

Remedial Investigation / Alternatives Analysis Report

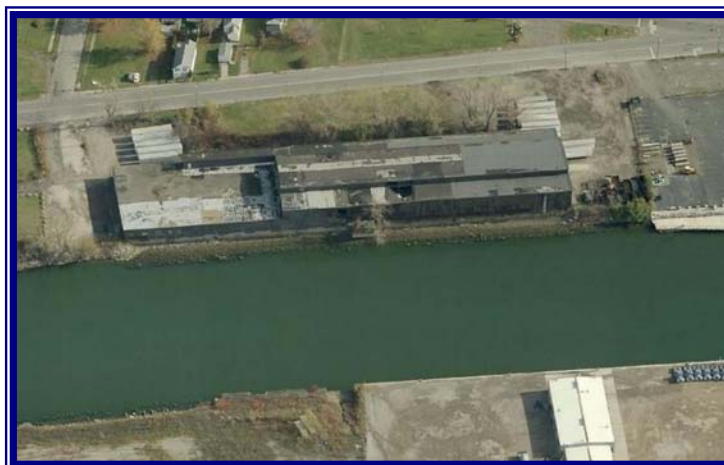
441 Ohio Street Site (C915285)
Buffalo, New York

July 2016

0292-013-002

Prepared For:

441 Ohio Street, LLC



Prepared By:



BROWNFIELD CLEANUP PROGRAM

REMEDIAL INVESTIGATION/ ALTERNATIVES ANALYSIS REPORT

**441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK**

July 2016

0292-013-002

Prepared for:

441 Ohio Street, LLC

Prepared By:



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Buffalo, NY 14218

**BROWNFIELD CLEANUP PROGRAM
REMEDIAL INVESTIGATION/ALTERNATIVE ANALYSIS REPORT**

**441 Ohio Street Site
BCP Site No. C915285**

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Certification

I, Thomas H. Forbes, certify that I am currently a NYS registered professional engineer and that this July 2016 Remedial Investigation/ Alternatives Analysis (RI/AA) Report for the 441 Ohio Street Site (C915285) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

7-26-16
Date



1.0 INTRODUCTION

This Remedial Investigation/Alternatives Analysis Report (RI/AAR) has been prepared by Benchmark Environmental Engineering and Science, PLLC (Benchmark, on behalf of 441 Ohio Street, LLC (441 Ohio), for the 441 Ohio Street Site, located in the City of Buffalo, Erie County, New York (Site; see Figures 1 and 2).

441 Ohio elected to pursue cleanup and redevelopment of the Site under the New York State Brownfield Cleanup Program (BCP) and executed a Brownfield Cleanup Agreement (BCA, Index # C915285-04-14, Site No. C915285) with the New York State Department of Environmental Conservation (NYSDEC) dated April 30, 2014.

The RI Work Plan was approved by the NYSDEC, with concurrence from the NYS Department of Health (NYSDOH) on May 23, 2014. The RI activities were completed during February and March 2015.

Interpretations presented within this report are based on historic investigations and the RI completed by Benchmark and others prior to the Site entering into the BCP and subsequent to RI activities. The analytical data generated as part of the previous investigations are included within this report and compared to the current applicable cleanup guidance.

1.1 Background

The Site consists of an approximate 1.8 acre portion of a larger 2.25 acre property, located in a highly developed mixed use industrial, commercial, residential, and recreational area of the City of Buffalo, Erie County, New York. Erie County Real Property identifies the Site as 9 South Street (SBL 122.14-1-1). It should be noted that the prior operations at the Site were addressed as both the 9 South Street and 441 Ohio Street addresses. For the purposes of the BCP, the Site is referred to herein as the 441 Ohio Street Site.

The Site has been utilized for various freight and warehousing operations since at least 1889, including the Erie Elevator, New York Lake Erie and Western RR Freight, Erie RR Exchange – Lake and Transfer Warehouse, and most recently Great Lakes Paper Fibers Corp. Operations included multiple rail lines, including interior building rail line, material handling and shipping equipment use and maintenance, freight storage and paper recycling.

The Site is largely comprised of an approximately 47,000 square foot vacant municipally condemned commercial/industrial structure (currently undergoing demolition) situated along

the Buffalo River, with roadway access and parking area to the south and inactive rail line along the eastern boundary (see Figure 2).

1.2 Historic Investigations

A summary of the investigations that have been completed at the Site are presented below. Appendix E includes the laboratory data from these investigations and Figure 3 shows the approximate locations of these samples.

1.2.1 November 2011 - Phase I Environmental Site Assessment

RJS Environmental Consultants (RJS) conducted a Phase I Environmental Site Assessment (ESA) of the 441 Ohio Street parcel. The findings of the report are summarized below

- The property was historically used for warehousing purposes. The building, constructed in 1892 and condemned in 2011, was most recently occupied by Great Lakes Paper Fibers Corp., a bailed paper warehouse operation. Operations associated with Great Lakes Paper Fibers Corp. included paper cutting and maintenance of on-site equipment (forklifts, cutting machines, etc.). Previous site occupants historically included Erie Railroad Flour Warehouse, Erie Railroad Exchange - Lake and Transfer Warehouse, Great Lakes Paper Stock, Inc., Seaboard Great Lakes, Buffalo Waterfront Corp., and Erie Railroad Corp.
- In addition to the industrial nature of the property, the ESA identified several Recognized Environmental Conditions (RECs) and historic RECs associated with the site and its prior use, including:
 - Historic on-site operations reportedly included repair/maintenance of on-site bobcats, forklifts, and paper bailing and cutting machines.
 - Hazardous/regulated materials (antifreeze, hydraulic oil, solvents for degreasing, etc.) and miscellaneous equipment were present on-site.
 - Stained soils were observed proximate to dumpsters and a propane storage area located south of the on-site building.
 - A railroad spur was observed to run north-south along the eastern portion of the Site. Rail operations are frequently associated with elevated levels of semi-volatile organic compounds (SVOCs) and metals.

- The south adjacent property reportedly includes a sub-grade gun range. Lead impacts are often associated with gun ranges. Adjacent/nearby properties were also identified to include gasoline tanks, a truck repair/welding operation, and railroad tracks.
- Three "closed" spills, one of which was identified as a duplicate spill incident, were identified in connection with the Site.
- Numerous "inactive" and "closed" spill incidents were identified in connection with adjacent/nearby properties.

1.2.2 November 2013 - Limited Phase II Site Investigation

Benchmark completed a Limited Phase II Site Investigation on the 441 Ohio Street parcel. The limited SI included the advancement of eight soil borings across accessible portions of the Site. The soil boring locations are depicted on Figure 3. The soil borings were advanced by direct-push drill rig to approximately 12 fbgs. Soil samples were collected continuously with a macro-core sampler to allow for field characterization of the subsurface lithology and collection of soil samples for laboratory analysis. Field personnel scanned each core sample for total VOCs with a photoionization detector (PID) and recorded visual and/or olfactory observations. No olfactory indications of adverse impacts were observed and no elevated PID readings were detected.

In general, the borings indicated the presence of 0-6 feet of fill materials overlying clayey and/or sandy native soils. Fill materials were typically comprised of fine sand and gravel with some slag pieces. Groundwater was generally encountered at approximately 9-9.5 fbgs. Four (4) soil boring locations were selected for chemical analysis to represent general conditions for the soil/fill quality across the Site.

Analytical results indicated widespread exceedance of the Part 375 Unrestricted Use, Residential Use, Restricted Residential Use, and/or Commercial Use soil cleanup objectives (SCOs). Specifically:

- Elevated SVOCs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene were identified above their respective SCOs, including several exceedances of the Restricted Residential and Commercial Use SCOs.

- RCRA-regulated metals (arsenic, chromium, lead and mercury) were detected above SCOs at one or more locations, with arsenic and lead detected above Restricted Residential Use SCOs.
- PCBs, including Aroclor 1242 and Aroclor 1254, were detected above Unrestricted Use SCOs.

The limited SI also included the collection of a groundwater sample from an existing piezometer located at the northern property boundary of the Site. The location of the piezometer is depicted on Figure 3. The piezometer was gauged and contained water from approximately 9.5 feet below ground surface. The piezometer terminus was located at 27.5 fbs. Groundwater analytical results were generally reported as non-detect, with all constituents identified at concentrations below their respective NY State Class GA Groundwater Quality Standards and Guidance Values.

1.3 Purpose and Scope

This RI/AAR has been prepared on behalf of 441 Ohio Street LLC, to describe and present the findings of the RI activities, and evaluate remedial alternatives for the Site.

This report contains the following sections

- Section 1.0 provides an introduction to the project and Site background information.
- Section 2.0 presents the investigation approach.
- Section 3.0 describes the Site physical characteristics as they pertain to the investigation findings.
- Section 4.0 presents the investigation results by media.
- Section 5.0 describes the fate and transport of the COCs.
- Section 6.0 presents the qualitative risk assessment.
- Section 7.0 evaluates remedial alternatives for the Site.
- Section 8.0 presents the project summary and conclusions.
- Section 9.0 provides a list of references for this report.

2.0 INVESTIGATION APPROACH

The Remedial Investigation (RI) scope of work focused on further defining the nature and extent of contamination, identifying the source of contamination, defining chemical constituent migration pathways, qualitatively assessing human health and ecological risks (if necessary), and obtaining data of sufficient quantity and quality to perform the remedial alternatives evaluation in accordance with NYSDEC DER-10.

The RI was performed to supplement previous investigation data and to better characterize subsurface soil materials, groundwater, and overburden stratigraphy within the Site boundaries. The field activities included: advancement of soil borings, soil/fill sampling, temporary groundwater monitoring well installation, groundwater sampling, and collection of hydrogeologic data. The RI tasks were performed in accordance with the RI/AA Work Plan. RI activities were completed in January and February 2015.

Field team personnel collected environmental samples (i.e., surface and sub-surface soil, and groundwater) in accordance with the rationale and protocols described in the Sampling and Analysis Plan (SAP) of the Quality Assurance Project Plan (included in the RI/AA Work Plan) as detailed on Table 1. Representative environmental samples were collected during the RI using dedicated sampling devices and were placed in pre-cleaned laboratory provided sample containers, cooled to 4°C in the field (if necessary), and transported under chain-of-custody command to a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified analytical laboratory.

Samples for chemical analysis were analyzed in accordance with USEPA SW-846 methodologies to meet the definitive-level data requirements. A Category B deliverable package was provided for each sample delivery group to allow independent third-party data validation and provide defensible data. Analytical results were evaluated by a third-party data validation expert in accordance with provisions described in the QAPP.

2.1 RI Soil/Fill Investigation

A soil/fill investigation was completed across the site to supplement previous environmental data and to further delineate known contamination on-Site. The soil/fill investigation included the advancement of soil borings across the Site, including accessible

locations beneath the existing building, and the collection of surface and subsurface soil/fill samples. RI soil/fill investigation activities were completed on February 17th and 18th, 2015.

2.1.1 Surface Soil/Fill Investigation

The surface soil/fill investigation included the collection of five (5) soil samples, to characterize the upper fill layer across the site. The samples were generally collected from 0–2 feet below ground surface (fbgs) at boring locations SB-102, SB-104, SB-105, SB107, and SB-112. The sample from SB-112 was collected directly beneath the concrete floor of the building (see Figure 3).

2.1.2 Subsurface Soil/Fill Investigation

The subsurface soil/fill investigation included the advancement of thirteen (13) soil borings, identified as SB-101 through SB-113, across the Site (see Figure 3). Soil borings were advanced using direct push drilling techniques to a target depth of 16 fbgs, or refusal. Subsurface soil/fill samples were collected with a macro-core sampler which contained a 2-inch outer diameter by 48-inch long acetate liner. A new acetate liner was used for each 4-foot sample run. Subsurface soil/fill samples were field-screened for the presence of volatile organic compounds (VOCs) using a PID. Soil boring logs are provided in Appendix B.

2.1.3 Soil/Fill Sample Collection and Analyses

Soil/fill samples were collected using dedicated stainless steel sampling tools. Representative soil samples were placed in pre-cleaned laboratory provided sample bottles, cooled to 4°C in the field, and transported under chain-of-custody command to a NYSDOH ELAP certified analytical laboratory. All samples were collected and analyzed in accordance with United States Environmental Protection Agency (USEPA) SW-846 methodology with equivalent NYSDEC Category B deliverables to allow for independent third-party data usability assessment.

Representative soil/fill samples were analyzed in accordance with the approved work plan, for Target Compound List (TCL) plus Commissioner Policy (CP-51) VOCs and TCL SVOCs, Target Analyte List (TAL) metals, polychlorinated biphenyls (PCBs) pesticides and herbicides as detailed on Table 1.

2.2 Groundwater Investigation

Benchmark personnel provided oversight for the installation of six (6) temporary groundwater monitoring wells, identified as TMW-1 through TMW-6 to investigate on-Site groundwater quality and flow. Details of the well installation, well development, and groundwater sampling are provided below. Figure 4 presents the location of the monitoring well network.

2.2.1 Temporary Monitoring Well Installation and Development

After completion of the soil borings, six (6) temporary monitoring wells were installed, identified as TMW-1 through TMW-6. Each well was constructed using 1-inch diameter flush-joint Schedule 40 PVC with a 5-foot flush-joint Schedule 40 PVC slotted well screen. Each well screen and attached riser was placed at the bottom of each borehole and a silica sand filter pack (size #00N) was installed from the base of the well to a minimum of approximately 2 feet above the top of the screen. A bentonite chip seal was installed and hydrated to mitigate the potential for downhole contamination, with the exception of TMW-4 and TMW-5 due to limited access beneath the building wood floor (interior wells). The temporary monitoring wells were purged and sampled by Benchmark personnel on February 26th and 27th, 2015, using dedicated and disposable micro-bailers. Field measurements for pH, specific conductance, temperature, turbidity were monitored and periodically recorded during development and sampling.

