	8.4	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Benzo[a]pyrene	ND		67	6.7	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Benzo[b]fluoranthene	ND		67	10	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Benzo[g,h,i]perylene	ND		67	6.6	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Benzo[k]fluoranthene	ND		67	13	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Bis(2-chloroethyl)ether	ND		67	9.0	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Bis(2-chloroethoxy)methane	ND		330	22	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,2'-oxybis[1-chloropropane]	ND		67	7.2	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Bis(2-ethylhexyl) phthalate	ND		670	54	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4-Bromophenyl phenyl ether	ND		330	29	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Butyl benzyl phthalate	ND		330	46	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Carbazole	ND		67	6.1	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4-Chloroaniline	ND		330	27	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2-Chloronaphthalene	ND		67	7.0	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4-Chlorophenyl phenyl ether	ND		330	37	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Chrysene	ND		67	7.9	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Dibenz(a,h)anthracene	ND		67	7.4	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Dibenzofuran	ND		330	33	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Di-n-butyl phthalate	ND		330	42	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
3,3'-Dichlorobenzidine	ND		330	35	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Diethyl phthalate	ND		330	36	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Dimethyl phthalate	ND		330	36	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,4-Dinitrotoluene	ND		330	27	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,6-Dinitrotoluene	ND		330	34	ug/Kg		05/31/12 05:20	06/05/12 10:47	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-37554/1-A**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Di-n-octyl phthalate	ND		330	35	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Fluoranthene	ND		67	7.1	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Fluorene	ND		67	8.8	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Hexachlorobenzene	ND		67	7.1	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Hexachlorobutadiene	ND		67	7.5	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Hexachlorocyclopentadiene	ND		330	36	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Hexachloroethane	ND		330	24	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Indeno[1,2,3-cd]pyrene	ND		67	6.9	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Isophorone	ND		330	25	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2-Methylnaphthalene	ND		67	6.0	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Naphthalene	ND		67	5.7	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2-Nitroaniline	ND		1700	150	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
3-Nitroaniline	ND		1700	140	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4-Nitroaniline	ND		1700	140	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Nitrobenzene	ND		670	28	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
N-Nitrosodi-n-propylamine	ND		67	7.8	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
N-Nitrosodiphenylamine	ND		330	31	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Phenanthrene	ND		67	11	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Pyrene	ND		67	6.7	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4-Chloro-3-methylphenol	ND		330	31	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2-Chlorophenol	ND		330	27	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2-Methylphenol	ND		330	23	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Methylphenol, 3 & 4	ND		330	33	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,4-Dichlorophenol	ND		67	6.7	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,4-Dimethylphenol	ND		330	52	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,4-Dinitrophenol	ND		1700	400	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4,6-Dinitro-2-methylphenol	ND		1700	130	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2-Nitrophenol	ND		330	37	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
4-Nitrophenol	ND		1700	120	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Pentachlorophenol	ND		330	30	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Phenol	ND		67	7.9	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,4,5-Trichlorophenol	ND		330	36	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
2,4,6-Trichlorophenol	ND		330	50	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
1,1'-Biphenyl	ND		330	30	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Caprolactam	ND		1700	250	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Benzaldehyde	ND		330	50	ug/Kg		05/31/12 05:20	06/05/12 10:47	1
Atrazine	ND		330	32	ug/Kg		05/31/12 05:20	06/05/12 10:47	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	61		25 - 104	05/31/12 05:20	06/05/12 10:47	1
2-Fluorobiphenyl	68		35 - 105	05/31/12 05:20	06/05/12 10:47	1
Terphenyl-d14	86		25 - 127	05/31/12 05:20	06/05/12 10:47	1
Phenol-d5	73		25 - 105	05/31/12 05:20	06/05/12 10:47	1
2-Fluorophenol	74		39 - 103	05/31/12 05:20	06/05/12 10:47	1
2,4,6-Tribromophenol	72		35 - 124	05/31/12 05:20	06/05/12 10:47	1



# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-37554/2-A**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	6670	4230		ug/Kg		63	47 - 104
Acetophenone	6670	4360		ug/Kg		65	30 - 150
Acenaphthylene	6670	4390		ug/Kg		66	49 - 114
Anthracene	6670	4430		ug/Kg		66	45 - 112
Benzo[a]anthracene	6670	4890		ug/Kg		73	47 - 110
Benzo[a]pyrene	6670	4700		ug/Kg		70	47 - 112
Benzo[b]fluoranthene	6670	4350		ug/Kg		65	41 - 107
Benzo[g,h,i]perylene	6670	4350		ug/Kg		65	38 - 126
Benzo[k]fluoranthene	6670	4650		ug/Kg		70	44 - 115
Bis(2-chloroethyl)ether	6670	3500		ug/Kg		52	38 - 99
Bis(2-chloroethoxy)methane	6670	3540		ug/Kg		53	44 - 101
2,2'-oxybis[1-chloropropane]	6670	3730		ug/Kg		56	36 - 101
Bis(2-ethylhexyl) phthalate	6670	5390		ug/Kg		81	40 - 122
4-Bromophenyl phenyl ether	6670	4800		ug/Kg		72	47 - 110
Butyl benzyl phthalate	6670	5120		ug/Kg		77	41 - 118
Carbazole	6670	4130		ug/Kg		62	45 - 114
4-Chloroaniline	6670	4100		ug/Kg		61	25 - 108
2-Chloronaphthalene	6670	4290		ug/Kg		64	46 - 101
4-Chlorophenyl phenyl ether	6670	4340		ug/Kg		65	47 - 109
Chrysene	6670	4420		ug/Kg		66	46 - 111
Dibenz(a,h)anthracene	6670	4030		ug/Kg		61	39 - 127
Dibenzofuran	6670	3930		ug/Kg		59	46 - 104
Di-n-butyl phthalate	6670	4590		ug/Kg		69	43 - 121
3,3'-Dichlorobenzidine	6670	5380		ug/Kg		81	19 - 122
Diethyl phthalate	6670	4210		ug/Kg		63	47 - 115
Dimethyl phthalate	6670	4550		ug/Kg		68	49 - 111
2,4-Dinitrotoluene	6670	4790		ug/Kg		72	45 - 124
2,6-Dinitrotoluene	6670	4920		ug/Kg		74	50 - 122
Di-n-octyl phthalate	6670	5530		ug/Kg		83	33 - 129
Fluoranthene	6670	4120		ug/Kg		62	40 - 120
Fluorene	6670	4260		ug/Kg		64	46 - 109
Hexachlorobenzene	6670	4000		ug/Kg		60	47 - 108
Hexachlorobutadiene	6670	3720		ug/Kg		56	43 - 107
Hexachlorocyclopentadiene	6670	4930		ug/Kg		74	23 - 129
Hexachloroethane	6670	3300		ug/Kg		49	37 - 97
Indeno[1,2,3-cd]pyrene	6670	4420		ug/Kg		66	41 - 125
Isophorone	6670	3740		ug/Kg		56	47 - 110
2-Methylnaphthalene	6670	3780		ug/Kg		57	45 - 100
Naphthalene	6670	3810		ug/Kg		57	43 - 100
2-Nitroaniline	6670	4140		ug/Kg		62	45 - 117
3-Nitroaniline	6670	4260		ug/Kg		64	34 - 122
4-Nitroaniline	6670	4180		ug/Kg		63	38 - 123
Nitrobenzene	6670	3720		ug/Kg		56	43 - 104
N-Nitrosodi-n-propylamine	6670	4260		ug/Kg		64	42 - 107
N-Nitrosodiphenylamine	6670	5040		ug/Kg		76	44 - 111
Phenanthrene	6670	4280		ug/Kg		64	43 - 108
Pyrene	6670	4630		ug/Kg		69	41 - 115
4-Chloro-3-methylphenol	6670	3890		ug/Kg		58	47 - 109
2-Chlorophenol	6670	3950		ug/Kg		59	40 - 101

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-37554/2-A**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	6670	3540		ug/Kg		53	40 - 104
Methylphenol, 3 & 4	13300	8020		ug/Kg		60	42 - 105
2,4-Dichlorophenol	6670	4150		ug/Kg		62	47 - 105
2,4-Dimethylphenol	6670	3790		ug/Kg		57	44 - 105
2,4-Dinitrophenol	6670	3970		ug/Kg		60	10 - 146
4,6-Dinitro-2-methylphenol	6670	5460		ug/Kg		82	24 - 134
2-Nitrophenol	6670	4740		ug/Kg		71	46 - 106
4-Nitrophenol	6670	3680		ug/Kg		55	36 - 127
Pentachlorophenol	6670	3870		ug/Kg		58	17 - 122
Phenol	6670	3650		ug/Kg		55	41 - 102
2,4,5-Trichlorophenol	6670	4520		ug/Kg		68	48 - 108
2,4,6-Trichlorophenol	6670	4720		ug/Kg		71	50 - 106
1,1'-Biphenyl	6670	4410		ug/Kg		66	30 - 150
Caprolactam	6670	3830		ug/Kg		57	30 - 150
Benzaldehyde	6670	2810		ug/Kg		42	30 - 150
Atrazine	6670	7970		ug/Kg		120	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	59		25 - 104
2-Fluorobiphenyl	68		35 - 105
Terphenyl-d14	83		25 - 127
Phenol-d5	67		25 - 105
2-Fluorophenol	71		39 - 103
2,4,6-Tribromophenol	69		35 - 124

**Lab Sample ID: 180-10882-6 MS**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		7490	4680		ug/Kg	☼	62	47 - 104
Acetophenone	ND		7490	4630		ug/Kg	☼	62	30 - 150
Acenaphthylene	ND		7490	4990		ug/Kg	☼	67	49 - 114
Anthracene	ND		7490	5030		ug/Kg	☼	67	45 - 112
Benzo[a]anthracene	ND		7490	4970		ug/Kg	☼	66	47 - 110
Benzo[a]pyrene	ND		7490	5000		ug/Kg	☼	67	47 - 112
Benzo[b]fluoranthene	ND		7490	4490		ug/Kg	☼	60	41 - 107
Benzo[g,h,i]perylene	ND		7490	5020		ug/Kg	☼	67	38 - 126
Benzo[k]fluoranthene	ND		7490	4790		ug/Kg	☼	64	44 - 115
Bis(2-chloroethyl)ether	ND		7490	3800		ug/Kg	☼	51	38 - 99
Bis(2-chloroethoxy)methane	ND		7490	4000		ug/Kg	☼	53	44 - 101
2,2'-oxybis[1-chloropropane]	ND		7490	3950		ug/Kg	☼	53	36 - 101
Bis(2-ethylhexyl) phthalate	ND		7490	5480		ug/Kg	☼	73	40 - 122
4-Bromophenyl phenyl ether	ND		7490	5210		ug/Kg	☼	70	47 - 110
Butyl benzyl phthalate	ND		7490	5220		ug/Kg	☼	70	41 - 118
Carbazole	ND		7490	4830		ug/Kg	☼	65	45 - 114
4-Chloroaniline	ND		7490	4440		ug/Kg	☼	59	25 - 108
2-Chloronaphthalene	ND		7490	4950		ug/Kg	☼	66	46 - 101
4-Chlorophenyl phenyl ether	ND		7490	4830		ug/Kg	☼	64	47 - 109