2.2.2 Groundwater Sample Collection and Analyses

All collected groundwater samples were placed in pre-cleaned, pre-preserved laboratory provided sample bottles, cooled to 4°C in the field, and transported under chain-of-custody command to a NYSDOH ELAP-certified analytical laboratory.

Groundwater samples were collected and analyzed for TCL plus CP-51 list VOCs, TCL SVOCs, TAL metals (dissolved), PCBs, pesticides, and herbicides in accordance with the approved RI Work Plan and detailed on Table 1. All sampling was performed in accordance with USEPA SW-846 methodology with equivalent NYSDEC Category B deliverables to allow for independent third-party data usability assessment.

2.2.3 Monitoring Well Decommissioning

Prior to the start of building demolition activities in March 2015, the temporary monitoring wells were decommissioned in accordance with NYSDEC CP-43 guidelines. Well Abandonment-Decommission Logs are provided in Appendix C.

2.3 Field Specific Quality Assurance/Quality Control Sampling

In addition to the soil/fill and groundwater samples described above, field-specific quality assurance/quality control (QA/QC) samples were collected and analyzed to ensure the reliability of the generated data as described in the QAPP and to support the required third-party data usability assessment effort. Site-specific QA/QC samples included matrix spikes, matrix spike duplicates, blind duplicates, and trip blanks (see Table 1).

2.4 Site Mapping

A Site map was developed during the RI field investigation. The sample points and relevant Site features were located on the map (see Figure 3). Benchmark used a handheld GPS unit to identify the exterior investigation locations relative to State planar grid coordinates. Monitoring well elevations were measured by Benchmark's surveyor and used as the basis for the groundwater isopotential map showing the general direction of groundwater flow based on water level measurements relative to the Site vertical datum (see Figure 4).

2.5 Decontamination & Investigation-Derived Waste Management

Every attempt was made to utilize dedicated sampling equipment during the RI, however, non-dedicated equipment was required and/or used (concrete core drill, macro-core) and was decontaminated with a non-phosphate detergent (i.e., Alconox®) and potable water mixture, and rinsed with distilled water, and air-dried before each use in accordance with Benchmark's field operating procedures (FOPs).

3.0 SITE PHYSICAL CHARACTERISTICS

The physical characteristics of the Site observed during the RI are described in the following sections.

3.1 General Site Features

The BCP Site consists of a 1.8 acre portion of a larger 2.25 acre property, located at 441 Ohio Street, in the City of Buffalo, Erie County, New York, and is primarily covered by the large warehouse building. The property is bound by the Buffalo River to the west, a public recreational parcel (public canoe/kayak launch) to the north, commercial property (Bison City Rod and Gun Club) to the south, and vacant lot with Ohio Street beyond to the east (see Figure 2).

3.2 Geology

3.2.1 Overburden

The U.S. Department of Agriculture Soil Conservation Service soil survey map of Erie County describes the general soil type at the Site as Urban Land (Ud). This is indicative of level to gently sloping land with at least 40 percent of the soil surface covered by asphalt, concrete, buildings, or other impervious structures typical of an urban environment. The presence of overburden fill material is widespread and common throughout the City of Buffalo.

Investigation activities characterized the overburden soil/fill as generally consisting of wood debris, brick fragments, and slag with varying amounts of granular soils (silts, sands and gravels) from 0-4 fbs. The fill progressed to approximately 8 feet below grade with the lower 4 feet generally described as mostly reworked clay soil with diminishing amounts of wood debris, brick fragments, etc. The fill is underlain by native soil described as brown lean clays with varying amounts of sands, silts and gravels. Boring logs are included in Appendix B.

It should be noted that interior borings completed within the raised wood flooring section of the building (SB-109, SB-110, and SB-111) identified between 4 and 6 feet of void space between the wood flooring and the top of soil/fill beneath the building. Approximate void space is noted on the related boring logs (see Appendix B). For reference purposes,

borehole logs from the previous investigation (completed by Benchmark) are included electronically in Appendix B.

3.2.2 Bedrock

Based on the bedrock geologic map of Erie County, the Site is situated over the Onondaga Formation of the Middle Devonian Series. The Onondaga Formation is comprised of a varying texture from coarse to very finely crystalline with a dark gray to tan color and chert and fossils within. The unit has an approximate thickness of 110 to 160 feet. Structurally, the bedrock formations strike in an east-west direction and exhibit a regional dip that approximates 40 feet per mile (3 to 5 degrees) toward the south and southwest. Bedrock was not encountered during the RI drilling activities.

Based on the 2013 Empire geotechnical report, bedrock was encountered between 23.5 and 30 fbgs, respectively moving from south to north across the Site. A copy of the geotechnical report is included electronically in Appendix B.

3.2.3 Hydrogeology

Groundwater elevation data was collected during the RI, which included water level measurements on February 26, 2015 from the temporary monitoring wells, and used to evaluate Site hydrogeology. Monitoring well construction logs are provided in Appendix B.

Based on the findings of the RI, localized groundwater flow was estimated to flow to the west toward the Buffalo River. Groundwater was typically encountered ranging from 9 to 14 fbgs. Figure 4 presents an isopotential map for the overburden groundwater based upon the February 26, 2015 water level measurements.

3.2.4 Hydraulic Gradient

Using well installation and water level information collected during the RI, the estimated hydraulic gradient was calculated to be an average of 0.0067 ft./ft.

4.0 INVESTIGATION RESULTS BY MEDIA

The nature and extent of contamination at the Site was further characterized using soil/fill and groundwater samples collected and analyzed as part of the RI. As described in Section 2, soil samples collected during previous investigations were used to supplement this RI.

The soil/fill and groundwater samples collected during the RI sampling events were submitted for analyses under chain-of-custody to a NYSDOH ELAP-certified laboratory. Analytical services were performed in accordance with the most current SW-846 analytical methods and protocols. Analytical results from the previous investigation have been incorporated into the RI findings.

Figure 3 shows the sampling locations for both the historic and RI investigations. Table 1 summarizes the sampling and analysis program of the RI. Tables 2 and 3 summarize the soil/fill and groundwater analytical data results with comparison to applicable regulatory guidelines. Laboratory analytical data packages are provided electronically in Appendix E.

4.1 Historic Soil/Fill Investigation Results

As described above, Benchmark completed a limited Phase II site investigation at the Site. A total of eight (8) soil boring locations were advanced across the exterior portion of the Site, and four (4) near surface - subsurface soil/fill samples, ranging from 0-6 fbg, were collected and selectively analyzed for VOCs, SVOCs, metals and PCBs (see Table 2). Historic sample locations are presented on Figure 3.

The Phase II results identified certain SVOCs, metals, and PCBs above their respective Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs), Restricted Residential Use SCOs (RRSCOs), and Commercial Use SCOs (CSCOs). Table 2 summarizes the historic soil/fill analytical results with comparison to applicable soil SCGs.

4.2 RI Soil/Fill Investigation Results

Benchmark completed the soil/fill investigation across the Site in accordance with the Department's approved Work Plan. In total, five (5) surface-near-surface and 22 subsurface soil/fill samples (excluding QA/QC samples) were collected from the 13 soil boring locations as part of the RI.

Table 2 compares the soil/fill data to a range of health risk-based SCOs as published in 6NYCRR Part 375. The RRSCOs are deemed protective of human health under a scenario whereby site use and associated exposure pathways are assumed to be similar to those under a single family home setting, excluding those that might occur from consumption of foods grown in a home vegetable garden. Based upon the reasonably anticipated future use of the Site in a residential (apartment) capacity, the RRSCOs are conservatively considered to be the most applicable health risk-based comparative criteria. Nevertheless, the following sections discuss the surface and subsurface soil results relative to the range of health-based SCO criteria to provide a comprehensive summary of the data.

4.2.1 RI Surface Soil/Fill Results

Five (5) surface soil/fill samples were collected from the upper 0-2 fbg to characterize the surface soil/fill across the Site, including SB-102, SB-104, SB-105, SB-107, and SB-112 (see Figure 3).

Table 2 summarizes the analytical results of the surface/fill soil samples with comparison to Part 375 SCOs.

4.2.1.1 SVOCs

The majority of SVOCs were reported as non-detect (below the laboratory method detection levels) or trace (estimated) concentrations. Certain SVOCs, primarily polycyclic aromatic hydrocarbons (PAHs), were detected above their respective RRSCOs and CSCOs in SB-102, SB-105, and SB-107 (see Table 2).

4.2.1.2 Metals

The majority of metals detected above USCOs were primarily naturally occurring minerals. Arsenic was detected above its RRSCO at SB-102, SB-105, and SB-107; barium was detected above its RRSCO at SB-107; lead was detected slightly above its RRSCO at SB-107; and, copper was detected slightly above its RRSCO at SB-102 (see Table 2).

4.2.1.3 PCBs

No PCBs were detected with the exception of one (1) location, SB-102 (0-2), where results were above its RRSCO. It should be noted that the Part 375 SCO for PCBs of 1 ppm is the same value for the Residential, Restricted-Residential and Commercial Use categories.

4.2.1.4 Pesticides and Herbicides

No pesticides or herbicides were detected above USCOs; with all laboratory analytical results reported as non-detect or estimated concentrations below MDLs.

4.2.2 RI Subsurface Soil/Fill Results

Seventeen (17) subsurface soil/fill samples were collected from the 13 soil boring locations, identified as SB-101 through SB-113, at varying depths to characterize the subsurface soils as part of the RI. Table 3 summarizes the analytical results of the subsurface soil/fill samples with comparison to Part 375 SCOs.

4.2.2.1 VOCs

No VOCs were detected above USCOs, with the vast majority of results being reported by the laboratory as non-detect or estimated.

4.2.2.2 SVOCs

No SVOCs were detected above USCOs, with the vast majority of results being reported by the laboratory as non-detect or estimated.

4.2.2.3 Metals

The majority of metals detected above USCOs were primarily naturally occurring minerals. Barium and lead were detected above RRSCO in only one location, SB-112 (2-6); and, mercury was detected above its RRSCO in SB-106 (8-16).

4.2.2.4 Polychlorinated Phenyls, Pesticides and Herbicides

No PCBs, pesticides or herbicides were detected above USCOs; with all laboratory analytical results reported as non-detect or estimated concentrations below MDLs.

4.3 Groundwater Investigation Results

Benchmark personnel provided oversight for the installation of RI groundwater monitoring wells to investigate on-Site groundwater quality and flow. Figure 4 presents the location of the monitoring well network and Table 4 presents a comparison of the detected groundwater parameters to the Class GA Groundwater Quality Standards (GWQS) per NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent

Limitations (June 1988). Groundwater samples were collected in accordance with the work plan and analyzed in accordance with Table 1.

4.3.1 Historic Groundwater Results

During the previous Phase II investigation an off-site piezometer located at the northern property boundary was sampled for TCL VOCs. No VOCs were detected above GWQS.

4.3.2 RI Groundwater Investigation Results

Groundwater samples were collected as part of the RI activities; including six (6) groundwater samples from TMW-1 through TMW-6 (see Figure 4). Table 4 summarizes the results of the groundwater samples collected as part of the RI. The groundwater sample results from the RI was compared to the NYS Class “GA” Groundwater Quality Standards and Guidance Values (GWQS) and discussed below.

4.3.2.1 VOCs

No VOCs were detected above their respective GWQs with the vast majority of analytes being reported as non-detectable or estimated values below the quantitation limit by the laboratory.

4.3.2.2 SVOCs

The majority of analytes were reported as non-detectable or trace (estimated) concentrations below the laboratory quantitation limit. Only one constituent, benzo(b)fluoranthene was detected above its GWQS in TMW-1, TMW-2 (located along the upgradient boundary of the Site) and TMW-6. It should be noted that all benzo(b)fluoranthene detections were flagged as estimated values by the laboratory. In addition the elevated turbidity of the groundwater may have contributed to benzo(b)fluoranthene detections.

4.3.2.3 Metals

The majority of dissolved metals detected at concentrations above GWQS were primarily limited to naturally-occurring minerals, including magnesium, manganese and sodium (see Table 4).

4.3.2.4 PCBs

No PCBs were detected in any of the groundwater samples.

4.3.2.5 Pesticides

The majority of analytes were reported as non-detectable or at trace (estimated) concentrations below the laboratory quantitation limit. Select pesticides were detected above their respective GWQS (see Table 4), including upgradient wells TMW-1 and TMW-2 and TMW-3. It should also be noted that the majority of elevated results are estimated values by the laboratory.

4.3.2.6 Herbicides

No herbicides were detected above GWQS during the RI.

4.4 Summary of Investigation Findings

The following is a summary of the historic investigations and RI findings.

Surface-Near Surface Soil/Fill:

No VOCs, pesticides or herbicides were detected at concentrations above USCOs. Investigation results identified select PAHs, PCBs, and metals above RRSCOs and in some instances CSCOs (see Table 2).

Subsurface Soil/Fill:

No VOCs, SVOCs, PCBs, pesticides or herbicides were detected above USCOs from the subsurface soils. Select elevated metals above USCOs, RRSCOs, and CSCOs, respectively were detected, primarily associated with the reworked soil/fill from 2-8 fbs.

Groundwater:

As described above, no VOCs, PCBs, or herbicides were detected above GWQS. One PAH, benzo(b)flouranthene, was detected above its GWQS, and can be likely attributed to the elevated turbidity of the collected groundwater. Dissolved metals detected above GWQS are primarily naturally occurring minerals. Select pesticides were detected above their respective GWQS, including the upgradient wells, indicating

a potential background condition associated with subsurface soil/fill material predominant in urban environments.

4.5 Data Usability Summary

In accordance with the RI Work Plan, the laboratory analytical data was independently assessed and, as required, submitted for independent review. Ms. Judy Harry of Data Validation Services located in North Creek, New York performed the data usability summary assessment for the soil vapor, soil/fill and groundwater samples, which involved a review of the summary form information and sample raw data, and a limited review of associated QC raw data. Specifically, the following items were reviewed:

- Laboratory Narrative Discussion
- Custody Documentation
- Holding Times
- Surrogate and Internal Standard Recoveries
- Matrix Spike Recoveries/Duplicate Recoveries
- Field Duplicate Correlation
- Preparation/Calibration Blanks
- Control Spike/Laboratory Control Samples
- Instrumental IDLs
- Calibration/CRI/CRA Standards
- ICP Interference Check Standards
- ICP Serial Dilution Correlations
- Sample Results Verification

The Data Usability Summary Reports (DUSRs) were conducted using guidance from the USEPA Region 2 validation Standard Operating Procedures, the USEPA National Functional Guidelines for Data Review, as well as professional judgment. Appendix F includes the DUSRs for the February 2015 analytical data, which were prepared in accordance with Appendix 2B of NYSDEC's DER-10 guidance. Those items listed above that demonstrated deficiencies are discussed in detail in the DUSR narrative sections. Analytical results were edited or qualified per the DUSR with changes reflected on the summary tables.

In general, the sample analyses were primarily conducted in compliance with the required analytical protocols. The sample results were usable either as reported, usable with

minor qualification or edited, with the exception of groundwater analytical results for phenolic compounds in TMW-03, TMW-04, and TMW-06 are not useable due to recoveries below 10% for surrogate compound d5-phenol. Phenols were not detected in site soils and are not expected to be present at elevated concentration in site groundwater.

4.6 Constituents of Concern (COCs)

Based on historical investigation and the RI findings to date, the Constituents of Concern (COCs) for a restricted residential cleanup are presented by media below:

- Soil/Fill: SVOCs, PCBs and metals.

5.0 FATE AND TRANSPORT OF COCs

The soil and groundwater sample analytical results associated with historic investigation and the RI were incorporated with the physical characterization of the Site to evaluate the fate and transport of COCs in Site media. The mechanisms by which the COCs can migrate to other areas or media are briefly outlined below.

5.1 Fugitive Dust Generation

Volatile and non-volatile chemicals present in soil/fill can be released to ambient air as a result of fugitive dust generation. Fugitive dust generation during excavations related to construction and Site redevelopment is considered a relevant potential short-term migration pathway.

Particulate monitoring in accordance with an approved Community Air Monitoring Plan (CAMP) will be employed during future remediation and redevelopment.

5.2 Volatilization

Volatile chemicals present in soil and groundwater may be released to ambient air through volatilization either from or through the soil/fill.

No VOCs were detected in the soil/fill or groundwater above applicable SCGs. Therefore, volatilization is not considered a relevant potential pathway.

5.3 Surface Water Runoff

The potential for soil/fill particle transport via surface water runoff is limited, as the majority of the Site is covered by building.

Surface water in contact with contaminated soil/fill that may be exposed during remedial excavation activities will be managed under a Soil/Fill Management Plan, which will be developed and submitted to the Department review and approval with the Remedial Action Work Plan, which would minimize or eliminate the potential of contaminated sediment particles migrating from the Site.

As such, surface water runoff is considered a relevant, but manageable migration pathway.

5.4 Leaching

Leaching refers chemicals present in soil/fill capable of migrating downward to groundwater as a result of infiltration of precipitation. The majority of the Site is covered by impermeable surfaces (e.g., building) which limits infiltration of precipitation.

Select PAHs and metals were detected in the non-saturated soil/fill above SCOs. However, PAHs and metals tend to adsorb strongly to soil, sediments and particulate matter and are not expected to leach under natural conditions (i.e., neutral pH). Furthermore, based on the underlying clay soil PAHs and metals are highly unlikely to leach into the groundwater.

As such, leaching is not considered a relevant migration pathway.

5.5 Groundwater Transport

Overburden groundwater underlying the Site flows to the west (see Figure 4) with a calculated average hydraulic gradient of 0.0067 ft/ft.

RI groundwater analytical results (see Table 4), indicate one PAH, and select dissolved metals and pesticides were detected slightly above their GWQS.; however, the exceedances are limited to naturally occurring metals, and common PAHs and pesticides typical of urban environments.

Additionally, the Site and surrounding area is serviced by municipal (supplied) potable water service (Buffalo Water), with no evidence of pumping wells in the area of the subject property. As such, contaminant transport via groundwater is not considered a relevant migration pathway.

5.6 Exposure Pathways

Based on the analysis of chemical fate and transport provided above, the pathways through which Site COCs could reach receptors at significant exposure point concentrations are: fugitive dust during excavation activities and surface-water runoff.

Remedial activities will be completed in accordance with a soil management plan to minimize or eliminate the potential that contaminated sediment particles could migrate from the Site in the form of fugitive dust and/or surface runoff.

During proposed remediation or redevelopment construction activities, a Community Air Monitoring Program (CAMP) and erosion and sediment control strategies will be

implemented to mitigate the potential for off-site exposure; and, if necessary, excavation dewatering will be completed in accordance with an approved Buffalo Sewer Authority temporary discharge permit

6.0 QUALITATIVE EXPOSURE ASSESSMENT

6.1 Potential Human Health Exposure Assessment

The 441 Ohio Street Site is planned as a residential development. The planned reuse is consistent with the surrounding property use and zoning. Under current conditions (i.e., remediation and redevelopment) human contact with the Site can be reasonably expected to occur primarily by two types of receptors: construction workers involved in the remediation and/or redevelopment of the Site, and trespassers who may traverse the property during intrusive activities. Construction workers will be comprised of adults, and trespassers would likely be limited to adolescents and adults. In both instances, exposure frequency is expected to be minimal (short-term).

Elevated PAHs, PCBs and metals were detected above CSCOs in overburden fill at varying depths from 0-6 fbg; therefore, under the current use scenario exposure pathways would be limited to inhalation of dust and dermal contact with impacted soil/fill. An approved Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) will be followed during intrusive remedial and redevelopment activities to mitigate unacceptable exposures via these pathways.

Concerning groundwater, the availability of municipal water source at the Site mitigates the potential for routine direct human contact or ingestion (i.e., as might occur with use of on-Site groundwater water for potable or process purposes). Human contact with groundwater can be expected to be limited to only one receptor: construction worker during deep intrusive activities.

Under the planned redevelopment scenario, the majority of the Site will be covered by hardscape (e.g., building, asphalt, concrete) with limited passive recreation areas on-Site. The planned Restricted-Residential Use of the site will necessitate either achieving RRSCOs to depths of 15 feet below grade across the Site, or extending the redevelopment cover to assure that all areas of the property are covered by 24-inches of clean soil material and/or hard cover (asphalt, pavement, etc.). In either case exposures to routine end users would be mitigated, with the only remaining pathways being potential short term exposures due to dust inhalation and dermal contact by construction workers/groundskeepers during deeper excavation work.

6.2 Potential Ecological Risks

The Site is a former commercial-industrial facility, located in a historically industrial developed area of the City of Buffalo. The former and anticipated future use of the Site (Restricted-Residential) with the majority covered by buildings, asphalt and concrete, provide little to no wildlife habitat or food value. No long term ecological risks are associated with the findings of the RI.

The Buffalo River is located along the western BCP property boundary of the Site. Remedial and redevelopment activities will be conducted in accordance with an approved Soil/Fill Management Plan (SFMP), CAMP and completion of Part 375 compliant cover system. Dust and erosion controls will be implemented, as necessary, during intrusive activities to mitigate potential short-term risks.

As such, no unacceptable ecological risks are anticipated under the current or reasonably anticipated future use scenario.

7.0 REMEDIAL ALTERNATIVES EVALUATION

This section provides an analysis of the selected remedial approach by media using the Remedy Selection Evaluation Criteria identified in Section 4.2 of Guidance Document DER-10: Technical Guidance for Site Investigation and Remediation. In accordance with DER-10 Section 4.4(d)2, in addition to a “no action” baseline alternative, the following three alternatives are developed and assessed for each BCP Site based on NYSDEC-defined cleanup tracks as follows:

Track 1, 6 New York Codes, Rules and Regulations (6NYCRR) Part 375-3.8(e)(1) requires site media to meet Part 375 SCOs that will allow the site to be used for any purpose without restrictions on the use of the site (i.e., unrestricted use). The soil cleanup must achieve the unrestricted use criteria at any depth above bedrock. Details and evaluation of the Track 1 alternative are described below.

Track 2, 6NYCRR Part 375-3.8(e)(2) requires site media to meet Part 375 restricted use SCOs that are consistent with the end use. For the Site, the Track 2 cleanup must achieve the Restricted Residential Use SCOs to a depth of 15 fbg. For Track 2 remedies, restrictions can be placed on the use of the property in the form of institutional and engineering controls, and future use and development will be completed in accordance with the environmental easement and site management plan. Details and evaluation of the Track 2 cleanup are described below.

Track 4, 6NYCRR Part 375-3.8(e)(4) soil cleanups uses site-specific information to identify site-specific SCOs (or site-specific action levels; SSALs) that are protective of public health and the environment under a restricted use scenario. For Track 4 remedies, restrictions can be placed on the use of the property in the form of institutional and engineering controls if they can be realistically implemented and maintained in a reliable and enforceable manner. As set forth in 6 NYCRR Part 375-3.8(e)(4)(iii)(a)(1), the top two feet of all exposed surface soils, not otherwise covered by the components of the development of the site (e.g., buildings, pavement), shall not exceed the restricted use (Restricted Residential Use) SCOs. Areas that exceed these SCOs must be covered by material meeting the requirements of the generic soil cleanup table contained in Part 375-6.7(d) for the applicable future site uses (i.e., Restricted Residential).

7.1 Remedial Action Objectives

The final remedial measures for the 441 Ohio Street Site must satisfy Remedial Action Objectives (RAOs). Remedial Action Objectives are site-specific statements that convey the goals for minimizing or eliminating substantial risks to public health and the environment.

Per DER-10, generic RAOs appropriate for the 441 Ohio Street Site include:

7.1.1 Soil/Fill RAOs

- Prevent ingestion of and/or direct contact with contaminated soil/fill.
- Prevent migration of contaminants that would result in groundwater and/or surface water contamination.

7.1.2 Groundwater RAOs

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent ingestion of and/or direct contact with groundwater containing contaminant levels exceeding SCGs.

7.2 Standards, Criteria, and Guidance

According to DER-10 Section 1.3(b)71, SCGs mean “*standards and criteria that are generally applicable, consistently applied, and officially promulgated, that are either directly applicable or not directly applicable but are relevant and appropriate, unless good cause exists why conformity should be dispensed with, and with consideration being given to guidance determined, after the exercise of scientific and engineering judgment, to be applicable. This term incorporates both the CERCLA concept of ‘applicable or relevant and appropriate requirements’ (ARARs) and the USEPA’s ‘to be considered’ (TBCs) category of non-enforceable criteria or guidance. For purposes of this Guidance, ‘soil SCGs’ means the soil cleanup objectives and supplemental soil cleanup objectives identified in 6NYCRR 375-6.8 and the Commissioner Policy on Soil Cleanup Guidance (CP-Soil).*”

7.2.1 Chemical-Specific SCGs

Chemical-specific SCGs are usually health- or risk-based concentrations in environmental media (e.g., air, soil, water), or methodologies that when applied to site-specific

conditions, result in the establishment of concentrations of a chemical that may be found in, or discharged to, the ambient environment. The determination of potential chemical-specific SCGs for a site is based on the: nature and extent of contamination; potential migration pathways and release mechanisms for site contaminants; reasonably anticipated future site use; and likelihood that exposure to site contaminants will occur. RI and historic sampling events included the collection and analysis of surface/near-surface soil/fill, subsurface soil/fill, and groundwater samples.

One of the remedial alternatives to be assessed for the Site is a Track 4 restricted residential cleanup. This approach would require institutional controls (e.g., groundwater and land use restrictions, Site Management Plan and Environmental Easement) and engineering controls (e.g., a cover system) as components of the final remedy to reduce future potential exposure to impacted soil/fill.

7.2.2 Remedial Areas of Concern (AOCs)

Based on the results of the RI, as described above, certain individual PAHs, metals (arsenic, barium, copper and lead) and PCBs were detected on-Site above the RRSCOs. However, lead falls below the CSCO, and the remaining metals were generally present at low concentrations typical of urban fill. Similarly, low-level detections of PAHs are also typical of urban fill and are generally consistent across the Site, with Total PAHs at or below approximately 100 ppm.

The elevated PCBs detected in SB-102 (0-2) appear to be limited to this one location. PCBs are not naturally occurring, and as such their presence suggests an isolated, site-specific impact. Therefore, elevated PCBs detected at SB-102 are identified as a remedial AOC and will be included for excavation and off-site disposal under all remedial alternatives evaluated for the Site.

Under the Track 4 Restricted Residential Use cleanup alternative, more fully described below, construction of a cover system will be evaluated as a component of the remedial plan to limit potential exposure to remaining on-Site contaminants. As such, construction of the cover will limit exposure to low level PAH and metal constituents exceeding RRSCOs below the cover system.