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-10882-6 MS**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Chrysene	ND		7490	4920		ug/Kg	*	66	46 - 111
Dibenz(a,h)anthracene	ND		7490	4600		ug/Kg	*	61	39 - 127
Dibenzofuran	ND		7490	4470		ug/Kg	*	60	46 - 104
Di-n-butyl phthalate	ND		7490	5350		ug/Kg	*	71	43 - 121
3,3'-Dichlorobenzidine	ND		7490	5750		ug/Kg	*	77	19 - 122
Diethyl phthalate	ND		7490	4910		ug/Kg	*	66	47 - 115
Dimethyl phthalate	ND		7490	5210		ug/Kg	*	70	49 - 111
2,4-Dinitrotoluene	ND		7490	5580		ug/Kg	*	74	45 - 124
2,6-Dinitrotoluene	ND		7490	5710		ug/Kg	*	76	50 - 122
Di-n-octyl phthalate	ND		7490	5450		ug/Kg	*	73	33 - 129
Fluoranthene	ND		7490	4840		ug/Kg	*	65	40 - 120
Fluorene	ND		7490	4810		ug/Kg	*	64	46 - 109
Hexachlorobenzene	ND		7490	4450		ug/Kg	*	59	47 - 108
Hexachlorobutadiene	ND		7490	4290		ug/Kg	*	57	43 - 107
Hexachlorocyclopentadiene	ND		7490	5310		ug/Kg	*	71	23 - 129
Hexachloroethane	ND		7490	3800		ug/Kg	*	51	37 - 97
Indeno[1,2,3-cd]pyrene	ND		7490	5000		ug/Kg	*	67	41 - 125
Isophorone	ND		7490	4320		ug/Kg	*	58	47 - 110
2-Methylnaphthalene	ND		7490	4090		ug/Kg	*	55	45 - 100
Naphthalene	ND		7490	4380		ug/Kg	*	59	43 - 100
2-Nitroaniline	ND		7490	5020		ug/Kg	*	67	45 - 117
3-Nitroaniline	ND		7490	5130		ug/Kg	*	68	34 - 122
4-Nitroaniline	ND		7490	5050		ug/Kg	*	67	38 - 123
Nitrobenzene	ND		7490	4190		ug/Kg	*	56	43 - 104
N-Nitrosodi-n-propylamine	ND		7490	4410		ug/Kg	*	59	42 - 107
N-Nitrosodiphenylamine	ND		7490	5800		ug/Kg	*	77	44 - 111
Phenanthrene	ND		7490	4740		ug/Kg	*	63	43 - 108
Pyrene	ND		7490	4330		ug/Kg	*	58	41 - 115
4-Chloro-3-methylphenol	ND		7490	4260		ug/Kg	*	57	47 - 109
2-Chlorophenol	ND		7490	4440		ug/Kg	*	59	40 - 101
2-Methylphenol	ND		7490	4080		ug/Kg	*	55	40 - 104
Methylphenol, 3 & 4	ND		15000	8530		ug/Kg	*	57	42 - 105
2,4-Dichlorophenol	ND		7490	4980		ug/Kg	*	67	47 - 105
2,4-Dimethylphenol	ND		7490	4160		ug/Kg	*	56	44 - 105
2,4-Dinitrophenol	ND		7490	3670		ug/Kg	*	49	10 - 146
4,6-Dinitro-2-methylphenol	ND		7490	5880		ug/Kg	*	78	24 - 134
2-Nitrophenol	ND		7490	5270		ug/Kg	*	70	46 - 106
4-Nitrophenol	ND		7490	4860		ug/Kg	*	65	36 - 127
Pentachlorophenol	ND		7490	3740		ug/Kg	*	50	17 - 122
Phenol	ND		7490	4140		ug/Kg	*	55	41 - 102
2,4,5-Trichlorophenol	ND		7490	5400		ug/Kg	*	72	48 - 108
2,4,6-Trichlorophenol	ND		7490	5530		ug/Kg	*	74	50 - 106
1,1'-Biphenyl	ND		7490	5160		ug/Kg	*	69	30 - 150
Caprolactam	ND		7490	4190		ug/Kg	*	56	30 - 150
Benzaldehyde	ND		7490	2990		ug/Kg	*	40	30 - 150
Atrazine	ND		7490	10000		ug/Kg	*	134	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5	61		25 - 104

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-10882-6 MS**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	71		35 - 105
Terphenyl-d14	70		25 - 127
Phenol-d5	67		25 - 105
2-Fluorophenol	74		39 - 103
2,4,6-Tribromophenol	71		35 - 124

**Lab Sample ID: 180-10882-6 MSD**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Acenaphthene	ND		7440	4960		ug/Kg	*	67	47 - 104	6	40	
Acetophenone	ND		7440	5100		ug/Kg	*	69	30 - 150	10	40	
Acenaphthylene	ND		7440	5130		ug/Kg	*	69	49 - 114	3	38	
Anthracene	ND		7440	4900		ug/Kg	*	66	45 - 112	2	42	
Benzo[a]anthracene	ND		7440	5130		ug/Kg	*	69	47 - 110	3	40	
Benzo[a]pyrene	ND		7440	5090		ug/Kg	*	68	47 - 112	2	42	
Benzo[b]fluoranthene	ND		7440	5040		ug/Kg	*	68	41 - 107	12	53	
Benzo[g,h,i]perylene	ND		7440	5040		ug/Kg	*	68	38 - 126	1	43	
Benzo[k]fluoranthene	ND		7440	4480		ug/Kg	*	60	44 - 115	7	44	
Bis(2-chloroethyl)ether	ND		7440	4080		ug/Kg	*	55	38 - 99	7	43	
Bis(2-chloroethoxy)methane	ND		7440	4130		ug/Kg	*	55	44 - 101	3	36	
2,2'-oxybis[1-chloropropane]	ND		7440	4300		ug/Kg	*	58	36 - 101	8	41	
Bis(2-ethylhexyl) phthalate	ND		7440	5760		ug/Kg	*	77	40 - 122	5	41	
4-Bromophenyl phenyl ether	ND		7440	5070		ug/Kg	*	68	47 - 110	3	46	
Butyl benzyl phthalate	ND		7440	5250		ug/Kg	*	71	41 - 118	1	41	
Carbazole	ND		7440	4820		ug/Kg	*	65	45 - 114	0	36	
4-Chloroaniline	ND		7440	4520		ug/Kg	*	61	25 - 108	2	36	
2-Chloronaphthalene	ND		7440	5190		ug/Kg	*	70	46 - 101	5	40	
4-Chlorophenyl phenyl ether	ND		7440	5030		ug/Kg	*	68	47 - 109	4	39	
Chrysene	ND		7440	5140		ug/Kg	*	69	46 - 111	4	39	
Dibenz(a,h)anthracene	ND		7440	4680		ug/Kg	*	63	39 - 127	2	45	
Dibenzofuran	ND		7440	4500		ug/Kg	*	60	46 - 104	1	38	
Di-n-butyl phthalate	ND		7440	5060		ug/Kg	*	68	43 - 121	5	38	
3,3'-Dichlorobenzidine	ND		7440	5950		ug/Kg	*	80	19 - 122	3	40	
Diethyl phthalate	ND		7440	4890		ug/Kg	*	66	47 - 115	0	38	
Dimethyl phthalate	ND		7440	5390		ug/Kg	*	72	49 - 111	3	37	
2,4-Dinitrotoluene	ND		7440	5880		ug/Kg	*	79	45 - 124	5	41	
2,6-Dinitrotoluene	ND		7440	5740		ug/Kg	*	77	50 - 122	1	40	
Di-n-octyl phthalate	ND		7440	5510		ug/Kg	*	74	33 - 129	1	41	
Fluoranthene	ND		7440	4600		ug/Kg	*	62	40 - 120	5	36	
Fluorene	ND		7440	4870		ug/Kg	*	65	46 - 109	1	40	
Hexachlorobenzene	ND		7440	4380		ug/Kg	*	59	47 - 108	2	43	
Hexachlorobutadiene	ND		7440	4340		ug/Kg	*	58	43 - 107	1	39	
Hexachlorocyclopentadiene	ND		7440	5520		ug/Kg	*	74	23 - 129	4	49	
Hexachloroethane	ND		7440	4050		ug/Kg	*	54	37 - 97	6	48	
Indeno[1,2,3-cd]pyrene	ND		7440	5120		ug/Kg	*	69	41 - 125	2	47	
Isophorone	ND		7440	4400		ug/Kg	*	59	47 - 110	2	37	
2-Methylnaphthalene	ND		7440	4240		ug/Kg	*	57	45 - 100	4	40	

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-10882-6 MSD**

**Matrix: Solid**

**Analysis Batch: 38110**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: Total/NA**

**Prep Batch: 37554**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Naphthalene	ND		7440	4380		ug/Kg	*	59	43 - 100	0	32
2-Nitroaniline	ND		7440	5150		ug/Kg	*	69	45 - 117	2	42
3-Nitroaniline	ND		7440	5010		ug/Kg	*	67	34 - 122	2	39
4-Nitroaniline	ND		7440	5070		ug/Kg	*	68	38 - 123	0	40
Nitrobenzene	ND		7440	4240		ug/Kg	*	57	43 - 104	1	33
N-Nitrosodi-n-propylamine	ND		7440	4960		ug/Kg	*	67	42 - 107	12	43
N-Nitrosodiphenylamine	ND		7440	5730		ug/Kg	*	77	44 - 111	1	40
Phenanthrene	ND		7440	4790		ug/Kg	*	64	43 - 108	1	39
Pyrene	ND		7440	4490		ug/Kg	*	60	41 - 115	4	43
4-Chloro-3-methylphenol	ND		7440	4300		ug/Kg	*	58	47 - 109	1	36
2-Chlorophenol	ND		7440	4650		ug/Kg	*	62	40 - 101	5	42
2-Methylphenol	ND		7440	4290		ug/Kg	*	58	40 - 104	5	41
Methylphenol, 3 & 4	ND		14900	9550		ug/Kg	*	64	42 - 105	11	43
2,4-Dichlorophenol	ND		7440	4970		ug/Kg	*	67	47 - 105	0	35
2,4-Dimethylphenol	ND		7440	4200		ug/Kg	*	56	44 - 105	1	49
2,4-Dinitrophenol	ND		7440	3770		ug/Kg	*	51	10 - 146	3	83
4,6-Dinitro-2-methylphenol	ND		7440	5820		ug/Kg	*	78	24 - 134	1	87
2-Nitrophenol	ND		7440	5490		ug/Kg	*	74	46 - 106	4	39
4-Nitrophenol	ND		7440	4830		ug/Kg	*	65	36 - 127	1	43
Pentachlorophenol	ND		7440	3710		ug/Kg	*	50	17 - 122	1	52
Phenol	ND		7440	4550		ug/Kg	*	61	41 - 102	10	39
2,4,5-Trichlorophenol	ND		7440	5770		ug/Kg	*	78	48 - 108	7	44
2,4,6-Trichlorophenol	ND		7440	5670		ug/Kg	*	76	50 - 106	3	42
1,1'-Biphenyl	ND		7440	5330		ug/Kg	*	72	30 - 150	3	40
Caprolactam	ND		7440	4180		ug/Kg	*	56	30 - 150	0	40
Benzaldehyde	ND		7440	3280		ug/Kg	*	44	30 - 150	9	40
Atrazine	ND		7440	9890		ug/Kg	*	133	30 - 150	2	40

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	63		25 - 104
2-Fluorobiphenyl	75		35 - 105
Terphenyl-d14	75		25 - 127
Phenol-d5	73		25 - 105
2-Fluorophenol	78		39 - 103
2,4,6-Tribromophenol	70		35 - 124

**Lab Sample ID: LB 180-36735/12-B LB**

**Matrix: Solid**

**Analysis Batch: 37308**

**Client Sample ID: Method Blank**

**Prep Type: SPLP East**

**Prep Batch: 37009**

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 11:20	1
Acetophenone	ND		9.8	0.78	ug/L		05/24/12 08:19	05/28/12 11:20	1
Acenaphthylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
Anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
Benzo[a]anthracene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 11:20	1
Benzo[a]pyrene	ND		2.0	0.13	ug/L		05/24/12 08:19	05/28/12 11:20	1
Benzo[b]fluoranthene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
Benzo[g,h,i]perylene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LB 180-36735/12-B LB**