7.3 Evaluation of Alternatives

In addition to achieving RAOs, NYSDEC's Brownfield Cleanup Program calls for remedy evaluation in accordance with Part 375-1.8(f) and DER-10 Technical Guidance for Site Investigation and Remediation. Specifically, the guidance states "When proposing an appropriate remedy, the person responsible for conducting the investigation and/or remediation should identify and develop a remedial action that is based on the following criteria...:"

- **Overall Protection of Public Health and the Environment.** This criterion is an evaluation of the remedy's ability to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced, or controlled through removal, treatment, engineering controls, or institutional controls.
- **Compliance with Standards, Criteria, and Guidance (SCGs).** Compliance with SCGs addresses whether a remedy will meet applicable environmental laws, regulations, standards, and guidance.
- **Long-Term Effectiveness and Permanence.** This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: (i) the magnitude of the remaining risks (i.e., will there be any significant threats, exposure pathways, or risks to the community and environment from the remaining wastes or treated residuals), (ii) the adequacy of the engineering and institutional controls intended to limit the risk, (iii) the reliability of these controls, and (iv) the ability of the remedy to continue to meet RAOs in the future.
- **Reduction of Toxicity, Mobility or Volume with Treatment.** This criterion evaluates the remedy's ability to reduce the toxicity, mobility, or volume of Site contamination. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the Site.
- **Short-Term Effectiveness.** Short-term effectiveness is an evaluation of the potential short-term adverse impacts and risks of the remedy upon the community,

the workers, and the environment during construction and/or implementation. This includes a discussion of how the identified adverse impacts and health risks to the community or workers at the Site will be controlled, and the effectiveness of the controls. This criterion also includes a discussion of engineering controls that will be used to mitigate short term impacts (i.e., dust control measures), and an estimate of the length of time needed to achieve the remedial objectives.

- **Implementation.** The implementation criterion evaluates the technical and administrative feasibility of implementing the remedy. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.
- **Cost.** Capital, operation, maintenance, and monitoring costs are estimated for the remedy and presented on a present worth basis.
- **Community Acceptance.** This criterion evaluates the public's comments, concerns, and overall perception of the remedy.
- **Land Use –** This criterion includes the Department's determination of reasonable certainty of the use; and the evaluation of the reasonably anticipated future use of the site.

7.4 Anticipated Future Land Use Evaluation

In developing and screening remedial alternatives, 6NYCRR Part 375 regulations require that the reasonableness of the anticipated future land be factored into the evaluation. The regulations identify 16 criteria that must be considered. These criteria and the resultant outcome for the 441 Ohio Street Site are presented below.

1. *Current use and historical and/or recent development patterns:* The 441 Ohio Street Site was historically used for various freight and warehousing operations, located in a historically mixed use area of the City of Buffalo. The Site is planned for redeveloped into a residential development. **Accordingly, residential site redevelopment would be consistent with historic and recent development patterns.**

2. *Applicable zoning laws and maps:* The Site and the surrounding areas to the west are located in an area of the City of Buffalo zoned M1-Light Industrial District, with Residential and Recreational to the north and east.

The planned redevelopment for residential use is consistent with the larger surrounding mixed use neighborhood, and the City of Buffalo's Green Code, as described below.

3. *Brownfield opportunity areas as designated set forth in GML 970-r:* The Brownfield Opportunity Area (BOA) Program provides municipalities and community based organizations with assistance to complete revitalization plans and implementation strategies for areas or communities affected by the presence of brownfield sites, and site assessments for strategic sites. **The subject property lies within the Buffalo River Corridor BOA.**
4. *Applicable comprehensive community master plans, local waterfront revitalization plans as provided for in EL article 42, or any other applicable land use plan formally adopted by a municipality:* According to the Transitional Analysis completed as part of the Buffalo Green Code, Unified Development Ordinance (draft May 2014), the Site is located within the boundaries of an area slated for transition to Urban Neighborhood (N-3O, N-3R). **The proposed redevelopment of the Site for a residential use is consistent with the Buffalo Green Code.**
5. *Proximity to real property currently used for residential use, and to urban, commercial, industrial, agricultural and recreational areas:* The Site is located within the boundaries of the new Urban Neighborhood (N-3) designated in the draft Unified Development Ordinance and Buffalo Green Code. Residential properties are currently located approximately 250-ft to the east. Commercial and industrial properties are located proximate to the Site. **Nearby and adjacent properties are mixed use, including residential, commercial and industrial. The proposed redevelopment of the Site for a mixed residential and commercial use is consistent with the Buffalo Green Code.**
6. *Any written and oral comments submitted by members of the public on the proposed use as part of the activities performed pursuant to the citizen participation plan:* **No comments have been received from the public relevant to Site use concerns.**
7. *Environmental justice concerns, which include the extent to which the proposed use may reasonably be expected to cause or increase a disproportionate burden on the community in which the site is located, including low-income minority communities, or to result in a disproportionate concentration of commercial or industrial uses in what has historically been a mixed use or residential community:* **Nearby and adjacent property is currently mixed use commercial and**

residential capacity. Redevelopment of the Site in a residential capacity does not pose environmental justice issues.

8. *Federal or State land use designations:* The property is currently designated Commercial Land Use by the City of Buffalo (GIS). **Redevelopment is consistent with the draft Unified Development Ordinance and Buffalo Green Code.**
9. *Population growth patterns and projections:* The City of Buffalo, encompassing 40.38 square miles, has a population of 261,025 (2011 [estimate] US Census Bureau), a decrease of 285 from the 2010 U.S. Census. A slight decrease in population is not expected to have a significant impact on the housing market. **The Site is being redeveloped as a residential project. The redevelopment will increase residential opportunities.**
10. *Accessibility to existing infrastructure:* Access to the Site is from Ohio Street. Utilities (sewer, water, electric) are present along Ohio Street. **Existing infrastructure supports reuse in a residential capacity.**
11. *Proximity of the site to important cultural resources, including federal or State historic or heritage sites or Native American religious sites.* **No such resources or sites are known to be present on or adjacent to the Site.**
12. *Natural resources, including proximity of the site to important federal, State or local natural resources, including waterways, wildlife refuges, wetlands, or critical habitats of endangered or threatened species:* No State or Federal wetlands exist on the Site. The Buffalo River is located along the western boundary of the Site. A NYS regulated wetland (BU-3) is located approximately 0.75-miles to the northwest. According to the NYSDEC's EnviroMapper the important plant habitat and species listed for the area encompassing the Site, include:
 - Golden Dock *Rumex fueginus*, listed as endangered rare plant species under NYS Protection Status.
 - Midland Clubtail *Gomphus fratermus*, listed as a rare animal species under NYS Protection Status.
 - American Burying Beetle *Nicrophorus americanus*, listed as an endangered rare animal species under NYS protection Status.

The absence of significant ecological resources on or adjacent to the Site indicates that cleanup to restricted-residential use conditions will not pose an ecological threat.

13. *Potential vulnerability of groundwater to contamination that might emanate from the site, including proximity to wellhead protection and groundwater recharge areas and other areas identified by the Department and the State's comprehensive groundwater remediation and protection program established set forth in ECL article 15 title 31:* Groundwater at the Site is assigned Class "GA" by 6NYCRR Part 701.15. Groundwater data obtained during the RI indicates no exceedances for VOCs, PCBs or herbicides. Minor exceedance of the GWQS for certain PAHs, pesticides and naturally occurring metals across the Site. There are no groundwater supply wells present on the Site or noted in the vicinity of the Site. Regionally, groundwater has not been developed for industrial, commercial agriculture, or public supply purposes. Potable water service is provided by the local municipal water authority. **The absence of potable wells, wellhead protection and groundwater recharge areas indicates that cleanup to restricted use conditions will not pose a threat to drinking water.**
14. *Proximity to flood plains:* The Buffalo River embankment is the western property boundary of the BCP Site, and is a designated flood zone. US FEMA Flood Insurance Rate Map (FIRM – 3602300020D; revised September 26, 2008) – indicates that a portion of the Site is identified as a Zone AE with a flood elevation of 581 fmsl; and a portion of the Site is identified as a Zone X, which does not have flood elevation established. **As such, completion of remedial measures and cleanup to residential use would decrease potential threats to surface water caused by flooding.**
15. *Geography and geology:* The Site is located within the Erie-Ontario lake plain physiographic province, which is typified by little topographic relief and gentle slope toward Lake Erie (USDA, 1978). The surficial geology of the Lake Erie Plain consists of a thin glacial till (if present), glaciolacustrine deposits, recent alluvium, and the soils derived from these deposits. Surface soils within the vicinity of the Site are described as Urban Land (Ud) with 0-3 percent slopes. This is indicative of the level to gently sloping land with at least 40 percent of the soil surface covered by asphalt, concrete, buildings, or other impervious structures typical of an urban environment. Previous development patterns covered the Site in asphalt, concrete and building foundations. **Geography and geology are consistent with the planned redevelopment.**
16. *Current institutional controls applicable to the site:* **No institutional controls are currently present that would affect redevelopment options.**

Based on the above analysis, reuse of the Site in a residential capacity is consistent with past, current and contemplated development and zoning on and around the Site, and does not pose additional environmental or human health risk.

7.5 Comparison of Remedial Alternatives

In addition to the evaluation of the alternatives to remediate the Site to the likely end use, NYSDEC regulations and policy calls for evaluation of more restrictive end-use scenarios. These include an Unrestricted Use scenario (considered under 6NYCRR Part 375 to be representative of cleanup to pre-disposal conditions), and a scenario less restrictive than the reasonably anticipated future use. Per NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, evaluation of a “no action” alternative is also required to provide a baseline for comparison against other alternatives. The alternatives evaluated below in greater detail include:

- Alternative 1 - No Action
- Alternative 2 - Track 4 Restricted Residential Use Cleanup
- Alternative 3 - Track 2 Restricted Residential Use Cleanup
- Alternative 4 - Unrestricted Use Cleanup (Track 1)

The section below describes and evaluates the remedial alternatives for the Site against the screening criteria.

7.5.1 Alternative 1 - No Action

Under this alternative, the Site would remain in its current state, with no controls in place.

Overall Protection of Public Health and the Environment – This alternative does not reduce the risk or exposure for human health and the environment. The Site as it exists is not fully protective of human health and the environment due to the presence of elevated PAHs, PCBs and metals exceeding CSCOs in surface soil/fill and the absence of institutional controls to prevent more restrictive forms of future Site use (e.g., unrestricted or residential). Uncontrolled access to the Site could lead to potential exposure to impacted soil or if intrusive work were performed at the Site and workers are unaware or untrained regarding the contaminants.

Compliance with SCGs – The no action alternative would not make the Site compliant with SCGs. Based on the results of the RI, on-Site constituents detected in the soil/fill and groundwater exceeds the applicable SCO and GWQS.

Long-Term Effectiveness and Permanence – Based on the findings of the RI, the no action alternative does not provide long-term effectiveness or permanence, and does not achieve any of the RAOs.

Reduction of Toxicity, Mobility, or Volume – The no action alternative does not reduce the toxicity, mobility, or volume of soil, and therefore this alternative is not protective of public health and does not satisfy the RAOs.

Short-Term Impact and Effectiveness – There would be no short-term adverse impacts and risks to the community, workers, or the environment attributable to implementation of the no action alternative.

Implementation – No technical or administrative implementation issues are associated with the no action alternative.

Cost – There would be no capital or long-term operation, maintenance, or monitoring costs associated with the no action alternative.

Community Acceptance – Community acceptance will be evaluated based on comments to be received from the public in response to Fact Sheets and other planned Citizen Participation activities. Recent development patterns in the vicinity of the Site, including the Ohio Street Improvement Project would likely render the No Action alternative unacceptable to the community.

7.5.2 Alternative 2 – Track 4 Restricted Residential Use Cleanup

Under this alternative, the Site would be remediated to achieve a Track 4 Restricted Residential Use cleanup. For Track 4 remedies, restrictions can be placed on the use of the property in the form of IC/ECs if they can be realistically implemented and maintained in a reliable and enforceable manner. For restricted-residential use, the top two feet of all exposed

soils that are not otherwise covered by the components of the development of the site (e.g. buildings, pavement) cannot exceed the restricted-residential SCOs. Areas that exceed the restricted-residential SCOs must be covered by material meeting the requirements of the generic soil cleanup table contained in 6NYCRR Part 375-6.7(d) for restricted-residential future Site use.

Figure 5 identifies the remedial measures necessary to achieve a Track 4 RRSCO cleanup. This alternative's remedial measures would include:

- Removal and disposal of remnant railroad ties.
- Excavation and off-site disposal of shallow PCB impacted soil/fill exceeding RRSCOs at SB-102 (see Figure 5).
- Placement of Cover System, in accordance with 6NYCRR Part 375 and NYSDEC DER-10 guidelines. The cover system will include the redevelopment hardscaped areas (asphalt parking lot, concrete walkways and new building) to limit exposure. In non-hardscaped areas, a minimum of 24-inches of approved clean backfill material meeting the import criteria for restricted residential use sites, in accordance with Appendix 5 of DER-10, will be placed on top of a demarcation layer to identify remaining in-place soil-fill.

Cover system elements, specific to the western BCP boundary, may involve reuse of the existing former building foundation wall along the river as an integral part of the final remedy to structurally support and separate remaining contaminated material from the Buffalo River. Reuse of the former foundation wall will require a structural/geotechnical assessment by an experienced geotechnical/structural professional and be repaired and stabilized, as necessary, in accordance with recommendations presented in the assessment, and as approved by the Department. Other alternative measures, such as removal of the wall, sloping back the embankment, and stabilizing the embankment with rock armor and soil cover may be considered. Engineering controls used to stabilize the wall and/or retain contaminated material will be installed within the limits of the BCP site and covered under the site's Institutional Controls.

For the segment of shoreline, south of the existing wall, consisting of a concrete rubble armored embankment, a structural/geotechnical assessment by an experienced geotechnical/structural professional shall evaluate on-site engineering controls necessary to structurally support and separate remaining contaminated material from the Buffalo River. Engineering controls will be installed according to recommendations presented in the assessment and as approved by the Department. Engineering controls used to stabilize and retain remaining contaminated material, such as reshaping the embankment and stabilizing the

embankment with rock armor and soil cover, will be installed and covered under the site's Institutional Controls.

A conceptual cover system layout is provided on Figure 7. Final details of the cover system will be provided in the Remedial Action Work Plan.

- Implementation of a Site Management Plan (SMP). The SMP will include:
 - Institutional Controls and Engineering Controls (IC/EC) Engineering controls include any physical barrier or method employed to actively or passively contain, stabilize, or monitor contaminants; restrict the movement of contaminants; or eliminate potential exposure pathways to contaminants. Institutional controls at the site will include groundwater use restrictions and limitations on end use of the site to restricted residential, commercial or industrial applications.
 - An Operation and Maintenance Plan that describes the measures necessary to operate, monitor, and maintain any mechanical components of the remedial work (not considered applicable in this case).
 - Excavation Work Plan to assure that future intrusive activities and soil/fill handling at the Site are completed in a safe and environmentally responsible manner;
 - Site Monitoring Plan that includes: provisions for a Site-wide inspection program to assure that the IC/ECs have not been altered and remain effective; and,
 - A copy of the Environmental Easement filed with Erie County.

Under this approach approximately 300 CY of impacted soil/fill would require excavation and off-site disposal. Specifically, PCB-impacted soil/fill at SB-102 is planned for excavation and off-site disposal in a permitted landfill. An equivalent volume of DER-10 approved backfill would be required to restore the Site to grade. Alternatively, on-site materials excavated after these AOCs were removed (e.g., for new building footers, utilities, etc.) may be used for backfill and grading beneath the cover system. Upon completion of the remedial excavations and offsite disposal work, and prior to issuance of the Final Engineering Report, the site will require a DER-10 compliant cover system, as described above.

Overall Protection of Public Health and the Environment— This alternative would be protective of public health and the environment, based on the planned remedial activities, including excavation and off-site disposal of soil/fill exceeding CSCOs, installation of cover system (soil and impervious) across the Site, and the use of engineering and institutional controls to prevent potential future exposure. The SMP will include appropriate plans, controls and measures and an environmental easement to ensure the restricted-residential use remedy is protective of human health and the environment. Therefore, this alternative is protective of health and the environment and satisfies the RAOs.

Compliance with SCGs – The planned remedial activities will be performed in accordance with applicable, relevant, and appropriate standards, guidance, and criteria; and, are protective of human health and the environment, and achieves RAOs for the Site. Subgrade preparation activities will need to adhere to a CAMP in accordance with Appendices 1A and 1B of DER-10.

Long-Term Effectiveness and Permanence – Completion of remedial excavation of PCB-impacted soil/fill at SB-102 and construction of a cover system would prevent direct contact with soil/fill exceeding RRSCOs. Periodic inspection and maintenance of the cover system would be required to assure long-term cover integrity. The SMP will include appropriate plans, controls, and measures and an environmental easement to ensure the restricted use remedy is protective of human health and the environment. Accordingly, this alternative satisfies this criterion.

Reduction of Toxicity, Mobility, or Volume with Treatment – Reduction of toxicity (via removal of exposure pathways) and mobility (via disposal of impacted materials in a secured landfill and construction of cover system) would be achieved by completion of the planned remedial measures. The SMP will include appropriate plans, controls, and measures and an environmental easement to ensure the restricted use remedy remains protective of human health and the environment. Accordingly, this alternative satisfies this criterion.

Short-Term Impact and Effectiveness – The short-term adverse impacts and risks to the community, workers, and environment during implementation of the Restricted Residential Use alternative are not considered significant and are controllable.

During intrusive remedial activities air monitoring will be performed to assure conformance with community air monitoring action levels. The potential for chemical exposures and physical injuries are reduced through safe work practices; proper personal protection equipment; environmental monitoring in accordance with an approved Work Plan, HASP and CAMP. This alternative achieves the RAOs for the Site.

Implementation – No technical or administrative implementation issues are associated with this alternative.

Cost – The capital cost of implementing a Track 4 Restricted Residential Use alternative is estimated at approximately \$478,000 (see Table 6). Annual certification is estimated at approximately \$2,500 per year.

Community Acceptance – Community acceptance will be evaluated based on comments to be received from the public in response to Fact Sheets and other planned Citizen Participation activities.

7.5.3 Alternative 3 – Track 2 Restricted Residential Use Cleanup

Under this alternative the Site would be remediated to achieve 6NYRR Part 375 Restricted Residential Use Cleanup (Track 2), which in general would include: excavation and off-Site disposal of soil/fill exceeding RRSCOs to an average depth of 8 fbg across the Site, and implementation of a Site Management Plan, and filing of an environmental easement.

The remedial components under this alternative, the Site would be remediated to achieve a Restricted Residential Use (Track 2) cleanup, which will include:

- Removal and disposal of remnant railroad ties.
- Excavation and off-site disposal of soil/fill exceeding Part 375 Restricted Residential Use SCOs (RRSCOs)
- Collection of post-excavation confirmatory samples
- Management of on-Site excavation waters during intrusive activities

Exceedances of RRSCOs were primarily associated with the presence of fill material, which was observed across the site to a depth of 8 fbs. Accounting for the estimated void space underneath the existing wooden floor section of the building, approximately 18,400 CY of soil/fill would require excavation and off-site disposal. An equivalent volume of DER-10 compliant backfill would be required to restore the Site.

On-Site groundwater impacts are mainly attributable to the presence of fill material. After completion of the excavation, and proper handling of excavation waters, no additional groundwater monitoring would be required.

Overall Protection of Public Health and the Environment—This alternative meets NYSDEC requirements for a Track 2 Restricted Residential cleanup and is protective of public health and the environment. Since the remedial action would achieve removal of impacted soil/fill to below RRSCOs, and implement institutional controls (restriction of use to Restricted Residential), this alternative is fully protective of human health and the environment, and would successfully achieves the RAOs for the Site.

Compliance with SCGs – The planned remedial activities would be performed in accordance with applicable, relevant, and appropriate SCGs. Imported backfill material would need to meet backfill quality criteria per DER-10. Subgrade intrusive activities would necessitate preparation of and adherence to a community air monitoring plan in accordance with Appendices 1A and 1B of DER-10. The planned remedial actions would be fully protective of public health and the environment, and achieve all RAOs for the Site.

Long-Term Effectiveness and Permanence – Removal of soil/fill exceeding RRSCOs would provide long-term effectiveness and permanence. Accordingly, this alternative satisfies this criterion.

Reduction of Toxicity, Mobility, or Volume – Reduction of toxicity, mobility or volume would be achieved by excavation of the and off-site disposal of soil/fill exceeding RRSCOs across the Site. Institutional controls to ensure the restricted use remedy is protective of human health and the environment would be prepared. Accordingly, this alternative satisfies this criterion.

Short-Term Impact and Effectiveness – There are several potential short-term impacts associated with this alternative as described in the Unrestricted Use cleanup above. However, this alternative would significantly increase the duration of time community, workers, and the environment is exposed to fugitive dust and potential off-site exposures during remediation over a Track 4 RRSCOs cleanup.

Implementation – Technical implementation issues would be a barrier to construction of this alternative. The Site is planned for residential redevelopment and surface parking areas. Excavating the impacted soil/fill is feasible, however, as the Site is planned to have little vegetated areas, the additional cleanup required to achieve Track 2 is consider a significant implementation issue due to the presence of historic fill site wide with depth ranging from 0 to 10 fbg. As a Track 2 cleanup does not allow for the use of a cover system, excavation and off-site disposal of the soil/fill would be required. Therefore, implementation of Track 2 RRSCO cleanup is not considered reasonable given the current and anticipated future use of the Site.

Cost – The capital cost of implementing a Track 2 Restricted Residential Use alternative is estimated at approximately \$2.5MM (see Table 7).

Community Acceptance – Community acceptance will be evaluated based on comments to be received from the public in response to Fact Sheets and other planned Citizen Participation activities.

7.5.4 Alternative 4 – Unrestricted Use Cleanup

An Unrestricted Use cleanup alternative would necessitate remediation of all soil/fill where concentrations exceed the Unrestricted Use SCOs per 6NYCRR Part 375 (see Tables 2 and 3). For Unrestricted Use scenario, excavation and off-site disposal of impacted soil/fill is generally regarded as the most applicable remedial measure, because institutional controls cannot be used to supplement the remedy. As such, the Unrestricted Use alternative assumes that those areas which exceed Unrestricted Use SCOs would be excavated and disposed at an off-Site commercial solid waste landfill.

Under this alternative, the Site would be remediated to Unrestricted Use (Track 1) cleanup, which will include:

- Removal and disposal of remnant railroad ties.
- Excavation and off-site disposal of soil/fill exceeding Part 375 Unrestricted Use SCOs (USCOs)
- Collection of post-excavation confirmatory samples
- Management of on-Site excavation waters during intrusive activities

Exceedance of the USCOs were observed up to 16 fbgs with an average depth of approximately 10 fbgs across the entire Site. Accounting for the estimated void space underneath the existing wooden floor section of the building, approximately 24,100 cubic yards (CY) of soil/fill would require excavation and off-site disposal. An equivalent volume of DER-10 compliant backfill would be required to restore the Site.

On-Site groundwater impacts are mainly attributable to the presence of fill material. After completion of the excavation, and proper handling of excavation waters, no additional groundwater monitoring would be required.

Overall Protection of Public Health and the Environment – Excavation and off-site disposal to achieve USCOs would be protective of public health under any reuse scenario. However, this alternative would permanently use and displace valuable landfill airspace, causing ancillary environmental issues due to reduced landfill capacity, and would require excavating, transporting, and placing a similar volume of clean soil from an off-site borrow source to backfill the excavation, also contributing to detrimental off-site environmental issues.

Compliance with SCGs – This alternative would be performed in accordance with applicable, relevant, and appropriate SCGs. Excavation of soil/fill to achieve Unrestricted Use SCOs would satisfy this criterion.

Long-Term Effectiveness and Permanence – This alternative would achieve removal of all residual impacted soil/fill; therefore, the Unrestricted Use alternative would

provide long-term effectiveness and permanence. Post-remedial monitoring and certifications would not be required.

Reduction of Toxicity, Mobility, or Volume – Through removal of all impacted soil/fill, the Unrestricted Use alternative would permanently reduce the toxicity, mobility, and volume of on-Site contamination.

Short-Term Impact and Effectiveness – The principal advantage of a large-scale excavation to achieve USCOs is reliability of effectiveness in the long-term. The short-term adverse impacts and risks to the community, workers, and environment during implementation of this alternative are manageable. There are several potential short-term impacts associated with this alternative.

- There is potential for impacts to human health (workers and construction personnel) due to direct contact with impacted soil and particulate releases. This alternative would require implementation of a health and safety plan (HASP) and community air monitoring, as outlined in the NYSDOH Generic Community Air Monitoring Plan (CAMP), in order to mitigate potential adverse conditions/short-term impacts. Additional health and safety measures would need to be employed during excavation activities within the building and under the building slab. Moreover, significant physical hazards may be encountered due to structural limitations associated with removal of soil/fill to the required depth in proximity to the Buffalo River.
- Human health and the environment associated with chemical exposures would be protected under this alternative if the HASP and CAMP are properly implemented. This alternative is expected to meet RAOs at completion of the excavations, because the impacted soil will be removed from the Site. Confirmatory soil sampling would be performed.

This alternative would significantly increase the duration of time community, workers, and the environment is exposed to on-Site contamination and potential for off-site exposures during remediation.

Implementation – Significant technical and administrative implementation issues would be encountered in completion of the Unrestricted Use alternative. Technical implementation issues include, but are not limited to: shoring/stabilizing excavation sidewalls to prevent sloughing during the deep excavation; the need for construction, maintenance, and operation of dewatering facilities; groundwater and/or stormwater handling, treatment and/or discharge/disposal; and traffic coordination for trucks entering and exiting Ohio Street. As such the feasibility of achieving a Unrestricted Use cleanup is questionable.

Administrative implementation issues may include: the need to coordinate and secure disposal contracts with numerous permitted off-site landfills as a single location would not be able to be relied upon to accept the volume of soil/fill generated under this alternative; difficulty locating local borrow sources for such a large volume of backfill; and the need for rezoning of the area to allow for Unrestricted Uses (e.g., farming, livestock, single-family residential), which are not consistent with current surrounding land-use or the reasonably anticipated future use the Site.

Cost – The capital cost of implementing an Unrestricted Use cleanup alternative is estimated at approximately \$3.25 MM (see Table 8). Post-remedial groundwater monitoring and annual certification costs would not be incurred.

Community Acceptance – Community acceptance will be evaluated based on comments to be received from the public in response to Fact Sheets and other planned Citizen Participation activities.

7.6 Recommended Remedial Measure

Based on the Remedial Alternatives Analysis evaluation, the proposed remedial approach for the Site is a Track 4 RRSCO cleanup. A Track 4 RRSCO cleanup is fully protective of public health and the environment, is significantly less disruptive to the community, and is consistent with current and future land use, and represents a cost-effective approach that fully satisfies the RAOs.

The components and details of the Track 4 RRSCO remedial approach will be more fully described in a Remedial Action Work Plan to be submitted to the NYSDEC for approval.

In summary, this alternative would involve:

- Removal and disposal of remnant railroad ties.
- **Excavation** and off-site disposal of PCB impacted soil/fill at SB-102 exceeding RRSCOs.

Placement of Cover System, including hardscaped areas (building, asphalt and concrete); repair and reuse of the former building foundation wall along the Buffalo River; reshaping and stabilization of embankment area along the Buffalo River to limit exposure and retain remaining contaminated soil; and, placement of a minimum of 24-inches of DER-10 acceptable backfill on top of a demarcation layer identifying remaining in-place material in areas without hardscape (to address remaining contamination above RRSCOs).