**Matrix: Solid**

**Analysis Batch: 37308**

**Client Sample ID: Method Blank**

**Prep Type: SPLP East**

**Prep Batch: 37009**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzo[k]fluoranthene	ND		2.0	0.54	ug/L		05/24/12 08:19	05/28/12 11:20	1
Bis(2-chloroethyl)ether	ND		2.0	0.25	ug/L		05/24/12 08:19	05/28/12 11:20	1
Bis(2-chloroethoxy)methane	ND		9.8	0.57	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,2'-oxybis[1-chloropropane]	ND		2.0	0.19	ug/L		05/24/12 08:19	05/28/12 11:20	1
Bis(2-ethylhexyl) phthalate	ND		20	12	ug/L		05/24/12 08:19	05/28/12 11:20	1
4-Bromophenyl phenyl ether	ND		9.8	0.62	ug/L		05/24/12 08:19	05/28/12 11:20	1
Butyl benzyl phthalate	ND		9.8	1.4	ug/L		05/24/12 08:19	05/28/12 11:20	1
Carbazole	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
4-Chloroaniline	ND		9.8	0.87	ug/L		05/24/12 08:19	05/28/12 11:20	1
2-Chloronaphthalene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
4-Chlorophenyl phenyl ether	ND		9.8	0.49	ug/L		05/24/12 08:19	05/28/12 11:20	1
Chrysene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 11:20	1
Dibenz(a,h)anthracene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
Dibenzofuran	ND		9.8	0.60	ug/L		05/24/12 08:19	05/28/12 11:20	1
Di-n-butyl phthalate	ND		9.8	1.2	ug/L		05/24/12 08:19	05/28/12 11:20	1
3,3'-Dichlorobenzidine	ND		9.8	1.1	ug/L		05/24/12 08:19	05/28/12 11:20	1
Diethyl phthalate	ND		9.8	1.4	ug/L		05/24/12 08:19	05/28/12 11:20	1
Dimethyl phthalate	ND		9.8	0.75	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,4-Dinitrotoluene	ND		9.8	0.53	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,6-Dinitrotoluene	ND		9.8	0.78	ug/L		05/24/12 08:19	05/28/12 11:20	1
Di-n-octyl phthalate	ND		9.8	2.0	ug/L		05/24/12 08:19	05/28/12 11:20	1
Fluoranthene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 11:20	1
Fluorene	ND		2.0	0.21	ug/L		05/24/12 08:19	05/28/12 11:20	1
Hexachlorobenzene	ND		2.0	0.18	ug/L		05/24/12 08:19	05/28/12 11:20	1
Hexachlorobutadiene	ND		2.0	0.16	ug/L		05/24/12 08:19	05/28/12 11:20	1
Hexachlorocyclopentadiene	ND		9.8	0.51	ug/L		05/24/12 08:19	05/28/12 11:20	1
Hexachloroethane	ND		9.8	0.62	ug/L		05/24/12 08:19	05/28/12 11:20	1
Indeno[1,2,3-cd]pyrene	ND		2.0	0.20	ug/L		05/24/12 08:19	05/28/12 11:20	1
Isophorone	ND		9.8	0.63	ug/L		05/24/12 08:19	05/28/12 11:20	1
2-Methylnaphthalene	ND		2.0	0.12	ug/L		05/24/12 08:19	05/28/12 11:20	1
Naphthalene	ND		2.0	0.14	ug/L		05/24/12 08:19	05/28/12 11:20	1
2-Nitroaniline	ND		49	3.4	ug/L		05/24/12 08:19	05/28/12 11:20	1
3-Nitroaniline	ND		49	3.2	ug/L		05/24/12 08:19	05/28/12 11:20	1
4-Nitroaniline	ND		49	1.7	ug/L		05/24/12 08:19	05/28/12 11:20	1
Nitrobenzene	ND		20	0.83	ug/L		05/24/12 08:19	05/28/12 11:20	1
N-Nitrosodi-n-propylamine	ND		2.0	0.30	ug/L		05/24/12 08:19	05/28/12 11:20	1
N-Nitrosodiphenylamine	ND		9.8	0.84	ug/L		05/24/12 08:19	05/28/12 11:20	1
Phenanthrene	ND		2.0	0.42	ug/L		05/24/12 08:19	05/28/12 11:20	1
Pyrene	ND		2.0	0.15	ug/L		05/24/12 08:19	05/28/12 11:20	1
4-Chloro-3-methylphenol	ND		9.8	0.74	ug/L		05/24/12 08:19	05/28/12 11:20	1
2-Chlorophenol	ND		9.8	1.6	ug/L		05/24/12 08:19	05/28/12 11:20	1
2-Methylphenol	ND		9.8	0.85	ug/L		05/24/12 08:19	05/28/12 11:20	1
Methylphenol, 3 & 4	ND		9.8	0.88	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,4-Dichlorophenol	ND		2.0	0.33	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,4-Dimethylphenol	ND		9.8	0.84	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,4-Dinitrophenol	ND		49	6.0	ug/L		05/24/12 08:19	05/28/12 11:20	1
4,6-Dinitro-2-methylphenol	ND		49	2.2	ug/L		05/24/12 08:19	05/28/12 11:20	1
2-Nitrophenol	ND		9.8	1.7	ug/L		05/24/12 08:19	05/28/12 11:20	1
4-Nitrophenol	ND		49	6.3	ug/L		05/24/12 08:19	05/28/12 11:20	1
Pentachlorophenol	ND		9.8	0.65	ug/L		05/24/12 08:19	05/28/12 11:20	1

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LB 180-36735/12-B LB**  
**Matrix: Solid**  
**Analysis Batch: 37308**

**Client Sample ID: Method Blank**  
**Prep Type: SPLP East**  
**Prep Batch: 37009**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Phenol	ND		2.0	0.57	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,4,5-Trichlorophenol	ND		9.8	1.5	ug/L		05/24/12 08:19	05/28/12 11:20	1
2,4,6-Trichlorophenol	ND		9.8	1.7	ug/L		05/24/12 08:19	05/28/12 11:20	1
1,1'-Biphenyl	ND		9.8	0.41	ug/L		05/24/12 08:19	05/28/12 11:20	1
Caprolactam	ND		49	12	ug/L		05/24/12 08:19	05/28/12 11:20	1
Benzaldehyde	ND		9.8	1.5	ug/L		05/24/12 08:19	05/28/12 11:20	1
Atrazine	ND		9.8	0.87	ug/L		05/24/12 08:19	05/28/12 11:20	1

Surrogate	LB LB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	63		37 - 104	05/24/12 08:19	05/28/12 11:20	1
2-Fluorobiphenyl	61		35 - 108	05/24/12 08:19	05/28/12 11:20	1
Terphenyl-d14	73		25 - 130	05/24/12 08:19	05/28/12 11:20	1
Phenol-d5	68		30 - 102	05/24/12 08:19	05/28/12 11:20	1
2-Fluorophenol	65		26 - 100	05/24/12 08:19	05/28/12 11:20	1
2,4,6-Tribromophenol	78		33 - 122	05/24/12 08:19	05/28/12 11:20	1

**Lab Sample ID: 180-10882-6 MS**  
**Matrix: Solid**  
**Analysis Batch: 37408**

**Client Sample ID: WC-MWP-02-06**  
**Prep Type: SPLP East**  
**Prep Batch: 37009**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Acenaphthene	ND		194	140		ug/L		72	39 - 106
Acetophenone	ND		194	141		ug/L		73	30 - 150
Acenaphthylene	ND		194	150		ug/L		77	40 - 113
Anthracene	ND		194	143		ug/L		73	37 - 108
Benzo[a]anthracene	ND		194	132		ug/L		68	40 - 103
Benzo[a]pyrene	ND		194	161		ug/L		83	37 - 105
Benzo[b]fluoranthene	ND		194	154		ug/L		79	35 - 100
Benzo[g,h,i]perylene	ND		194	150		ug/L		77	31 - 118
Benzo[k]fluoranthene	ND		194	146		ug/L		75	37 - 108
Bis(2-chloroethyl)ether	ND		194	135		ug/L		69	34 - 96
Bis(2-chloroethoxy)methane	ND		194	138		ug/L		71	36 - 101
2,2'-oxybis[1-chloropropane]	ND		194	128		ug/L		66	30 - 100
Bis(2-ethylhexyl) phthalate	ND		194	155		ug/L		80	35 - 112
4-Bromophenyl phenyl ether	ND		194	150		ug/L		77	38 - 108
Butyl benzyl phthalate	ND		194	153		ug/L		79	34 - 110
Carbazole	ND		194	144		ug/L		74	35 - 113
4-Chloroaniline	ND		194	139		ug/L		72	26 - 99
2-Chloronaphthalene	ND		194	136		ug/L		70	37 - 102
4-Chlorophenyl phenyl ether	ND		194	137		ug/L		71	39 - 107
Chrysene	ND		194	140		ug/L		72	39 - 103
Dibenz(a,h)anthracene	ND		194	142		ug/L		73	32 - 117
Dibenzofuran	ND		194	139		ug/L		71	37 - 107
Di-n-butyl phthalate	ND		194	149		ug/L		77	36 - 113
3,3'-Dichlorobenzidine	ND		194	131		ug/L		67	11 - 106
Diethyl phthalate	ND		194	145		ug/L		75	39 - 112
Dimethyl phthalate	ND		194	144		ug/L		74	40 - 110
2,4-Dinitrotoluene	ND		194	153		ug/L		79	41 - 117
2,6-Dinitrotoluene	ND		194	155		ug/L		80	42 - 118

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-10882-6 MS**

**Matrix: Solid**

**Analysis Batch: 37408**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: SPLP East**

**Prep Batch: 37009**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Di-n-octyl phthalate	ND		194	175		ug/L		90	27 - 118
Fluoranthene	ND		194	144		ug/L		74	35 - 111
Fluorene	ND		194	139		ug/L		72	39 - 107
Hexachlorobenzene	ND		194	149		ug/L		77	35 - 106
Hexachlorobutadiene	ND		194	139		ug/L		72	30 - 103
Hexachlorocyclopentadiene	ND		194	63.4		ug/L		33	19 - 116
Hexachloroethane	ND		194	116		ug/L		60	27 - 94
Indeno[1,2,3-cd]pyrene	ND		194	148		ug/L		76	32 - 116
Isophorone	ND		194	144		ug/L		74	39 - 108
2-Methylnaphthalene	ND		194	142		ug/L		73	36 - 101
Naphthalene	ND		194	138		ug/L		71	35 - 98
2-Nitroaniline	ND		194	151		ug/L		78	37 - 114
3-Nitroaniline	ND		194	146		ug/L		75	32 - 117
4-Nitroaniline	ND		194	137		ug/L		71	32 - 117
Nitrobenzene	ND		194	140		ug/L		72	37 - 103
N-Nitrosodi-n-propylamine	ND		194	131		ug/L		67	37 - 106
N-Nitrosodiphenylamine	ND		194	152		ug/L		78	34 - 108
Phenanthrene	ND		194	147		ug/L		76	34 - 107
Pyrene	ND		194	149		ug/L		77	36 - 115
4-Chloro-3-methylphenol	ND		194	153		ug/L		79	40 - 107
2-Chlorophenol	ND		194	138		ug/L		71	34 - 100
2-Methylphenol	ND		194	131		ug/L		67	34 - 101
Methylphenol, 3 & 4	ND		388	270		ug/L		70	34 - 104
2,4-Dichlorophenol	ND		194	143		ug/L		74	34 - 106
2,4-Dimethylphenol	ND		194	120		ug/L		62	34 - 98
2,4-Dinitrophenol	ND		194	137		ug/L		70	3 - 125
4,6-Dinitro-2-methylphenol	ND		194	157		ug/L		81	24 - 121
2-Nitrophenol	ND		194	153		ug/L		79	33 - 108
4-Nitrophenol	ND		194	127		ug/L		66	29 - 120
Pentachlorophenol	ND		194	151		ug/L		78	10 - 118
Phenol	ND		194	123		ug/L		63	35 - 98
2,4,5-Trichlorophenol	ND		194	142		ug/L		73	31 - 111
2,4,6-Trichlorophenol	ND		194	150		ug/L		77	34 - 110
1,1'-Biphenyl	ND		194	138		ug/L		71	10 - 140
Caprolactam	ND		194	129		ug/L		66	10 - 140
Benzaldehyde	ND		194	251		ug/L		129	30 - 150
Atrazine	ND		194	240		ug/L		124	30 - 150

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	75		37 - 104
2-Fluorobiphenyl	70		35 - 108
Terphenyl-d14	87		25 - 130
Phenol-d5	73		30 - 102
2-Fluorophenol	74		26 - 100
2,4,6-Tribromophenol	93		33 - 122



# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-10882-6 MSD**

**Matrix: Solid**

**Analysis Batch: 37408**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: SPLP East**

**Prep Batch: 37009**

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Result			Result					Limits		
Acenaphthene	ND		194	137		ug/L		70	39 - 106	2	32
Acetophenone	ND		194	138		ug/L		71	30 - 150	3	30
Acenaphthylene	ND		194	152		ug/L		79	40 - 113	2	33
Anthracene	ND		194	140		ug/L		72	37 - 108	2	40
Benzo[a]anthracene	ND		194	141		ug/L		72	40 - 103	6	33
Benzo[a]pyrene	ND		194	154		ug/L		79	37 - 105	4	35
Benzo[b]fluoranthene	ND		194	146		ug/L		75	35 - 100	5	44
Benzo[g,h,i]perylene	ND		194	145		ug/L		75	31 - 118	4	45
Benzo[k]fluoranthene	ND		194	147		ug/L		76	37 - 108	1	42
Bis(2-chloroethyl)ether	ND		194	132		ug/L		68	34 - 96	2	34
Bis(2-chloroethoxy)methane	ND		194	132		ug/L		68	36 - 101	4	35
2,2'-oxybis[1-chloropropane]	ND		194	125		ug/L		64	30 - 100	3	38
Bis(2-ethylhexyl) phthalate	ND		194	151		ug/L		78	35 - 112	3	34
4-Bromophenyl phenyl ether	ND		194	146		ug/L		75	38 - 108	3	40
Butyl benzyl phthalate	ND		194	152		ug/L		78	34 - 110	1	35
Carbazole	ND		194	140		ug/L		72	35 - 113	3	32
4-Chloroaniline	ND		194	137		ug/L		70	26 - 99	2	55
2-Chloronaphthalene	ND		194	133		ug/L		68	37 - 102	2	34
4-Chlorophenyl phenyl ether	ND		194	141		ug/L		72	39 - 107	2	34
Chrysene	ND		194	140		ug/L		72	39 - 103	0	38
Dibenz(a,h)anthracene	ND		194	139		ug/L		72	32 - 117	2	43
Dibenzofuran	ND		194	137		ug/L		70	37 - 107	1	32
Di-n-butyl phthalate	ND		194	146		ug/L		75	36 - 113	2	39
3,3'-Dichlorobenzidine	ND		194	128		ug/L		66	11 - 106	3	56
Diethyl phthalate	ND		194	142		ug/L		73	39 - 112	2	32
Dimethyl phthalate	ND		194	143		ug/L		74	40 - 110	1	33
2,4-Dinitrotoluene	ND		194	156		ug/L		80	41 - 117	2	32
2,6-Dinitrotoluene	ND		194	151		ug/L		78	42 - 118	2	33
Di-n-octyl phthalate	ND		194	169		ug/L		87	27 - 118	4	36
Fluoranthene	ND		194	141		ug/L		73	35 - 111	2	43
Fluorene	ND		194	137		ug/L		71	39 - 107	1	33
Hexachlorobenzene	ND		194	145		ug/L		75	35 - 106	2	36
Hexachlorobutadiene	ND		194	136		ug/L		70	30 - 103	2	41
Hexachlorocyclopentadiene	ND		194	65.0		ug/L		33	19 - 116	2	57
Hexachloroethane	ND		194	111		ug/L		57	27 - 94	4	43
Indeno[1,2,3-cd]pyrene	ND		194	146		ug/L		75	32 - 116	2	45
Isophorone	ND		194	137		ug/L		71	39 - 108	5	36
2-Methylnaphthalene	ND		194	138		ug/L		71	36 - 101	3	35
Naphthalene	ND		194	134		ug/L		69	35 - 98	3	39
2-Nitroaniline	ND		194	152		ug/L		79	37 - 114	1	33
3-Nitroaniline	ND		194	142		ug/L		73	32 - 117	3	46
4-Nitroaniline	ND		194	137		ug/L		71	32 - 117	0	39
Nitrobenzene	ND		194	133		ug/L		68	37 - 103	5	34
N-Nitrosodi-n-propylamine	ND		194	123		ug/L		63	37 - 106	6	36
N-Nitrosodiphenylamine	ND		194	146		ug/L		75	34 - 108	4	42
Phenanthrene	ND		194	141		ug/L		72	34 - 107	5	34
Pyrene	ND		194	145		ug/L		75	36 - 115	2	38
4-Chloro-3-methylphenol	ND		194	144		ug/L		74	40 - 107	6	32
2-Chlorophenol	ND		194	135		ug/L		69	34 - 100	3	31

# QC Sample Results

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-10882-6 MSD

Matrix: Solid

Analysis Batch: 37408

Client Sample ID: WC-MWP-02-06

Prep Type: SPLP East

Prep Batch: 37009

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
2-Methylphenol	ND		194	127		ug/L		65	34 - 101	3	34
Methylphenol, 3 & 4	ND		388	259		ug/L		67	34 - 104	4	34
2,4-Dichlorophenol	ND		194	141		ug/L		72	34 - 106	2	33
2,4-Dimethylphenol	ND		194	115		ug/L		59	34 - 98	4	34
2,4-Dinitrophenol	ND		194	132		ug/L		68	3 - 125	4	62
4,6-Dinitro-2-methylphenol	ND		194	160		ug/L		82	24 - 121	2	50
2-Nitrophenol	ND		194	147		ug/L		76	33 - 108	4	41
4-Nitrophenol	ND		194	125		ug/L		64	29 - 120	2	39
Pentachlorophenol	ND		194	143		ug/L		73	10 - 118	6	49
Phenol	ND		194	117		ug/L		60	35 - 98	4	35
2,4,5-Trichlorophenol	ND		194	138		ug/L		71	31 - 111	3	32
2,4,6-Trichlorophenol	ND		194	149		ug/L		77	34 - 110	0	35
1,1'-Biphenyl	ND		194	137		ug/L		70	10 - 140	1	30
Caprolactam	ND		194	121		ug/L		62	10 - 140	6	30
Benzaldehyde	ND		194	234		ug/L		121	30 - 150	7	30
Atrazine	ND		194	241		ug/L		124	30 - 150	0	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	73		37 - 104
2-Fluorobiphenyl	69		35 - 108
Terphenyl-d14	86		25 - 130
Phenol-d5	70		30 - 102
2-Fluorophenol	70		26 - 100
2,4,6-Tribromophenol	92		33 - 122

## Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-36598/1-A

Matrix: Water

Analysis Batch: 37253

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36598

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		1.0	0.29	ug/L		05/21/12 09:15	05/25/12 21:44	1
Barium	0.112	J	10	0.098	ug/L		05/21/12 09:15	05/25/12 21:44	1
Cadmium	ND		1.0	0.11	ug/L		05/21/12 09:15	05/25/12 21:44	1
Chromium	ND		2.0	0.54	ug/L		05/21/12 09:15	05/25/12 21:44	1
Lead	0.892	J	1.0	0.019	ug/L		05/21/12 09:15	05/25/12 21:44	1
Selenium	ND		5.0	0.42	ug/L		05/21/12 09:15	05/25/12 21:44	1
Silver	ND		1.0	0.036	ug/L		05/21/12 09:15	05/25/12 21:44	1

Lab Sample ID: LCS 180-36598/2-A

Matrix: Water

Analysis Batch: 37253

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36598

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Arsenic	40.0	38.9		ug/L		97	80 - 120
Barium	2000	1850		ug/L		93	80 - 120
Cadmium	50.0	45.7		ug/L		91	80 - 120
Chromium	200	190		ug/L		95	80 - 120

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 180-36598/2-A**  
**Matrix: Water**  
**Analysis Batch: 37253**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 36598**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	19.0		ug/L		95	80 - 120
Selenium	10.0	10.0		ug/L		100	80 - 120
Silver	50.0	45.4		ug/L		91	80 - 120

**Lab Sample ID: MB 180-36863/1-A**  
**Matrix: Solid**  
**Analysis Batch: 38009**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 36863**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	0.018	mg/Kg		05/23/12 08:20	06/04/12 14:38	1
Barium	0.0155	J	1.0	0.011	mg/Kg		05/23/12 08:20	06/04/12 14:38	1
Cadmium	ND		0.10	0.0070	mg/Kg		05/23/12 08:20	06/04/12 14:38	1
Chromium	0.0312	J	0.20	0.0061	mg/Kg		05/23/12 08:20	06/04/12 14:38	1
Lead	0.00550	J	0.10	0.0038	mg/Kg		05/23/12 08:20	06/04/12 14:38	1
Selenium	ND		0.50	0.050	mg/Kg		05/23/12 08:20	06/04/12 14:38	1
Silver	ND		0.10	0.0039	mg/Kg		05/23/12 08:20	06/04/12 14:38	1

**Lab Sample ID: LCS 180-36863/2-A**  
**Matrix: Solid**  
**Analysis Batch: 38009**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 36863**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	4.02		mg/Kg		101	80 - 120
Barium	200	193		mg/Kg		97	80 - 120
Cadmium	5.00	5.01		mg/Kg		100	80 - 120
Chromium	20.0	19.9		mg/Kg		100	80 - 120
Lead	2.00	2.14		mg/Kg		107	80 - 120
Selenium	1.00	0.905		mg/Kg		91	80 - 120
Silver	5.00	5.00		mg/Kg		100	80 - 120

**Lab Sample ID: 180-10882-6 MS**  
**Matrix: Solid**  
**Analysis Batch: 38009**

**Client Sample ID: WC-MWP-02-06**  
**Prep Type: Total/NA**  
**Prep Batch: 36863**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.70		4.52	4.61		mg/Kg	☼	86	75 - 125
Barium	360	B	226	574		mg/Kg	☼	95	75 - 125
Cadmium	1.2		5.65	6.73		mg/Kg	☼	97	75 - 125
Chromium	26	B	22.6	44.1		mg/Kg	☼	81	75 - 125
Lead	2.3	B	2.26	4.62		mg/Kg	☼	102	75 - 125
Selenium	1.6		1.13	2.41		mg/Kg	☼	76	75 - 125
Silver	0.19		5.65	5.55		mg/Kg	☼	95	75 - 125

**Lab Sample ID: 180-10882-6 MSD**  
**Matrix: Solid**  
**Analysis Batch: 38009**

**Client Sample ID: WC-MWP-02-06**  
**Prep Type: Total/NA**  
**Prep Batch: 36863**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.70		4.52	4.74		mg/Kg	☼	89	75 - 125	3	20
Barium	360	B	226	577		mg/Kg	☼	97	75 - 125	1	20
Cadmium	1.2		5.65	6.67		mg/Kg	☼	96	75 - 125	1	20

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-10882-6 MSD

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: WC-MWP-02-06

Prep Type: Total/NA

Prep Batch: 36863

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chromium	26	B	22.6	44.2		mg/Kg	✖	81	75 - 125	0	20
Lead	2.3	B	2.26	4.88		mg/Kg	✖	114	75 - 125	5	20
Selenium	1.6		1.13	2.43		mg/Kg	✖	77	75 - 125	1	20
Silver	0.19		5.65	5.61		mg/Kg	✖	96	75 - 125	1	20

Lab Sample ID: MB 180-37094/13-A

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37094

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		1.0	0.29	ug/L		05/24/12 16:36	06/04/12 13:00	1
Barium	ND		10	0.098	ug/L		05/24/12 16:36	06/04/12 13:00	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:36	06/04/12 13:00	1
Chromium	ND		2.0	0.54	ug/L		05/24/12 16:36	06/04/12 13:00	1
Lead	0.209	J	1.0	0.019	ug/L		05/24/12 16:36	06/04/12 13:00	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:36	06/04/12 13:00	1
Silver	0.957	J	1.0	0.036	ug/L		05/24/12 16:36	06/04/12 13:00	1

Lab Sample ID: LCS 180-37094/14-A

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37094

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Arsenic	40.0	42.4		ug/L		106	80 - 120
Barium	2000	1870		ug/L		94	80 - 120
Cadmium	50.0	47.5		ug/L		95	80 - 120
Chromium	200	202		ug/L		101	80 - 120
Lead	20.0	20.6		ug/L		103	80 - 120
Selenium	10.0	8.48		ug/L		85	80 - 120
Silver	50.0	53.5		ug/L		107	80 - 120

Lab Sample ID: LB 180-36735/12-D LB

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: Method Blank

Prep Type: SPLP East

Prep Batch: 37094

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		1.0	0.29	ug/L		05/24/12 16:35	06/04/12 13:05	1
Barium	ND		10	0.098	ug/L		05/24/12 16:35	06/04/12 13:05	1
Cadmium	ND		1.0	0.11	ug/L		05/24/12 16:35	06/04/12 13:05	1
Chromium	ND		2.0	0.54	ug/L		05/24/12 16:35	06/04/12 13:05	1
Lead	0.126	J	1.0	0.019	ug/L		05/24/12 16:35	06/04/12 13:05	1
Selenium	ND		5.0	0.42	ug/L		05/24/12 16:35	06/04/12 13:05	1
Silver	0.649	J	1.0	0.036	ug/L		05/24/12 16:35	06/04/12 13:05	1

Lab Sample ID: 180-10882-6 MS

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: WC-MWP-02-06

Prep Type: SPLP East

Prep Batch: 37094

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Arsenic	8.9		40.0	40.4		ug/L		79	75 - 125
Barium	6.4	J	2000	1990		ug/L		99	75 - 125

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-10882-6 MS

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: WC-MWP-02-06

Prep Type: SPLP East

Prep Batch: 37094

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Cadmium	0.12	J	50.0	51.9		ug/L		103		75 - 125
Chromium	4.8		200	202		ug/L		99		75 - 125
Lead	0.58	J B	20.0	21.9		ug/L		106		75 - 125
Selenium	ND		10.0	9.29		ug/L		93		75 - 125
Silver	0.86	J B	50.0	51.8		ug/L		102		75 - 125

Lab Sample ID: 180-10882-6 MSD

Matrix: Solid

Analysis Batch: 38009

Client Sample ID: WC-MWP-02-06

Prep Type: SPLP East

Prep Batch: 37094

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Arsenic	8.9		40.0	40.4		ug/L		79		75 - 125	0	20
Barium	6.4	J	2000	1890		ug/L		94		75 - 125	5	20
Cadmium	0.12	J	50.0	49.4		ug/L		98		75 - 125	5	20
Chromium	4.8		200	195		ug/L		95		75 - 125	3	20
Lead	0.58	J B	20.0	21.3		ug/L		103		75 - 125	3	20
Selenium	ND		10.0	9.47		ug/L		95		75 - 125	2	20
Silver	0.86	J B	50.0	49.2		ug/L		97		75 - 125	5	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-37068/1-A