- **Implementation of a Site Management Plan (SMP)**. The SMP will include:
 - **Institutional Controls and Engineering Controls (IC/EC)** Engineering controls include any physical barrier or method employed to actively or passively contain, stabilize, or monitor contaminants; restrict the movement of contaminants; or eliminate potential exposure pathways to contaminants. Institutional controls at the site will include groundwater use restrictions and use restrictions of the Site to restricted residential use.
 - **Operation and Maintenance Plan** (not considered applicable to this alternative).
 - **Excavation Work Plan** to assure that future intrusive activities and soil/fill handling at the Site are completed in a safe and environmentally responsible manner;
 - **Site Monitoring Plan** that includes: provisions for a Site-wide inspection program to assure that the IC/ECs have not been altered and remain effective; and,
 - **Environmental Easement** filed with Erie County.

8.0 RI/ AAR SUMMARY AND CONCLUSIONS

Based on the data and analyses presented in the preceding sections, we offer the following summary and conclusions:

- Based on the surface/near-surface soil/fill data, no VOCs, pesticides, or herbicides exceed USCOs. Certain SVOCs, primarily PAHS, PCBs and metals were detected above their respective RRSCOs and CSCOs, associated with the presence of fill material.
- Based on the subsurface soil/fill data, no VOCs, SVOCs, PCBs, pesticides or herbicides were detected above USCOs. Certain metals were detected at isolated locations above their RRSCOs and CSCOs, respectively.
- Based on the groundwater data, no VOCs, PCBs, or herbicides were detected above GWQS. Certain SVOCs, dissolved metals and pesticides were detected above GWQS, however in all cases the detections reported by the laboratory as estimated values and the metals were limited to naturally occurring minerals. Elevated constituents can likely be described as potential ubiquitous background contamination related to the historic fill material in this section of the City of Buffalo. Furthermore, municipally supplied potable water is available, and on-Site groundwater is not used for potable or other purposes.
- Given the nature and extent of contamination present in soil/fill and groundwater, and the long history of commercial/industrial use, it is not practicable to remediate the Property to pre-release (Unrestricted Use) conditions. Based on the Alternatives Analysis, a Track 4 RRSCO cleanup was selected. Additional components of the remedial measures to achieve the select remedial alternative include:
 - Excavation of PCB impacted soil/fill exceeding RRSCOs.
 - Removal and disposal of remnant railroad ties.
 - Placement of cover system, including hardscape (building, concrete and asphalt)); repair and reuse of the former building foundation wall along the Buffalo River; reshaping and stabilization of embankment area along the Buffalo River to limit exposure and retain remaining contaminated soil; and soil covered areas comprised of a minimum of 24-inches of DER-10 conformant soil material in areas without buildings and hardscape (e.g., in landscaped areas)
 - Development and Implementation of a Site Management Plan.

9.0 REFERENCES

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2. RJS Environmental Consultants, *Phase I Environmental Site Assessment*, 441 Ohio Street (aka 9 South Street), Buffalo, New York, prepared for FFZ Holdings, LLC, November 2011.
3. Benchmark Environmental Engineering & Science, PLLC *Limited Phase II Environmental Site Assessment*, 441 Ohio Street, Buffalo, New York, prepared for 441 Ohio Street, LLC, November 2013.
4. Empire Geo-Services, Inc., *Geotechnical Engineering Report*. 441 Ohio Street, Buffalo, New York, prepared for Tredo Engineers, August 2013
5. New York State Department of Environmental Conservation. *DER-10 - Technical Guidance for Site Investigation and Remediation*, May 2010.
6. United States Department of Agriculture, Soil Conservation Services, *Soil Survey of Erie County, New York*, dated December 1986.
7. Edward J. Buehler and Irving H. Tesmer, *Geologic Map of Erie County, New York Bedrock Geology*, dated 1963.
8. Camiros. *Buffalo Green Code, Unified Development Ordinance, Public Review Draft*. Prepared for The City of Buffalo, Mayor's Office of Strategic Planning, May 2014.
9. Chow, V., Maidment, D., and Mays, L. 1988. *Applied Hydrology*. McGraw-Hill.

TABLES

TABLE 1

SAMPLING AND ANALYSIS PLAN
REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT
441 OHIO STREET SITE
BUFFALO, NEW YORK

Investigation Location		Depth Sampled / Screened (ftgs)	Analysis						Date Sampled
			Full List VOCs ¹	TCL SVOCs	TAL Metals	PCBs	Pesticide	Herbicides	
Soil/Fill									
SB-102	Fill (Approx. 0-2')	0-2		1	1	1			2/18/2015
SB-104		0-4	1	1	1	1	1	1	2/18/2015
SB-105		0-2		1	1	1			2/18/2015
SB-107		0-4		1	1	1			2/18/2015
SB-112		0-2		1	1	1			2/17/2015
SB-101	Reworked Clayey Fill (Approx. 2-8')	2-7.5		1	1	1			2/18/2015
SB-102		2-8	1	1	1	1			2/18/2015
SB-103		2-8		1	1	1			2/18/2015
SB-104		4-8		1	1	1	1	1	2/18/2015
SB-105		2-8		1	1	1			2/18/2015
SB-106		4-8	1	1	1	1	1	1	2/18/2015
SB-107		4-8		1	1	1			2/18/2015
SB-108		1-4	1	1	1	1	1	1	2/17/2015
SB-109		4-10		1	1	1			2/17/2015
SB-110		4-10		1	1	1	1	1	2/17/2015
SB-111		6-9		1	1	1			2/17/2015
SB-112		2-6		1	1	1			2/17/2015
SB-113		2-6		1	1	1			2/17/2015
SB-103	Lean Clay (Approx. 8-16')	2-6		1	1	1			2/18/2015
SB-106		8-16	1	1	1	1			2/18/2015
SB-108		4-16		1	1	1			2/17/2015
SB-110		10-16	1	1	1	1	1	1	2/17/2015
Groundwater									
TMW-1	Down-gradient - South	--	1	1	1	1	1	1	2/27/2015
TMW-2	Upgradient	--	1	1	1	1	1		2/27/2015
TMW-3	North - Garage /Loading Dock	--	1	1	1	1	1	1	2/27/2015
TMW-4	Under Bldg.	--	1	1	1	1			2/27/2015
TMW-5	Under Bldg.	--	1	1	1	1	1	1	2/27/2015
TMW-6	Under Bldg.	--	1	1	1	1	1	1	2/27/2015

Notes:

1. Full List VOCs = TCL plus CP-51 List VOCs via Method 8260.
2. All locations shall be sampled and archived by the laboratory for potential analysis / reanalysis.
3. GW field parameters including: pH, specific conductance, temperature, DO, ORP, and turbidity will be collected and recorded.

Acronyms:

VOCs = volatile organic compounds
SVOCs = semi-volatile organic compounds
TCL = Target Compound List
TAL = Target Analyte List
PCBs = Polychlorinated Biphenyls

SB = Soil Boring
TMW = Temporary Monitoring Well

TABLE 2

SUMMARY OF REMEDIAL INVESTIGATION AND HISTORIC SURFACE / NEAR SURFACE SOIL/FILL SAMPLE ANALYTICAL RESULTS

REMEDIAL INVESTIGATION / ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE

BUFFALO, NEW YORK

Parameter ¹	Unrestricted Use SCOs ²	Restricted Residential Use SCOs ²	Commercial Use SCOs ²	Historical Investigation Sample Locations (Depth)				Remedial Investigation Sample Locations (Depth)				
				SB-1 (0-6)	SB-3 (0-6)	SB-5 (0-6)	SB-8 (0-6)	SB-102 (0-2)	SB-104 (0-4)	SB-105 (0-2)	SB-107 (0-4)	SB-112 (0-2)
				11/06/13				02/18/15				02/17/15
Volatile Organic Compounds (VOCs) - mg/Kg ³												
1,2,4-Trimethylbenzene	3.6	47	190	ND	--	--	ND	--	0.004 J	--	--	--
1,3,5-Trimethylbenzene	8.4	47	190	ND	--	--	ND	--	0.0025 J	--	--	--
Benzene	0.06	2.9	44	ND	--	--	ND	--	0.00094 J	--	--	--
Carbon disulfide	--	--	--	ND	--	--	ND	--	0.004 J	--	--	--
Cyclohexane	--	--	--	ND	--	--	ND	--	0.017 J	--	--	--
Ethylbenzene	1	30	390	ND	--	--	ND	--	0.0009 J	--	--	--
Methylcyclohexane	--	--	--	ND	--	--	ND	--	0.026	--	--	--
Toluene	0.7	100	500	ND	--	--	ND	--	0.0016 J	--	--	--
m&p-Xylene	0.26	100	500	ND	--	--	ND	--	0.0036 J	--	--	--
o-Xylenes	0.26	100	500	ND	--	--	ND	--	0.0014 J	--	--	--
Total Xylene	0.26	100	500	ND	--	--	ND	--	0.005 J	--	--	--
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg ³												
2-Methylnaphthalene	--	--	--	ND	0.16 J	0.84 J	ND	ND	ND	ND	ND	ND
4-Methylphenol	--	--	--	ND	0.016 J	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	100	500	ND	0.49	1.8 J	0.021 J	0.93 J	ND	ND	0.19	ND
Acenaphthylene	100	100	500	ND	0.19 J	ND	ND	0.65 J	ND	0.18 J	0.22 J	ND
Anthracene	100	100	500	ND	1.4	3.6	0.044 J	2.7 J	0.23 J	ND	0.65 J	ND
Benzo(a)anthracene	1	1	5.6	ND	3.2	7.7	0.11 J	7.1	0.89 J	1.3	2.3	ND
Benzo(a)pyrene	1	1	1	0.016 J	3	6.3	0.099 J	6.7	0.92	1.3	2.2	ND
Benzo(b)fluoranthene	1	1	5.6	0.031 J	4.4	10	0.18 J	9.2	1.3	1.6	2.8	ND
Benzo(g,h,i)perylene	100	100	500	0.017 J	1	2.5	0.047 J	1.7 J	0.43 J	0.53 J	0.87 J	ND
Benzo(k)fluoranthene	0.8	3.9	56	0.011 J	2	4.3	0.095 J	ND	0.58 J	0.76 J	1.2	ND
Biphenyl	--	--	--	ND	0.045 J	0.21 J	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	--	--	--	ND	ND	ND	ND	ND	0.57 J	ND	ND	ND
Carbazole	--	--	--	ND	0.53	2.2	ND	ND	ND	0.12 J	0.26 J	ND
Chrysene	1	3.9	56	0.025 J	3	7.1	0.14 J	7.1	1	1.5	2.3	ND
Dibenzo(a,h)anthracene	0.33	0.33	0.56	ND	ND	ND	ND	ND	ND	ND	0.38 J	ND
Dibenzofuran	7	59	350	ND	0.39	1.5 J	ND	0.72 J	ND	ND	0.2 J	ND
Fluoranthene	100	100	500	0.019 J	7.9	20	0.25 J	15	1.7	1.8	4.5	ND
Fluorene	30	100	500	ND	0.53	1.6 J	ND	ND	ND	ND	0.27 J	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.014 J	0.95	2.4	0.043 J	2.1	0.45 J	0.56 J	0.83 J	ND
Naphthalene	12	100	500	ND	0.28	1.9	ND	ND	ND	ND	0.19 J	ND
Phenanthrene	100	100	500	0.014 J	5.2	18	0.16 J	9.2	0.95	0.61 J	2.7	ND
Pyrene	100	100	500	0.017 J	4.8	13	0.17 J	11	1.3	1.5	3.4	ND
Total PAHs	--	100	500	0.164	38.87	102.4	1.359	73.28	9.75	11.76	24.88	0
Polychlorinated Biphenyls (PCBs) - mg/Kg												
Aroclor 1242	--	--	--	ND	0.21 J	ND	ND	4.6	ND	ND	ND	ND
Aroclor 1254	--	--	--	ND	0.49	0.18 J	ND	1.1	ND	ND	ND	ND
Aroclor 1260	--	--	--	ND	ND	ND	ND	0.4	ND	ND	ND	ND
Total PCBs	0.1	1	1	ND	0.7 J	0.18 J	ND	6.1	ND	ND	ND	ND
Metals - mg/Kg												
Aluminum	--	--	--	ND	ND	ND	ND	6240	12400	5190	5250	2070
Arsenic	13	16	16	20.3	19.2	7.8	4.3	30.1	8.9	15.2	11.5	3
Barium	350	400	400	85.2	186	41.3	52.5	137	135	60.8	751	9.1
Beryllium	7.2	72	590	ND	ND	ND	ND	0.54	2	0.68	0.41	ND
Cadmium	2.5	4.3	9.3	ND	2.3	ND	ND	1.5	0.47	0.81	1.3	ND
Calcium	--	--	--	ND	ND	ND	ND	44800	87700	7400	59200	186000
Chromium	30	180	1500	22.9	26.6	6	14	22.4	13.6	10.5	10.0	4.7
Cobalt	--	--	--	ND	ND	ND	ND	21.4	3.9	8	4.8	1.9
Copper	50	270	270	ND	ND	ND	ND	315	56.7	139	267	14.3
Iron	--	--	--	ND	ND	ND	ND	42100	15700	20000	15700	6590
Lead	63	400	1000	165	471	51	52	261	248	288	492	7.4
Magnesium	--	--	--	ND	ND	ND	ND	15200	16400	2440	25500	114000
Manganese	1600	2000	10000	ND	ND	ND	ND	605 B	869	254 B	455	175
Nickel	30	140	310	ND	ND	ND	ND	82.9	12	20.5	14.5	6.9
Potassium	--	--	--	ND	ND	ND	ND	1170	1240	653	823	902
Sodium	--	--	--	ND	ND	ND	ND	185 J	391	ND	169	199
Vanadium	--	--	--	ND	ND	ND	ND	31.9	14.3	15.8	14.7	8
Zinc	109	10000	10000	ND	ND	ND	ND	352	125	307	370	7.6
Mercury	0.18	0.81	2.8	0.11	0.35	0.32	0.032	0.28	0.17	0.2	0.37	0.044
Pesticides and Herbicides - mg/Kg ³												
alpha-BHC	0.02	0.48	3.4	--	--	--	--	--	0.02 J	--	--	--
delta-BHC	0.04	100	500	--	--	--	--	--	ND	--	--	--
Endosulfan sulfate	2.4	24	200	--	--	--	--	--	0.026 J	--	--	--
Endrine ketone	--	--	--	--	--	--	--	--	0.04 J	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	ND	--	--	--

Notes:

- Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
- Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006)
- Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparison to SCOs.