Matrix: Solid

Analysis Batch: 37108

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37068

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:40	1

Lab Sample ID: LCS 180-37068/2-A

Matrix: Solid

Analysis Batch: 37108

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37068

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Mercury	2.50	2.36		ug/L		94		80 - 120

Lab Sample ID: MB 180-37464/1-A

Matrix: Water

Analysis Batch: 37533

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37464

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.038	ug/L		05/30/12 12:52	05/30/12 18:19	1

Lab Sample ID: LCS 180-37464/2-A

Matrix: Water

Analysis Batch: 37533

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37464

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Mercury	2.50	2.40		ug/L		96		80 - 120

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID:** LCSD 180-37464/3-A  
**Matrix:** Water  
**Analysis Batch:** 37533

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA  
**Prep Batch:** 37464

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	2.50	2.31		ug/L		92	80 - 120	4	20

**Lab Sample ID:** LB 180-36735/12-C LB  
**Matrix:** Solid  
**Analysis Batch:** 37108

**Client Sample ID:** Method Blank  
**Prep Type:** SPLP East  
**Prep Batch:** 37068

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.038	ug/L		05/24/12 14:28	05/24/12 18:43	1

**Lab Sample ID:** 180-10882-6 MS  
**Matrix:** Solid  
**Analysis Batch:** 37108

**Client Sample ID:** WC-MWP-02-06  
**Prep Type:** SPLP East  
**Prep Batch:** 37068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		1.00	0.921		ug/L		92	75 - 125

**Lab Sample ID:** 180-10882-6 MSD  
**Matrix:** Solid  
**Analysis Batch:** 37108

**Client Sample ID:** WC-MWP-02-06  
**Prep Type:** SPLP East  
**Prep Batch:** 37068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	0.908		ug/L		91	75 - 125	1	20

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID:** MB 180-38098/1-A  
**Matrix:** Solid  
**Analysis Batch:** 38170

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 38098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.033	0.011	mg/Kg		06/06/12 03:29	06/06/12 08:27	1

**Lab Sample ID:** LCS 180-38098/2-A  
**Matrix:** Solid  
**Analysis Batch:** 38170

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 38098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.417	0.422		mg/Kg		101	80 - 120

**Lab Sample ID:** 180-10882-6 MS  
**Matrix:** Solid  
**Analysis Batch:** 38170

**Client Sample ID:** WC-MWP-02-06  
**Prep Type:** Total/NA  
**Prep Batch:** 38098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.182	0.181		mg/Kg	☼	99	75 - 125

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-10882-6 MSD

Matrix: Solid

Analysis Batch: 38170

Client Sample ID: WC-MWP-02-06

Prep Type: Total/NA

Prep Batch: 38098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.188	0.188		mg/Kg	☼	100	75 - 125	4	20

## Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 180-37192/4-A

Matrix: Water

Analysis Batch: 37206

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37192

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	1.70	J	10	1.5	ug/L		05/25/12 13:45	05/25/12 14:19	1

Lab Sample ID: HLCS 180-37192/2-A

Matrix: Water

Analysis Batch: 37206

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37192

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	250	251		ug/L		100	90 - 110

Lab Sample ID: LCS 180-37192/3-A

Matrix: Water

Analysis Batch: 37206

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37192

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	193		ug/L		96	85 - 115

Lab Sample ID: LLCS 180-37192/1-A

Matrix: Water

Analysis Batch: 37206

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37192

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	50.0	48.7		ug/L		97	90 - 110

Lab Sample ID: MB 180-37429/4-A

Matrix: Solid

Analysis Batch: 37472

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37429

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.50	0.097	mg/Kg		05/30/12 09:15	05/30/12 11:44	1

Lab Sample ID: HLCS 180-37429/2-A

Matrix: Solid

Analysis Batch: 37472

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37429

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.250	0.251		mg/Kg		100	90 - 110

# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 9012A - Cyanide, Total and/or Amenable (Continued)

**Lab Sample ID: LCS 180-37429/3-A**  
**Matrix: Solid**  
**Analysis Batch: 37472**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 37429**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	28.1	28.1		mg/Kg		100	38 - 162

**Lab Sample ID: LLCS 180-37429/1-A**  
**Matrix: Solid**  
**Analysis Batch: 37472**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 37429**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0500	0.0509		mg/Kg		102	90 - 110

**Lab Sample ID: 180-10882-6 MS**  
**Matrix: Solid**  
**Analysis Batch: 37472**

**Client Sample ID: WC-MWP-02-06**  
**Prep Type: Total/NA**  
**Prep Batch: 37429**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	2.0		5.54	6.77		mg/Kg	☼	86	75 - 125

**Lab Sample ID: 180-10882-6 MSD**  
**Matrix: Solid**  
**Analysis Batch: 37472**

**Client Sample ID: WC-MWP-02-06**  
**Prep Type: Total/NA**  
**Prep Batch: 37429**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cyanide, Total	2.0		5.54	8.13		mg/Kg	☼	110	75 - 125	18	20

**Lab Sample ID: MB 180-38146/4-A**  
**Matrix: Solid**  
**Analysis Batch: 38181**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 38146**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		10	1.5	ug/L		06/06/12 08:50	06/06/12 10:02	1

**Lab Sample ID: HLCS 180-38146/2-A**  
**Matrix: Solid**  
**Analysis Batch: 38181**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 38146**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	250	245		ug/L		98	90 - 110

**Lab Sample ID: LCS 180-38146/3-A**  
**Matrix: Solid**  
**Analysis Batch: 38181**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 38146**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	187		ug/L		93	85 - 115

**Lab Sample ID: LLCS 180-38146/1-A**  
**Matrix: Solid**  
**Analysis Batch: 38181**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 38146**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	50.0	51.5		ug/L		103	90 - 110



# QC Sample Results

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Method: 9012A - Cyanide, Total and/or Amenable (Continued)

**Lab Sample ID: 180-10882-1 MS**

**Matrix: Solid**

**Analysis Batch: 38181**

**Client Sample ID: WC-MWP-04-06**

**Prep Type: SPLP**

**Prep Batch: 38146**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	
Cyanide, Total	ND		100	89.2		ug/L		89	75 - 125	

**Lab Sample ID: 180-10882-6 MS**

**Matrix: Solid**

**Analysis Batch: 38181**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: SPLP**

**Prep Batch: 38146**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	
Cyanide, Total	ND		100	86.8		ug/L		87	75 - 125	

**Lab Sample ID: 180-10882-6 MSD**

**Matrix: Solid**

**Analysis Batch: 38181**

**Client Sample ID: WC-MWP-02-06**

**Prep Type: SPLP**

**Prep Batch: 38146**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits		RPD	Limit
Cyanide, Total	ND		100	90.1		ug/L		90	75 - 125		4	20

**Lab Sample ID: LB 180-36938/12-A LB**

**Matrix: Solid**

**Analysis Batch: 38181**

**Client Sample ID: Method Blank**

**Prep Type: SPLP**

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Cyanide, Total	ND		10	1.5	ug/L			06/06/12 10:02		1

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## GC/MS VOA

### Prep Batch: 36580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	5035	
180-10882-2	WC-MWP-14-06	Total/NA	Solid	5035	
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	5035	
180-10882-4	WC-MWP-01-06	Total/NA	Solid	5035	
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	5035	
MB 180-36580/1-A	Method Blank	Total/NA	Solid	5035	

### Analysis Batch: 36588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	8260B	36580
180-10882-2	WC-MWP-14-06	Total/NA	Solid	8260B	36580
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	8260B	36580
180-10882-4	WC-MWP-01-06	Total/NA	Solid	8260B	36580
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	8260B	36580
MB 180-36580/1-A	Method Blank	Total/NA	Solid	8260B	36580

### Analysis Batch: 36849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	8260B	
180-10882-11	WC-MWP-EB1	Total/NA	Water	8260B	
LCS 180-36849/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 180-36849/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 180-36849/3	Method Blank	Total/NA	Water	8260B	

### Prep Batch: 36865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-6	WC-MWP-02-06	Total/NA	Solid	5035	
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	5035	
180-10882-8	WC-MWP-03-06	Total/NA	Solid	5035	
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	5035	
LCS 180-36865/2-A	Lab Control Sample	Total/NA	Solid	5035	
MB 180-36865/1-A	Method Blank	Total/NA	Solid	5035	

### Analysis Batch: 36886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-6	WC-MWP-02-06	Total/NA	Solid	8260B	36865
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	8260B	36865
180-10882-8	WC-MWP-03-06	Total/NA	Solid	8260B	36865
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	8260B	36865
LCS 180-36865/2-A	Lab Control Sample	Total/NA	Solid	8260B	36865
MB 180-36865/1-A	Method Blank	Total/NA	Solid	8260B	36865

### Leach Batch: 37074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP	Solid	1312	
180-10882-2	WC-MWP-14-06	SPLP	Solid	1312	
180-10882-3	WC-MWP-04-1224	SPLP	Solid	1312	
180-10882-4	WC-MWP-01-06	SPLP	Solid	1312	
180-10882-5	WC-MWP-01-1224	SPLP	Solid	1312	
180-10882-6	WC-MWP-02-06	SPLP	Solid	1312	
180-10882-6 MS	WC-MWP-02-06	SPLP	Solid	1312	
180-10882-6 MSD	WC-MWP-02-06	SPLP	Solid	1312	

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## GC/MS VOA (Continued)

### Leach Batch: 37074 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-7	WC-MWP-02-1224	SPLP	Solid	1312	
180-10882-8	WC-MWP-03-06	SPLP	Solid	1312	
180-10882-9	WC-MWP-03-1224	SPLP	Solid	1312	
LB 180-37074/12-A LB	Method Blank	SPLP	Solid	1312	

### Analysis Batch: 37287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP	Solid	8260B	
180-10882-2	WC-MWP-14-06	SPLP	Solid	8260B	
180-10882-3	WC-MWP-04-1224	SPLP	Solid	8260B	
180-10882-4	WC-MWP-01-06	SPLP	Solid	8260B	
180-10882-5	WC-MWP-01-1224	SPLP	Solid	8260B	
180-10882-6	WC-MWP-02-06	SPLP	Solid	8260B	
180-10882-6 MS	WC-MWP-02-06	SPLP	Solid	8260B	
180-10882-6 MSD	WC-MWP-02-06	SPLP	Solid	8260B	
180-10882-7	WC-MWP-02-1224	SPLP	Solid	8260B	
180-10882-8	WC-MWP-03-06	SPLP	Solid	8260B	
180-10882-9	WC-MWP-03-1224	SPLP	Solid	8260B	
LB 180-37074/12-A LB	Method Blank	SPLP	Solid	8260B	
LCS 180-37287/9	Lab Control Sample	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Leach Batch: 36735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	1312	
180-10882-2	WC-MWP-14-06	SPLP East	Solid	1312	
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	1312	
180-10882-4	WC-MWP-01-06	SPLP East	Solid	1312	
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	1312	
180-10882-6	WC-MWP-02-06	SPLP East	Solid	1312	
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	1312	
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	1312	
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	1312	
180-10882-8	WC-MWP-03-06	SPLP East	Solid	1312	
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	1312	
LB 180-36735/12-B LB	Method Blank	SPLP East	Solid	1312	

### Prep Batch: 36872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	3520C	
180-10882-11	WC-MWP-EB1	Total/NA	Water	3520C	
LCS 180-36872/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 180-36872/1-A	Method Blank	Total/NA	Water	3520C	

### Prep Batch: 37009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	3520C	36735
180-10882-2	WC-MWP-14-06	SPLP East	Solid	3520C	36735
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	3520C	36735
180-10882-4	WC-MWP-01-06	SPLP East	Solid	3520C	36735
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	3520C	36735

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 37009 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-6	WC-MWP-02-06	SPLP East	Solid	3520C	36735
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	3520C	36735
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	3520C	36735
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	3520C	36735
180-10882-8	WC-MWP-03-06	SPLP East	Solid	3520C	36735
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	3520C	36735
LB 180-36735/12-B LB	Method Blank	SPLP East	Solid	3520C	36735
LCS 180-37009/2-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 180-37009/1-A	Method Blank	Total/NA	Solid	3520C	

### Analysis Batch: 37272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-36872/2-A	Lab Control Sample	Total/NA	Water	8270C	36872
MB 180-36872/1-A	Method Blank	Total/NA	Water	8270C	36872

### Analysis Batch: 37308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	8270C	36872
180-10882-11	WC-MWP-EB1	Total/NA	Water	8270C	36872
LB 180-36735/12-B LB	Method Blank	SPLP East	Solid	8270C	37009
LCS 180-37009/2-A	Lab Control Sample	Total/NA	Solid	8270C	37009
MB 180-37009/1-A	Method Blank	Total/NA	Solid	8270C	37009

### Analysis Batch: 37408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	8270C	37009
180-10882-2	WC-MWP-14-06	SPLP East	Solid	8270C	37009
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	8270C	37009
180-10882-4	WC-MWP-01-06	SPLP East	Solid	8270C	37009
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	8270C	37009
180-10882-6	WC-MWP-02-06	SPLP East	Solid	8270C	37009
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	8270C	37009
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	8270C	37009
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	8270C	37009
180-10882-8	WC-MWP-03-06	SPLP East	Solid	8270C	37009
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	8270C	37009

### Prep Batch: 37554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	3541	
180-10882-2	WC-MWP-14-06	Total/NA	Solid	3541	
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	3541	
180-10882-4	WC-MWP-01-06	Total/NA	Solid	3541	
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	3541	
180-10882-6	WC-MWP-02-06	Total/NA	Solid	3541	
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	3541	
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	3541	
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	3541	
180-10882-8	WC-MWP-03-06	Total/NA	Solid	3541	
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	3541	
LCS 180-37554/2-A	Lab Control Sample	Total/NA	Solid	3541	
MB 180-37554/1-A	Method Blank	Total/NA	Solid	3541	

# QC Association Summary

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 38110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	8270C	37554
180-10882-2	WC-MWP-14-06	Total/NA	Solid	8270C	37554
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	8270C	37554
180-10882-6	WC-MWP-02-06	Total/NA	Solid	8270C	37554
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	8270C	37554
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	8270C	37554
LCS 180-37554/2-A	Lab Control Sample	Total/NA	Solid	8270C	37554
MB 180-37554/1-A	Method Blank	Total/NA	Solid	8270C	37554

### Analysis Batch: 38249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-4	WC-MWP-01-06	Total/NA	Solid	8270C	37554
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	8270C	37554
180-10882-8	WC-MWP-03-06	Total/NA	Solid	8270C	37554
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	8270C	37554

### Analysis Batch: 38373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	8270C	37554

## Metals

### Prep Batch: 36598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	3010A	
180-10882-11	WC-MWP-EB1	Total/NA	Water	3010A	
LCS 180-36598/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 180-36598/1-A	Method Blank	Total/NA	Water	3010A	

### Leach Batch: 36735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	1312	
180-10882-2	WC-MWP-14-06	SPLP East	Solid	1312	
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	1312	
180-10882-4	WC-MWP-01-06	SPLP East	Solid	1312	
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	1312	
180-10882-6	WC-MWP-02-06	SPLP East	Solid	1312	
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	1312	
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	1312	
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	1312	
180-10882-8	WC-MWP-03-06	SPLP East	Solid	1312	
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	1312	
LB 180-36735/12-C LB	Method Blank	SPLP East	Solid	1312	
LB 180-36735/12-D LB	Method Blank	SPLP East	Solid	1312	

### Prep Batch: 36863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	3050B	
180-10882-2	WC-MWP-14-06	Total/NA	Solid	3050B	
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	3050B	
180-10882-4	WC-MWP-01-06	Total/NA	Solid	3050B	
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	3050B	

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Metals (Continued)

### Prep Batch: 36863 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-6	WC-MWP-02-06	Total/NA	Solid	3050B	
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	3050B	
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	3050B	
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	3050B	
180-10882-8	WC-MWP-03-06	Total/NA	Solid	3050B	
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	3050B	
LCS 180-36863/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 180-36863/1-A	Method Blank	Total/NA	Solid	3050B	

### Prep Batch: 37068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	7470A	36735
180-10882-2	WC-MWP-14-06	SPLP East	Solid	7470A	36735
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	7470A	36735
180-10882-4	WC-MWP-01-06	SPLP East	Solid	7470A	36735
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	7470A	36735
180-10882-6	WC-MWP-02-06	SPLP East	Solid	7470A	36735
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	7470A	36735
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	7470A	36735
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	7470A	36735
180-10882-8	WC-MWP-03-06	SPLP East	Solid	7470A	36735
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	7470A	36735
LB 180-36735/12-C LB	Method Blank	SPLP East	Solid	7470A	36735
LCS 180-37068/2-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 180-37068/1-A	Method Blank	Total/NA	Solid	7470A	

### Prep Batch: 37094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	3010A	36735
180-10882-2	WC-MWP-14-06	SPLP East	Solid	3010A	36735
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	3010A	36735
180-10882-4	WC-MWP-01-06	SPLP East	Solid	3010A	36735
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	3010A	36735
180-10882-6	WC-MWP-02-06	SPLP East	Solid	3010A	36735
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	3010A	36735
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	3010A	36735
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	3010A	36735
180-10882-8	WC-MWP-03-06	SPLP East	Solid	3010A	36735
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	3010A	36735
LB 180-36735/12-D LB	Method Blank	SPLP East	Solid	3010A	36735
LCS 180-37094/14-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 180-37094/13-A	Method Blank	Total/NA	Solid	3010A	

### Analysis Batch: 37108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	7470A	37068
180-10882-2	WC-MWP-14-06	SPLP East	Solid	7470A	37068
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	7470A	37068
180-10882-4	WC-MWP-01-06	SPLP East	Solid	7470A	37068
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	7470A	37068
180-10882-6	WC-MWP-02-06	SPLP East	Solid	7470A	37068
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	7470A	37068

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Metals (Continued)

### Analysis Batch: 37108 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	7470A	37068
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	7470A	37068
180-10882-8	WC-MWP-03-06	SPLP East	Solid	7470A	37068
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	7470A	37068
LB 180-36735/12-C LB	Method Blank	SPLP East	Solid	7470A	37068
LCS 180-37068/2-A	Lab Control Sample	Total/NA	Solid	7470A	37068
MB 180-37068/1-A	Method Blank	Total/NA	Solid	7470A	37068

### Analysis Batch: 37253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	6020	36598
180-10882-11	WC-MWP-EB1	Total/NA	Water	6020	36598
LCS 180-36598/2-A	Lab Control Sample	Total/NA	Water	6020	36598
MB 180-36598/1-A	Method Blank	Total/NA	Water	6020	36598

### Prep Batch: 37464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	7470A	
180-10882-11	WC-MWP-EB1	Total/NA	Water	7470A	
LCS 180-37464/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 180-37464/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
MB 180-37464/1-A	Method Blank	Total/NA	Water	7470A	

### Analysis Batch: 37533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	7470A	37464
180-10882-11	WC-MWP-EB1	Total/NA	Water	7470A	37464
LCS 180-37464/2-A	Lab Control Sample	Total/NA	Water	7470A	37464
LCSD 180-37464/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	37464
MB 180-37464/1-A	Method Blank	Total/NA	Water	7470A	37464

### Analysis Batch: 38009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP East	Solid	6020	37094
180-10882-1	WC-MWP-04-06	Total/NA	Solid	6020	36863
180-10882-2	WC-MWP-14-06	SPLP East	Solid	6020	37094
180-10882-2	WC-MWP-14-06	Total/NA	Solid	6020	36863
180-10882-3	WC-MWP-04-1224	SPLP East	Solid	6020	37094
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	6020	36863
180-10882-4	WC-MWP-01-06	SPLP East	Solid	6020	37094
180-10882-4	WC-MWP-01-06	Total/NA	Solid	6020	36863
180-10882-5	WC-MWP-01-1224	SPLP East	Solid	6020	37094
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	6020	36863
180-10882-6	WC-MWP-02-06	SPLP East	Solid	6020	37094
180-10882-6	WC-MWP-02-06	Total/NA	Solid	6020	36863
180-10882-6 MS	WC-MWP-02-06	SPLP East	Solid	6020	37094
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	6020	36863
180-10882-6 MSD	WC-MWP-02-06	SPLP East	Solid	6020	37094
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	6020	36863
180-10882-7	WC-MWP-02-1224	SPLP East	Solid	6020	37094
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	6020	36863
180-10882-8	WC-MWP-03-06	SPLP East	Solid	6020	37094

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## Metals (Continued)

### Analysis Batch: 38009 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-8	WC-MWP-03-06	Total/NA	Solid	6020	36863
180-10882-9	WC-MWP-03-1224	SPLP East	Solid	6020	37094
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	6020	36863
LB 180-36735/12-D LB	Method Blank	SPLP East	Solid	6020	37094
LCS 180-36863/2-A	Lab Control Sample	Total/NA	Solid	6020	36863
LCS 180-37094/14-A	Lab Control Sample	Total/NA	Solid	6020	37094
MB 180-36863/1-A	Method Blank	Total/NA	Solid	6020	36863
MB 180-37094/13-A	Method Blank	Total/NA	Solid	6020	37094

### Prep Batch: 38098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	7471A	
180-10882-2	WC-MWP-14-06	Total/NA	Solid	7471A	
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	7471A	
180-10882-4	WC-MWP-01-06	Total/NA	Solid	7471A	
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	7471A	
180-10882-6	WC-MWP-02-06	Total/NA	Solid	7471A	
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	7471A	
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	7471A	
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	7471A	
180-10882-8	WC-MWP-03-06	Total/NA	Solid	7471A	
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	7471A	
LCS 180-38098/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 180-38098/1-A	Method Blank	Total/NA	Solid	7471A	

### Analysis Batch: 38170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	7471A	38098
180-10882-2	WC-MWP-14-06	Total/NA	Solid	7471A	38098
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	7471A	38098
180-10882-4	WC-MWP-01-06	Total/NA	Solid	7471A	38098
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	7471A	38098
180-10882-6	WC-MWP-02-06	Total/NA	Solid	7471A	38098
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	7471A	38098
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	7471A	38098
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	7471A	38098
180-10882-8	WC-MWP-03-06	Total/NA	Solid	7471A	38098
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	7471A	38098
LCS 180-38098/2-A	Lab Control Sample	Total/NA	Solid	7471A	38098
MB 180-38098/1-A	Method Blank	Total/NA	Solid	7471A	38098

## General Chemistry

### Analysis Batch: 36597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	Moisture	
180-10882-2	WC-MWP-14-06	Total/NA	Solid	Moisture	
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	Moisture	
180-10882-4	WC-MWP-01-06	Total/NA	Solid	Moisture	
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	Moisture	
180-10882-6	WC-MWP-02-06	Total/NA	Solid	Moisture	
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	Moisture	



# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## General Chemistry (Continued)

### Analysis Batch: 36597 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-8	WC-MWP-03-06	Total/NA	Solid	Moisture	
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	Moisture	

### Leach Batch: 36938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP	Solid	1312	
180-10882-1 MS	WC-MWP-04-06	SPLP	Solid	1312	
180-10882-2	WC-MWP-14-06	SPLP	Solid	1312	
180-10882-3	WC-MWP-04-1224	SPLP	Solid	1312	
180-10882-4	WC-MWP-01-06	SPLP	Solid	1312	
180-10882-5	WC-MWP-01-1224	SPLP	Solid	1312	
180-10882-6	WC-MWP-02-06	SPLP	Solid	1312	
180-10882-6 MS	WC-MWP-02-06	SPLP	Solid	1312	
180-10882-6 MSD	WC-MWP-02-06	SPLP	Solid	1312	
180-10882-7	WC-MWP-02-1224	SPLP	Solid	1312	
180-10882-8	WC-MWP-03-06	SPLP	Solid	1312	
180-10882-9	WC-MWP-03-1224	SPLP	Solid	1312	
LB 180-36938/12-A LB	Method Blank	SPLP	Solid	1312	

### Prep Batch: 37192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	9012A	
180-10882-11	WC-MWP-EB1	Total/NA	Water	9012A	
HLCS 180-37192/2-A	Lab Control Sample	Total/NA	Water	9012A	
LCS 180-37192/3-A	Lab Control Sample	Total/NA	Water	9012A	
LLCS 180-37192/1-A	Lab Control Sample	Total/NA	Water	9012A	
MB 180-37192/4-A	Method Blank	Total/NA	Water	9012A	

### Analysis Batch: 37206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-10	WC-MWP-FB1	Total/NA	Water	9012A	37192
180-10882-11	WC-MWP-EB1	Total/NA	Water	9012A	37192
HLCS 180-37192/2-A	Lab Control Sample	Total/NA	Water	9012A	37192
LCS 180-37192/3-A	Lab Control Sample	Total/NA	Water	9012A	37192
LLCS 180-37192/1-A	Lab Control Sample	Total/NA	Water	9012A	37192
MB 180-37192/4-A	Method Blank	Total/NA	Water	9012A	37192

### Prep Batch: 37429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	9012A	
180-10882-2	WC-MWP-14-06	Total/NA	Solid	9012A	
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	9012A	
180-10882-4	WC-MWP-01-06	Total/NA	Solid	9012A	
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	9012A	
180-10882-6	WC-MWP-02-06	Total/NA	Solid	9012A	
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	9012A	
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	9012A	
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	9012A	
180-10882-8	WC-MWP-03-06	Total/NA	Solid	9012A	
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	9012A	
HLCS 180-37429/2-A	Lab Control Sample	Total/NA	Solid	9012A	
LCS 180-37429/3-A	Lab Control Sample	Total/NA	Solid	9012A	