Definitions:

ND = Parameter not detected above laboratory detection limit.
 "--" = Sample not analyzed for parameter or no SCO available for the parameter.
 J = Estimated value; result is less than the sample quantitation limit but greater than zero.

BOLD	= Result exceeds Part 375 Unrestricted Use SCOs.
BOLD	= Result exceeds Part 375 Restricted Residential Use SCOs.
BOLD	= Result exceeds Part 375 Commercial Use SCOs.



TABLE 3
SUMMARY OF SUBSURFACE SOIL/FILL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION / ALTERNATIVE ANALYSIS REPORT
441 OHIO STREET SITE
BUFFALO, NEW YORK

Parameter ¹	Unrestricted Use SCOs ²	Restricted Residential Use SCOs ²	Commercial Use SCOs ²	Remedial Investigation Sample Locations (Depth)																
				SB-101 (2-7.5)	SB-102 (2-8)	SB-103 (2-8)	SB-103 (8-16)	SB-104 (4-8)	SB-105 (2-8)	SB-106 (4-8)	SB-106 (8-16)	SB-107 (4-8)	SB-108 (1-4)	SB-108 (4-16)	SB-109 (4-10)	SB-110 (4-10)	SB-110 (10-16)	SB-111 (6-9)	SB-112 (2-6)	SB-113 (2-6)
				02/18/15						02/17/15		02/18/15	02/17/15							
Volatile Organic Compounds (VOCs) - mg/Kg ³																				
Acetone	0.05	100	500	--	0.0058 J B	--	--	--	--	0.0058 J B	0.039 J B	--	ND	--	--	--	0.0058 J B	--	--	--
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg ³																				
Acenaphthene	20	100	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	100	100	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100	100	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.46 J
Benzo(a)anthracene	1	1	5.6	0.58 J	ND	ND	ND	0.25 J	ND	0.14 J	ND	ND	ND	ND	ND	0.22 J	ND	0.18 J	ND	0.66 J
Benzo(a)pyrene	1	1	1	0.57 J	ND	ND	ND	0.31 J	ND	0.17 J	ND	ND	ND	ND	ND	0.25 J	ND	0.22 J	ND	0.45 J
Benzo(b)fluoranthene	1	1	5.6	0.6 J	ND	ND	ND	0.26 J	ND	ND	ND	ND	ND	ND	ND	0.22 J	ND	0.21 J	ND	0.66 J
Benzo(g,h,i)perylene	100	100	500	0.12 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1 J
Benzo(k)fluoranthene	0.8	3.9	56	0.34 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33 J
Bis(2-ethylhexyl) phthalate	--	--	--	ND	ND	ND	0.094 J	0.55 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31 J
Chrysene	1	3.9	56	ND	ND	ND	ND	0.28 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.62 J
Dibenzo(a,h)anthracene	0.33	0.33	0.56	0.19 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	7	59	350	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100	100	500	0.91 J	ND	ND	ND	0.47 J	ND	0.24 J	ND	ND	ND	ND	ND	0.35 J	ND	0.29 J	ND	1.7
Fluorene	30	100	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12 J
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12	100	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100	100	500	0.35 J	ND	ND	ND	0.39 J	ND	0.31 J	ND	ND	ND	ND	ND	0.21 J	ND	0.21 J	ND	1.8 J
Pyrene	100	100	500	0.71 J	ND	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	0.98 J
Total PAHs	--	--	500	4.57	0	0	0.094	2.76	0	0.86	0	0	0	0	0	1.45	0	1.11	0	8.19
PCBs - mg/Kg																				
Total PCBs	0.1	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals - mg/Kg																				
Aluminum	--	--	--	13500	8790	21800	9090	7500	17900	11800	7390	12300	6320	8520	7870	6910	9190	11100	8360 J	3360
Arsenic	13	16	16	5.9	7.2	5.5	5.6	6	4.5	3.4	ND	5.4	3.7	3.4	7.2	3.7	4.8	6.1	5.5	4.9
Barium	350	400	400	103	74	145	58.1	58.8	104	72.2	44.5	70.5	84 J	54.7	76.5	62.7	52	70.2	583	10.1
Beryllium	7.2	72	590	0.69	0.54	1.1	0.48	0.44	0.6	0.59	0.4	0.64	0.37	0.48	0.49	0.38	0.5	0.66	0.47	ND
Cadmium	2.5	4.3	9.3	0.33	0.35	0.47	ND	ND	ND	0.3	0.34	0.32	ND	ND	0.35	ND	ND	0.28	0.22	ND
Calcium	--	--	--	48900	4320	2620	1260	5810	15800	21600	1520	1870	24700	1350	4290	9950	1280	37700	2360 J	163000
Chromium	30	180	1500	18.6	13.1	28	13.1	10.8	20.6	15.7	10.6	17.0	8.1	13.1	12.4	9.4	13.3	16.1	12.2	7
Cobalt	--	--	--	9.8	9.4	17.3	9.5	7.5	9.3	9.8	9.1	11.4	4.6	7.3	10.6	5.9	9.5	11.1	8.4	3.3
Copper	50	270	270	32	26.3	24.5	22.2	32.4	11.5	27.6	19.5	24.0	66.6 J	28.4	260	37.1	24.8	92.5	20.4 J	8.9
Iron	--	--	--	20900	19200	29700	20000	14500	21300	19200	11800	24400	9040	18400	18500	12700	19300	20500	19000	9840
Lead	63	400	1000	78.7	93.7	20.3	11.9	146	10.6	16.2	9.6	16.2	122 J	11.6	111	155	11.8	24.9	451	8.1
Magnesium	--	--	--	17400	3990	6510	3290	3950	7790	4740	2780	3740	4250	2690	3760	2980	3240	13800	3110	104000
Manganese	1600	2000	10000	428	140 B	218	156 B	207 B	361 B	337	122	616	341	154	383	252	200	399	414	174
Nickel	30	140	310	24.6	25.4	41.5	26.6	20.8	21.7	29.2	22.2	30.6	12	23.1	24.3	17.6	27.5	26.1	25.1	11.5
Potassium	--	--	--	3120	1050	2670	939	969	1640	1360	1040	1700	786	1120	1230	1130	1110	2130	834 J	1440
Sodium	--	--	--	223	ND	459	211	ND	440	431	ND	213	661	510	ND	ND	ND	176	ND	196
Vanadium	--	--	--	26	16.9	37.2	17	14.7	28.1	20.4	14.4	21.9	10.2	19.6	16	12.8	17.9	23.2	16.5	9.4
Zinc	109	10000	10000	92.7	69.4	74.1	62.5	62.7	60.9	82.9	56.6	83.9	41.2	53.8	98	57	63.2	69.7	59.6	10.2
Mercury	0.18	0.81	2.8	0.042	ND	0.028	ND	0.06	ND	0.03	2.2	0.048	0.038	0.024	0.33	0.069	ND	0.085	0.066	0.11
Pesticides and Herbicides - mg/Kg ³																				
alpha-BHC	0.02	0.48	3.4	ND	--	--	--	ND	--	ND	--	--	0.00061 J	--	--	ND	ND	--	--	--
delta-BHC	0.04	100	500	0.00046 J	--	--	--	ND	--	0.00046 J	--	--	--	--	--	ND	0.00046 J	--	--	--
Endosulfan sulfate	2.4	24	200	ND	--	--	--	ND	--	ND	--	--	ND	--	--	0.002 J	ND	--	--	--
Endrin	0.014	11	89	ND	--	--	--	ND	--	ND	--	--	ND	--	--	0.001 J	ND	--	--	--
Endrin aldehyde	--	--	--	ND	--	--	--	ND	--	ND	--	--	ND	--	--	ND	0.00057 J	--	--	--
Endrine ketone	--	--	--	ND	--	--	--	ND	--	ND	--	--	ND	--	--	0.0015 J	ND	--	--	--
gamma-BHC (Lindane)	0.1	1.3	9.2	ND	--	--	--	ND	--	ND	--	--	ND	--	--	ND	0.00052 J	--	--	--
Methoxychlor	--	--	--	ND	--	--	--	0.015 J	--	ND	--	--	ND	--	--	ND	0.00051 J	--	--	--

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006)
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparison to SCOs.

Definitions:
ND = Parameter not detected above laboratory detection limit.
"--" = Sample not analyzed for parameter or no SCO available for the parameter.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
* = RPD of the LCS and LCSD exceeds the control limits.

BOLD	= Result exceeds Part 375 Unrestricted Use SCOs.
BOLD	= Result exceeds Part 375 Restricted Residential Use SCOs.
BOLD	= Result exceeds Part 375 Commercial Use SCOs.

TABLE 4

SUMMARY OF REMEDIAL INVESTIGATION GROUNDWATER ANALYTICAL RESULTS

REMEDIAL INVESTIGATION / ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE

BUFFALO, NEW YORK

Parameter ¹	GWQS ²	Sample Location					
		Groundwater					
		TMW-1	TMW-2	TMW-3	TMW-4	TMW-5	TMW-6
		02/28/15					
<i>Volatile Organic Compounds (VOCs) - ug/L</i>							
2-Butanone (MEK)	50	0.0019 J	ND	ND	1.6 J	1.5 J	ND
Acetone	50	0.0089 J	8.3 J	7.6 J	13	11	5.3 J
Methylene chloride	5	ND	ND	ND	ND	0.73 J	ND
<i>Semi-Volatile Organic Compounds (SVOCs) - ug/L</i>							
Benzo(b)fluoranthene	0.002	0.96 J	1.3 J	ND	ND	ND	0.9 J
Benzo(ghi)perylene	--	ND	0.46 J	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	5	ND	ND	ND	ND	ND	ND
Caprolactum	--	210 DL	2200 DL	1200 DL	1400 DL	550 DL	960 DL
Carbazole	--	ND	ND	ND	ND	ND	2.4 J
Diethyl phthalate	--	ND	ND	0.41 J	0.58 J	ND	0.2 J
Di-n-butyl phthalate	50	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	5	ND	2.6 J	ND	ND	ND	2.2 J
Phenanthrene	50	ND	ND	ND	ND	ND	0.7 J
Pyrene	50	ND	0.45 J	ND	ND	ND	ND
<i>Dissolved Metals - ug/L</i>							
Barium	1000	240 J	150 J	590 J	130 J	170 J	310 J
Calcium	--	15700 J	67400 J	211000 J	120000 J	61000 J	145000 J
Iron	300	ND	ND	ND	ND	ND	230 J
Magnesium	35000	29200 J	13400 J	59400 J	39500 J	14700 J	35000 J
Manganese	300	1800 J	2200 J	5700 J	750 J	940 J	1600 J
Potassium	--	11500 J	2700 J	13300 J	13400 J	9500 J	10600 J
Sodium	20000	78700 J	108000 J	1140000 J	77400 J	32400 J	50000 J
Zinc	2000	ND	ND	110 J	18 J	ND	ND
<i>Polychlorinated biphenyls (PCBs) - ug/L</i>							
Total PCBs	0.09	ND	ND	ND	ND	ND	ND
<i>Pesticides and Herbicides - ug/L</i>							
alpha-BHC	0.01	0.0099 J	0.036 J	0.025 J	--	0.02 J	0.022 J
beta-BHC	0.01	0.17	ND	ND	--	ND	ND
delta-BHC	0.01	0.01 J	0.012 J	ND	--	ND	ND
gamma-BHC (Lindane)	0.05	0.011 J	0.038 J	ND	--	ND	0.1
Endosulfan Sulfate	--	ND	0.028 J	ND	--	ND	0.018 J
Endrin	--	ND	0.023 J	ND	--	ND	ND
Endrin Aldehyde	5	ND	ND	ND	--	ND	ND
Endrin Ketone	5	ND	0.028 J	ND	--	ND	0.024 J
Heptachlor	0.04	ND	ND	ND	--	ND	ND
Heptachlor epoxide	0.03	ND	ND	ND	--	ND	ND
Methoxychlor	35	ND	0.19 NJ	ND	--	ND	ND

Notes:

- Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
- Values per NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - Class GA (TOGS 1.1.1)

Definitions:

ND = Parameter has a GWQS of non-detect; Parameter not detected above laboratory detection limit.
 "--" = No value available for the parameter; Parameter not analysed for.
 J = Estimated value; result is less than the reporting limit but greater than zero.
 D = Dilution required due to high concentration of target analyte above the laboratory reporting limit.
 N = Indicates presumptive evidence of compound.

BOLD = Result exceeds GWQS.