# QC Association Summary

Client: Booz Allen Hamilton Inc  
 Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## General Chemistry (Continued)

### Prep Batch: 37429 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LLCS 180-37429/1-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 180-37429/4-A	Method Blank	Total/NA	Solid	9012A	

### Analysis Batch: 37472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	Total/NA	Solid	9012A	37429
180-10882-2	WC-MWP-14-06	Total/NA	Solid	9012A	37429
180-10882-3	WC-MWP-04-1224	Total/NA	Solid	9012A	37429
180-10882-4	WC-MWP-01-06	Total/NA	Solid	9012A	37429
180-10882-5	WC-MWP-01-1224	Total/NA	Solid	9012A	37429
180-10882-6	WC-MWP-02-06	Total/NA	Solid	9012A	37429
180-10882-6 MS	WC-MWP-02-06	Total/NA	Solid	9012A	37429
180-10882-6 MSD	WC-MWP-02-06	Total/NA	Solid	9012A	37429
180-10882-7	WC-MWP-02-1224	Total/NA	Solid	9012A	37429
180-10882-8	WC-MWP-03-06	Total/NA	Solid	9012A	37429
180-10882-9	WC-MWP-03-1224	Total/NA	Solid	9012A	37429
HLCS 180-37429/2-A	Lab Control Sample	Total/NA	Solid	9012A	37429
LCS 180-37429/3-A	Lab Control Sample	Total/NA	Solid	9012A	37429
LLCS 180-37429/1-A	Lab Control Sample	Total/NA	Solid	9012A	37429
MB 180-37429/4-A	Method Blank	Total/NA	Solid	9012A	37429

### Prep Batch: 38146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP	Solid	9012A	36938
180-10882-1 MS	WC-MWP-04-06	SPLP	Solid	9012A	36938
180-10882-2	WC-MWP-14-06	SPLP	Solid	9012A	36938
180-10882-3	WC-MWP-04-1224	SPLP	Solid	9012A	36938
180-10882-4	WC-MWP-01-06	SPLP	Solid	9012A	36938
180-10882-5	WC-MWP-01-1224	SPLP	Solid	9012A	36938
180-10882-6	WC-MWP-02-06	SPLP	Solid	9012A	36938
180-10882-6 MS	WC-MWP-02-06	SPLP	Solid	9012A	36938
180-10882-6 MSD	WC-MWP-02-06	SPLP	Solid	9012A	36938
180-10882-7	WC-MWP-02-1224	SPLP	Solid	9012A	36938
180-10882-8	WC-MWP-03-06	SPLP	Solid	9012A	36938
180-10882-9	WC-MWP-03-1224	SPLP	Solid	9012A	36938
HLCS 180-38146/2-A	Lab Control Sample	Total/NA	Solid	9012A	
LCS 180-38146/3-A	Lab Control Sample	Total/NA	Solid	9012A	
LLCS 180-38146/1-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 180-38146/4-A	Method Blank	Total/NA	Solid	9012A	

### Analysis Batch: 38181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-1	WC-MWP-04-06	SPLP	Solid	9012A	38146
180-10882-1 MS	WC-MWP-04-06	SPLP	Solid	9012A	38146
180-10882-2	WC-MWP-14-06	SPLP	Solid	9012A	38146
180-10882-3	WC-MWP-04-1224	SPLP	Solid	9012A	38146
180-10882-4	WC-MWP-01-06	SPLP	Solid	9012A	38146
180-10882-5	WC-MWP-01-1224	SPLP	Solid	9012A	38146
180-10882-6	WC-MWP-02-06	SPLP	Solid	9012A	38146
180-10882-6 MS	WC-MWP-02-06	SPLP	Solid	9012A	38146
180-10882-6 MSD	WC-MWP-02-06	SPLP	Solid	9012A	38146
180-10882-7	WC-MWP-02-1224	SPLP	Solid	9012A	38146

# QC Association Summary

Client: Booz Allen Hamilton Inc  
Project/Site: R4021, Birmingham Facility Project

TestAmerica Job ID: 180-10882-1

## General Chemistry (Continued)

### Analysis Batch: 38181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10882-8	WC-MWP-03-06	SPLP	Solid	9012A	38146
180-10882-9	WC-MWP-03-1224	SPLP	Solid	9012A	38146
HLCS 180-38146/2-A	Lab Control Sample	Total/NA	Solid	9012A	38146
LB 180-36938/12-A LB	Method Blank	SPLP	Solid	9012A	
LCS 180-38146/3-A	Lab Control Sample	Total/NA	Solid	9012A	38146
LLCS 180-38146/1-A	Lab Control Sample	Total/NA	Solid	9012A	38146
MB 180-38146/4-A	Method Blank	Total/NA	Solid	9012A	38146

**TestAmerica Pittsburgh**

301 Alpha Drive RIDC Park  
Pittsburgh, PA 15238  
Phone (412) 963-7058 Fax (412) 963-2468

108882  
Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

**Client Information**  
Client Contact: John Bellin  
Company: Booz Allen Hamilton Inc  
Address: 230 Peachtree Street, NW Suite 2100  
City: Atlanta  
State, Zip: GA, 30303  
Phone: [Blank]  
Email: bellin\_join@bah.com  
Project Name: R4021, Birmingham Facility Project  
Site: [Blank]

**Sample Information**  
Sampler: MILES, BVZ, JRE, JWH, KAS, WLD  
Phone: 770-315-7444  
Job Title: [Blank]  
E-Mail: whitney.rian@testamericainc.com

**Analysis Requested**  
Due Date Requested: [Blank]  
TAT Requested (days): 15 DAYS  
PO #: B-090740151-2421-1000005  
WO #: [Blank]

**Carrier/Trailing No(s)**  
2814  
COC No: 180-5115-1515.4  
Page: 4 of 4  
Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
WC-MWP-04-06	5/12/12	1148	G	Solid	N	N	6020, 7471A, 8270C, 9012A	14	TOT VOLS NOT HWM
WC-MWP-14-06	5/12/12	1150	G	Solid	N	N	8260B - 8260B VOC 4.2 list	14	N
WC-MWP-04-1224	5/11/12	1225	G	Solid	N	N	9012A - 9012 Total Cyanide	14	N
				Water	N	N	6020, 7470A, 8270C	14	N
				Water	N	N	8260B - 8260B SPLP VOC	14	N
				Water	N	N	6020, 7470A	14	N
				Water	N	N	8260B - 8260 Volatiles	14	N
				Water	N	N	8270C - 8270 Semivolatiles	14	N
				Water	N	N	9012A - 9012 Total Cyanide	14	N

**Preservation Codes:**  
A-HCl, B-NaOH, C-Zn Acetate, D-Nitric Acid, E-NaHSO4, F-MeOH, G-Ambiclor, H-Ascorbic Acid, I-Iso Water, J-DI Water, K-EDTA, L-EDA, M-Hexane, N-None, O-AsNaO2, P-Na2O4S, Q-Na2SO3, R-Na2S2O3, S-H2SO4, T-TSP Dodecahydrate, U-Acetone, V-MCAA, W-ph 4-5, Z-other (specify)  
Other: [Blank]

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify) [Blank]

**Empty Kit Relinquished by:** [Blank]

**Relinquished by:** [Signature] Date/Time: 5/17/12 1445 Company: BHT

**Relinquished by:** [Blank] Date/Time: [Blank] Company: [Blank]

**Custody Seals Intact:**  Yes  No **Custody Seal No.:** [Blank]

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For [Blank] Months

**Special Instructions/RC Requirements:** [Blank]

**Method of Shipment:** [Blank]

**Received by:** [Signature] Date/Time: 5-18-12 945 Company: TA PIA

**Received by:** [Blank] Date/Time: [Blank] Company: [Blank]

**Received by:** [Blank] Date/Time: [Blank] Company: [Blank]

**Cooler Temperature(s) °C and Other Remarks:** [Blank]

**Page 4 of 4**

**TestAmerica Pittsburgh**

301 Alpha Drive RIDC Park  
Pittsburgh PA 15238  
Phone (412) 963-7058 Fax (412) 963-2468

**Chain of Custody Record**

7 P-8 25 A 3

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

**Client Information**  
Client Contact: John Bell  
Company: Booz Allen Hamilton Inc  
Address: 230 Peachtree Street, NW Suite 2100  
City: Atlanta  
State, Zip: GA, 30303  
Phone: [blank]  
Email: bell\_john@bah.com  
Project Name: R4021, Birmingham Facility Project  
Site: [blank]

Sampler: MILES BIRBE, JOHN KEEHNER  
Phone: 770-315-7444  
Lab Pk.: [blank]  
Retail: Whitney, Whitney  
E-Mail: whitney.rian@testamericainc.com

Carrier/Tracking No(s): 89876898  
2814

COC No: 180-5115-15152  
Page: Page 2 of 4  
Job #: 11 QMC

Due Date Requested: [blank]  
TAT Requested (days): [blank]  
PO #: B-09074-0151-2421-1000005  
WO #: [blank]  
Project #: 18009853  
SSOW#: [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Organic, A=Air)	Analysis Requested										Special Instructions/Note			
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7471A, 8270C, 9012A	8260B - 8260B VOC 4.2 list	9012A - 9012 Total Cyanide	6020, 7470A, 8270C	8260B - 8260B SPLP VOC	6020, 7470A	8260B - 8260 Volatiles	8270C - 8270 Semivolatiles		9012A - 9012 Total Cyanide	Total Number of containers	
WC-MWP-01-01	5/17/12	1014	G	Solid	X	X	N	N	N	N	N	N	N	N	N	N	N	TOT VOCs NOT HDM
WC-MWP-01-1224	5/17/12	1049	G	Solid	X	X	N	N	N	N	N	N	N	N	N	N	N	U
WC-MWP-02-06	5/17/12	1315	G	Solid	X	X	N	N	N	N	N	N	N	N	N	N	N	U
WC-MWP-02-1224	5/17/12	1536	G	Solid	X	X	N	N	N	N	N	N	N	N	N	N	N	U
WC-MWP-03-06	5/17/12	1420	G	Solid	X	X	N	N	N	N	N	N	N	N	N	N	N	U
WC-MWP-03-1224	5/17/12	1435	G	Solid	X	X	N	N	N	N	N	N	N	N	N	N	N	U

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify) [blank]

Empty Kit Relinquished by: [blank] Date: [blank] Time: [blank] Method of Shipment: [blank]

Relinquished by: [blank] Date/Time: [blank] Company: [blank]

Relinquished by: [blank] Date/Time: [blank] Company: [blank]

Relinquished by: [blank] Date/Time: [blank] Company: [blank]

Custody Seals Intact:  Yes  No Custody Seal No.: [blank]

Special Instructions/Note: [blank]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For [blank] Months

301 Alpha Drive RIDC Park  
Pittsburgh, PA 15238  
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

**Client Information**

Client Contact: John Belin  
Company: Booz Allen Hamilton Inc  
Address: 230 Peachtree Street, NW Suite 2100  
City: Atlanta  
State, Zip: GA, 30303  
Phone:  
Email: belin\_john@bah.com  
Project Name: R4021, Birmingham Facility Project  
Site:

Sampler: M105 B12BEC JOHN KATHLEEN  
Phone: 770-515-7444

Lab P/N: R1ari: Whitley  
Email: whitley.r1ari@testamericainc.com

Carder Tracking No(s): 8787 0898  
2814

COC No: 180-5115-1515.1  
Page: 1 of 1  
Page 1 of 1

Due Date Requested:

TAT Requested (days): 15 Days

**Analysis Requested**

<input checked="" type="checkbox"/>	Field Filtered Sample (Yes/No)	N
<input checked="" type="checkbox"/>	Perform MS/MSD (Yes/No)	N
	6020, 7471A, 8270C, 9012A	
	8260B - 8260B VOC 4.2 list	
	9012A - 9012 Total Cyanide	
	6020, 7470A, 8270C	
	8260B - 8260B SPLP VOC	
	6020, 7470A	
	8260B - 8260 Volatiles	
	8270C - 8270 Semivolatiles	
	9012A - 9012 Total Cyanide	

Total Number of Containers: \_\_\_\_\_

Special Instructions/Note: \_\_\_\_\_

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsHClO2
D - Nitric Acid	P - Na2OAS
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Decahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

**Sample Identification**

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=Other)
WC-MWP-EB1	9/12	1605	G	W soil
WC-MWP-EB1	9/12	1622	O	W soil

**Possible Hazard Identification**

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Company: BAH

Received by: MR SIM

Date/Time: 5-04-12 1:45

Company: TAPPA

Custody Seal Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:

Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
WC-MWP-04-06	180-10882-A-1	Soil jar 8oz	_____	_____	_____
WC-MWP-04-06	180-10882-B-1	Soil jar 8oz	_____	_____	_____
WC-MWP-04-06	180-10882-C-1	Soil jar 4oz	_____	_____	_____
WC-MWP-04-06	180-10882-D-1	Soil jar 4oz	_____	_____	_____
WC-MWP-04-06	180-10882-E-1	Amber Glass 60 mL - unpreserved	_____	_____	_____
WC-MWP-04-06	180-10882-F-1	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-04-06	180-10882-G-1	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-04-06	180-10882-H-1	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-14-06	180-10882-A-2	Soil jar 8oz	_____	_____	_____
WC-MWP-14-06	180-10882-B-2	Soil jar 8oz	_____	_____	_____
WC-MWP-14-06	180-10882-C-2	Soil jar 4oz	_____	_____	_____
WC-MWP-14-06	180-10882-D-2	Soil jar 4oz	_____	_____	_____
WC-MWP-14-06	180-10882-E-2	Amber Glass 60 mL - unpreserved	_____	_____	_____
WC-MWP-14-06	180-10882-F-2	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-14-06	180-10882-G-2	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-14-06	180-10882-H-2	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-04-1224	180-10882-A-3	Soil jar 8oz	_____	_____	_____
WC-MWP-04-1224	180-10882-B-3	Soil jar 8oz	_____	_____	_____
WC-MWP-04-1224	180-10882-C-3	Soil jar 4oz	_____	_____	_____
WC-MWP-04-1224	180-10882-D-3	Soil jar 4oz	_____	_____	_____
WC-MWP-04-1224	180-10882-E-3	Amber Glass 60 mL - unpreserved	_____	_____	_____
WC-MWP-04-1224	180-10882-F-3	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-04-1224	180-10882-G-3	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-04-1224	180-10882-H-3	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-01-06	180-10882-A-4	Soil jar 8oz	_____	_____	_____
WC-MWP-01-06	180-10882-B-4	Soil jar 8oz	_____	_____	_____
WC-MWP-01-06	180-10882-C-4	Soil jar 4oz	_____	_____	_____
WC-MWP-01-06	180-10882-D-4	Soil jar 4oz	_____	_____	_____
WC-MWP-01-06	180-10882-E-4	Amber Glass 60 mL - unpreserved	_____	_____	_____
WC-MWP-01-06	180-10882-F-4	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-01-06	180-10882-G-4	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-01-06	180-10882-H-4	VOA Terracore Kit - Greenwood	_____	_____	_____
WC-MWP-01-1224	180-10882-A-5	Soil jar 8oz	_____	_____	_____
WC-MWP-01-1224	180-10882-B-5	Soil jar 8oz	_____	_____	_____
WC-MWP-01-1224	180-10882-C-5	Soil jar 4oz	_____	_____	_____
WC-MWP-01-1224	180-10882-D-5	Soil jar 4oz	_____	_____	_____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
WC-MWP-01-1224	180-10882-E-5	Amber Glass 60 mL - unpreserved			
WC-MWP-01-1224	180-10882-F-5	VOA Terracore Kit - Greenwood			
WC-MWP-01-1224	180-10882-G-5	VOA Terracore Kit - Greenwood			
WC-MWP-01-1224	180-10882-H-5	VOA Terracore Kit - Greenwood			
WC-MWP-02-06	180-10882-A-6	Soil jar 8oz			
WC-MWP-02-06	180-10882-A-6 MS	Soil jar 8oz			
WC-MWP-02-06	180-10882-A-6 MSD	No Container			
WC-MWP-02-06	180-10882-B-6	Soil jar 8oz			
WC-MWP-02-06	180-10882-B-6 MS	Soil jar 4oz			
WC-MWP-02-06	180-10882-B-6 MSD	No Container			
WC-MWP-02-06	180-10882-C-6	Soil jar 4oz			
WC-MWP-02-06	180-10882-D-6	Amber Glass 60 mL - unpreserved			
WC-MWP-02-06	180-10882-E-6	VOA Terracore Kit - Greenwood			
WC-MWP-02-06	180-10882-F-6	VOA Terracore Kit - Greenwood			
WC-MWP-02-06	180-10882-G-6	VOA Terracore Kit - Greenwood			
WC-MWP-02-1224	180-10882-A-7	Soil jar 8oz			
WC-MWP-02-1224	180-10882-B-7	Soil jar 8oz			
WC-MWP-02-1224	180-10882-C-7	Soil jar 8oz			
WC-MWP-02-1224	180-10882-D-7	Soil jar 4oz			
WC-MWP-02-1224	180-10882-E-7	Soil jar 4oz			
WC-MWP-02-1224	180-10882-F-7	Amber Glass 60 mL - unpreserved			
WC-MWP-02-1224	180-10882-G-7	VOA Terracore Kit - Greenwood			
WC-MWP-02-1224	180-10882-H-7	VOA Terracore Kit - Greenwood			
WC-MWP-02-1224	180-10882-I-7	VOA Terracore Kit - Greenwood			
WC-MWP-03-06	180-10882-A-8	Soil jar 8oz			
WC-MWP-03-06	180-10882-B-8	Soil jar 8oz			
WC-MWP-03-06	180-10882-C-8	Soil jar 4oz			
WC-MWP-03-06	180-10882-D-8	Soil jar 4oz			
WC-MWP-03-06	180-10882-E-8	Amber Glass 60 mL - unpreserved			
WC-MWP-03-06	180-10882-F-8	VOA Terracore Kit - Greenwood			
WC-MWP-03-06	180-10882-G-8	VOA Terracore Kit - Greenwood			
WC-MWP-03-06	180-10882-H-8	VOA Terracore Kit - Greenwood			
WC-MWP-031224	180-10882-A-9	Soil jar 8oz			
WC-MWP-031224	180-10882-B-9	Soil jar 8oz			
WC-MWP-031224	180-10882-C-9	Soil jar 4oz			
WC-MWP-031224	180-10882-D-9	Soil jar 4oz			
WC-MWP-031224	180-10882-E-9	Amber Glass 60 mL - unpreserved			
WC-MWP-031224	180-10882-F-9	VOA Terracore Kit - Greenwood			
WC-MWP-031224	180-10882-G-9	VOA Terracore Kit - Greenwood			



<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
WC-MWP-031224	180-10882-H-9	VOA Terracore Kit - Greenwood			
WC-MWP-FB1	180-10882-A-10	Amber Glass 1 liter - unpreserved			
WC-MWP-FB1	180-10882-B-10	Amber Glass 1 liter - unpreserved			
WC-MWP-FB1	180-10882-C-10	Plastic 500ml - unpreserved			
WC-MWP-FB1	180-10882-D-10	Plastic 250ml - with Sodium	13		
WC-MWP-FB1	180-10882-E-10	Voa Vial 40ml - Hydrochloric Acid	P		
WC-MWP-FB1	180-10882-F-10	Voa Vial 40ml - Hydrochloric Acid	P		
WC-MWP-FB1	180-10882-G-10	Voa Vial 40ml - Hydrochloric Acid	P		
WC-MWP-EB1	180-10882-A-11	Amber Glass 1 liter - unpreserved			
WC-MWP-EB1	180-10882-B-11	Amber Glass 1 liter - unpreserved			
WC-MWP-EB1	180-10882-C-11	Plastic 500ml - unpreserved			
WC-MWP-EB1	180-10882-D-11	Plastic 250ml - with Sodium	P		
WC-MWP-EB1	180-10882-E-11	Voa Vial 40ml - Hydrochloric Acid	P		
WC-MWP-EB1	180-10882-F-11	Voa Vial 40ml - Hydrochloric Acid	P		
WC-MWP-EB1	180-10882-G-11	Voa Vial 40ml - Hydrochloric Acid	P		

**FedEx** **NEW Package** **Express US Airbill** **FedEx Tracking Number** **8987 6898 2814**

**0200** From 10/16

**FedEx R**

**1 From** **Date** **5/17/2012**

**Sender's Name** **Miles Burbee** **Phone** **404 5894129**

**Company** **BOOZ ALLEN HAMILTON**

**Address** **230 Peachtree St NW** **2100**

**City** **ATLANTA** **State** **GA** **ZIP** **30303**

**2 Your Internal Billing Reference**

**3 To** **Recipient's Name** **Whitney Ritari** **Phone** **412 963 7058**

**Company** **Test America**

**Address** **301 Alpha Drive**

**City** **Pittsburgh** **State** **PA** **ZIP** **15238**

**4 Express Package Service** \*To meet location. NOTE: Service order has changed. Please select carefully.

- 06** **FedEx First Overnight** Earliest next business day delivery to select Monday unless Saturday Delivery is specified.
- 01** **FedEx Priority Overnight** Next business day delivery with the next business day unless Saturday Delivery is selected.
- 05** **FedEx Standard Overnight** Standard delivery NOT available.

- 5 Packaging** \*Declared value limit \$500.
- 06** **FedEx Envelope\***
- 02** **FedEx Pak\***
- 03** **FedEx Box**
- 04** **FedEx**

**6 Special Handling and Delivery Signature Options**

- 03** **SATURDAY DELIVERY**
- 10** **Direct Signature** Signature of recipient may be required.

**Does this shipment contain hazardous goods?**  **No**  **Yes**  **16** **Permit Declaration**  **17** **Permit Declaration**

**7 Payment** Bill to:  **Sender**  **Recipient**  **Third Party**  **4**

**Total Packages** **3**



## Login Sample Receipt Checklist

Client: Booz Allen Hamilton Inc

Job Number: 180-10882-1

**Login Number: 10882**

**List Source: TestAmerica Pittsburgh**

**List Number: 1**

**Creator: O'Donnell, Brandon R**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Benzo(a)pyrene Equivalency Conversion Table

Facility/Site Name: Walter Coke  
 Location: Birmingham, AL  
 Facility/Site ID No.: ALD000828848  
  
 Soil Sample No. WC-MWP-01-06  
 Sample Date 17-May-12  
 Location: MWP-01  
 Depth (ft): 0" - 6" below grade

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor *	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.000	1.0	0.0000000
Benzo(a)anthracene	0.000	0.1	0.0000000
Benzo(b)fluoranthene	0.000	0.1	0.0000000
Benzo(k)fluoranthene	0.000	0.01	0.0000000
Chrysene	0.0092	0.001	0.0000092
Dibenz(a,h)anthracene	0.000	1.0	0.0000000
Indeno(1,2,3-cd)pyrene	0.000	0.1	0.0000000

**Total Benzo(a)pyrene Equivalents (mg/kg) = 0.0000092**

\* Source: U.S. EPA Health Effects Assessment of Polycyclic Aromatic Hydrocarbons (PAHs), 1984.

## Benzo(a)pyrene Equivalency Conversion Table

Facility/Site Name: Walter Coke  
 Location: Birmingham, AL  
 Facility/Site ID No.: ALD000828848

Soil Sample No. WC-MWP-01-1224  
 Sample Date 17-May-12  
 Location: MWP-01  
 Depth (ft): 12" - 24" below grade

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor *	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.180	1.0	0.1800000
Benzo(a)anthracene	0.200	0.1	0.0200000
Benzo(b)fluoranthene	0.220	0.1	0.0220000
Benzo(k)fluoranthene	0.000	0.01	0.0000000
Chrysene	0.23	0.001	0.0002300
Dibenz(a,h)anthracene	0.065	1.0	0.0650000
Indeno(1,2,3-cd)pyrene	0.080	0.1	0.0080000

**Total Benzo(a)pyrene Equivalents (mg/kg) = 0.2952300**

\* Source: U.S. EPA Health Effects Assessment of Polycyclic Aromatic Hydrocarbons (PAHs), 1984.

## Benzo(a)pyrene Equivalency Conversion Table

Facility/Site Name: Walter Coke  
 Location: Birmingham, AL  
 Facility/Site ID No.: ALD000828848  
  
 Soil Sample No. WC-MWP-02-1224  
 Sample Date 17-May-12  
 Location: MWP-02  
 Depth (ft): 12" - 24" below grade

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor *	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.058	1.0	0.0580000
Benzo(a)anthracene	0.075	0.1	0.0075000
Benzo(b)fluoranthene	0.074	0.1	0.0074000
Benzo(k)fluoranthene	0.000	0.01	0.0000000
Chrysene	0.076	0.001	0.0000760
Dibenz(a,h)anthracene	0.000	1.0	0.0000000
Indeno(1,2,3-cd)pyrene	0.000	0.1	0.0000000

**Total Benzo(a)pyrene Equivalents (mg/kg) = 0.0729760**

\* Source: U.S. EPA Health Effects Assessment of Polycyclic Aromatic Hydrocarbons (PAHs), 1984.