TABLE 5

REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT

STANDARDS, CRITERIA, AND GUIDANCE (SCGs)

441 OHIO STREET SITE

BUFFALO, NEW YORK

Citation	Title	Regulatory Agency
General		
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response	US Dept. of Labor, OSHA
29 CFR 1910.1000	OSHA General Industry Air Contaminants Standard	US Dept. of Labor, OSHA
29 CFR 1926	Safety and Health Regulations for Construction	US Dept. of Labor, OSHA
Not Applicable	Analytical Services Protocol	NYSDEC
6NYCRR Part 608	Use and Protection of Waters	NYSDEC
6NYCRR Part 621	Uniform Procedures Regulations	NYSDEC
6NYCRR Parts 750-757	State Pollutant Discharge Elimination System	NYSDEC
Section 404	Clean Water Act	USACE
Soil		
6NYCRR Part 375	Environmental Remediation Programs	NYSDEC
DEC Policy CP-51	Soil Cleanup Guidance	NYSDEC
Groundwater		
6NYCRR Part 700-705	Surface Water and Ground Water Classification Standards	NYSDEC
TOGS 1.1.1	Ambient Water Quality Standards and Guidance Values	NYSDEC
TOGS 2.1.3	Primary and Principal Aquifer	NYSDEC
Air		
Air Guide No. 1	Guidelines for the Control of Toxic Ambient Air Contaminants	NYSDEC
DER-10 Appendix 1B	Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites	NYSDEC
NYSDOH, October 2006	Final - Guidance for Evaluating Soil Vapor Intrusion in the State of New York	NYSDOH
Solid Waste		
6NYCRR 360	Solid Waste Management Facilities	NYSDEC
6NYCRR 364	Waste Transporters	NYSDEC

TABLE 6

COST ESTIMATE FOR TRACK 4 RESTRICTED RESIDENTIAL USE CLEANUP

REMEDIAL INVESTIGATION / ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE

BUFFALO, NEW YORK

Item	Quantity	Units	Unit Cost	Total Cost
<u>Impacted Soil/Fill Removal</u>				
Remedial Area Soil/Fill Excavation & Hauling	300	CY	\$ 20	\$ 6,000
Disposal at TSDF (1.6 tons per CY)	480	TON	\$ 30	\$ 14,400
Waste Characterization Analytical	2	EA	\$ 600	\$ 1,200
Post-Excavation Confirmatory Sampling	18	EA	\$ 500	\$ 9,000
Subtotal:				\$ 30,600
<u>Backfill Excavation with Off-Site Soil/Fill</u>				
Haul, Place & Compact	480	CY	\$ 25	\$ 12,000
Backfill Characterization and Sampling	3	LS	\$ 1,500	\$ 4,500
Subtotal:				\$ 16,500
<u>Cover System</u>				
Ashalt, Concrete, and Soil	1	EST	\$ 300,000	\$ 300,000
Subtotal Capital Cost				\$ 347,100
Contractor Mobilization/Demobilization (5%)				\$ 17,355
Health and Safety (2%)				\$ 6,942
Engineering/Contingency (30%)				\$ 104,130
Total Capital Cost				\$ 475,530
Annual Operation Maintenance & Monitoring (OM&M):				
Annual Certification	1	Yr	\$ 2,500	\$ 2,500
Total Annual OM&M Cost				\$ 2,500
Total Cost				\$ 478,000

TABLE 7

COST ESTIMATE FOR TRACK 2 RESTRICTED RESIDENTIAL USE CLEANUP

REMEDIAL INVESTIGATION / ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE

BUFFALO, NEW YORK

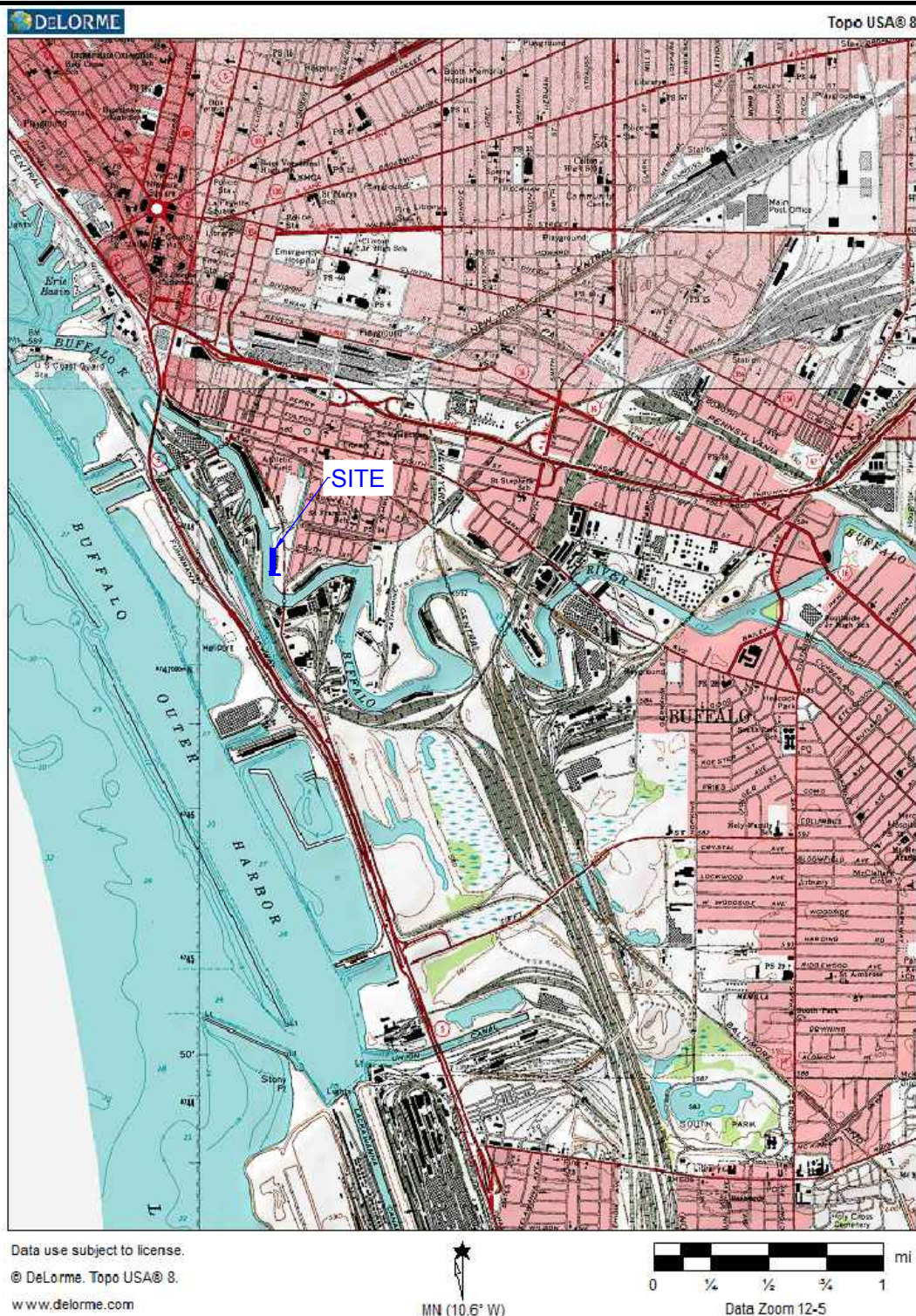
Item	Quantity	Units	Unit Cost	Total Cost
<u>Impacted Soil/Fill Removal</u>				
Soil/Fill Excavation & Hauling	18400	CY	\$ 20	\$ 368,000
Disposal at TSDF (1.6 tons per CY)	29440	TON	\$ 30	\$ 883,200
Waste Characterization Analytical	16	EA	\$ 600	\$ 9,600
Post-Excavation Confirmatory Sampling	150	EA	\$ 500	\$ 75,000
Subtotal:				\$ 1,335,800
<u>Backfill Excavation with Off-Site Soil/Fill</u>				
Haul, Place & Compact	18400	CY	\$ 25	\$ 460,000
Backfill Characterization and Sampling	18	EA	\$ 500	\$ 9,000
Subtotal:				\$ 469,000
<u>Excavation Water Handling and Treatment</u>				
Frac tanks, Filtration and GAC System	1	LS	\$ 20,000	\$ 20,000
Temporary Discharge Application and Permit	1	LS	\$ 1,500	\$ 1,500
Excavation Water Analytical Sampling	1	EA	\$ 600	\$ 600
Subtotal:				\$ 22,100
Subtotal Capital Cost				\$ 1,826,900
Contractor Mobilization/Demobilization (5%)				\$ 91,345
Health and Safety (2%)				\$ 36,538
Engineering/Contingency (30%)				\$ 548,070
Total Cost				\$ 2,502,853

TABLE 8
COST ESTIMATE FOR UNRESTRICTED USE CLEANUP ALTERNATIVE
REMEDIAL INVESTIGATION / ALTERNATIVE ANALYSIS REPORT
441 OHIO STREET SITE
BUFFALO, NEW YORK

Item	Quantity	Units	Unit Cost	Total Cost
<u>Impacted Soil/Fill Removal</u>				
Soil/Fill Excavation & Hauling	24100	CY	\$ 20	\$ 482,000
Disposal at TSDF (1.6 tons per CY)	38560	TON	\$ 30	\$ 1,156,800
Waste Characterization Analytical	20	EA	\$ 600	\$ 12,000
Post-Excavation Confirmatory Sampling	150	EA	\$ 500	\$ 75,000
Subtotal:				\$ 1,725,800
<u>Backfill Excavation with Approved Import Material</u>				
Haul, Place & Compact	24100	CY	\$ 25	\$ 602,500
Backfill Characterization and Sampling	25	EA	\$ 500	\$ 12,500
Subtotal:				\$ 615,000
<u>Excavation Water Handling and Treatment</u>				
Frac tanks, Filtration and GAC System, GAC Changeout	1	LS	\$ 30,000	\$ 30,000
Temporary Discharge Application Permit, Addt. Fee	1	LS	\$ 2,500	\$ 2,500
Excavation Water Analytical Sampling	3	EA	\$ 600	\$ 1,800
Subtotal:				\$ 34,300
Subtotal Capital Cost				\$ 2,375,100
Contractor Mobilization/Demobilization (5%)				\$ 118,755
Health and Safety (2%)				\$ 47,502
Engineering/Contingency (30%)				\$ 712,530
Total Cost				\$ 3,254,000

FIGURES

FIGURE 1



2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0292-013-002

DATE: MARCH 2015

DRAFTED BY: BLR

SITE LOCATION AND VICINITY MAP

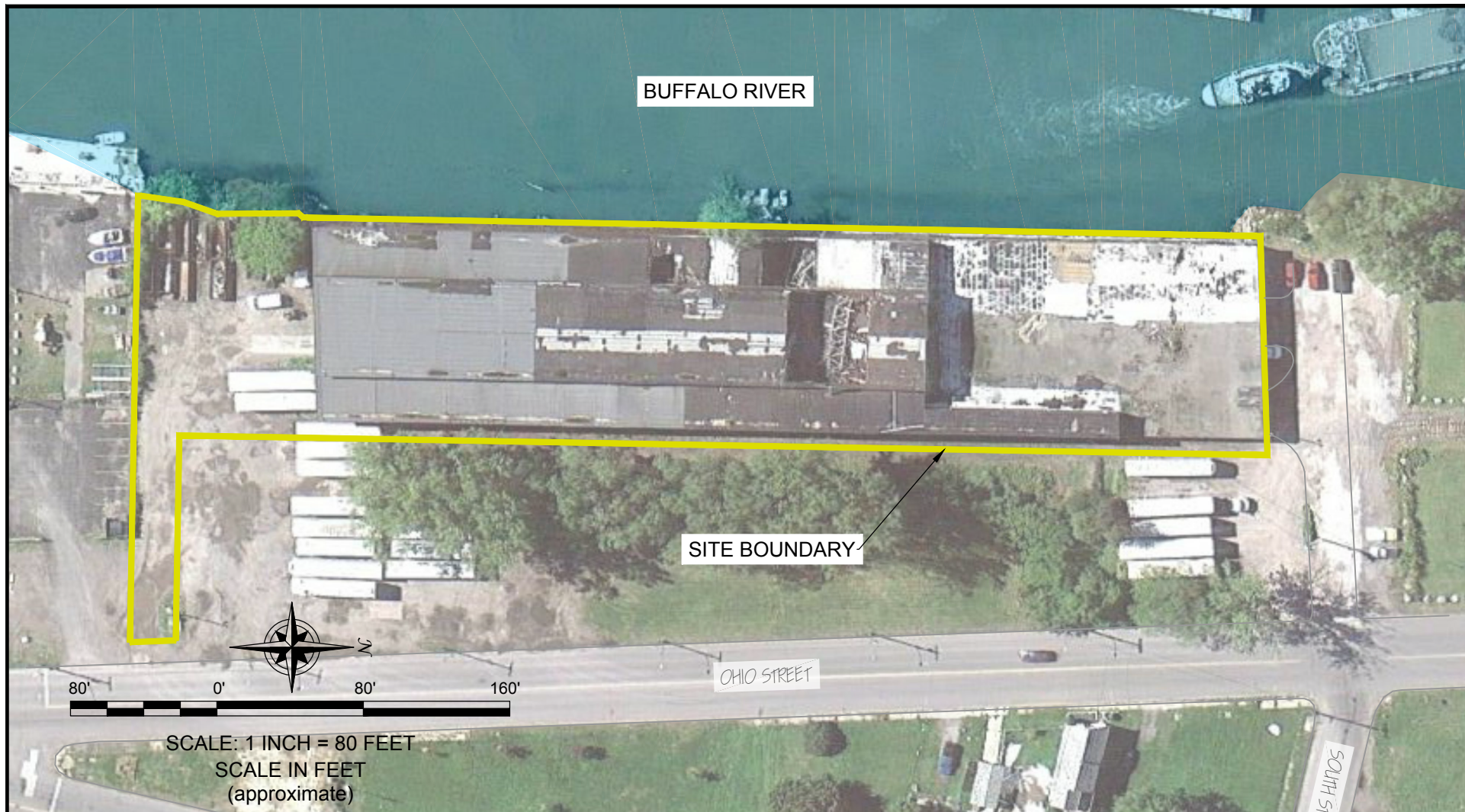
REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK

PREPARED FOR

441 OHIO STREET, LLC

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2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

SITE PLAN (AERIAL)

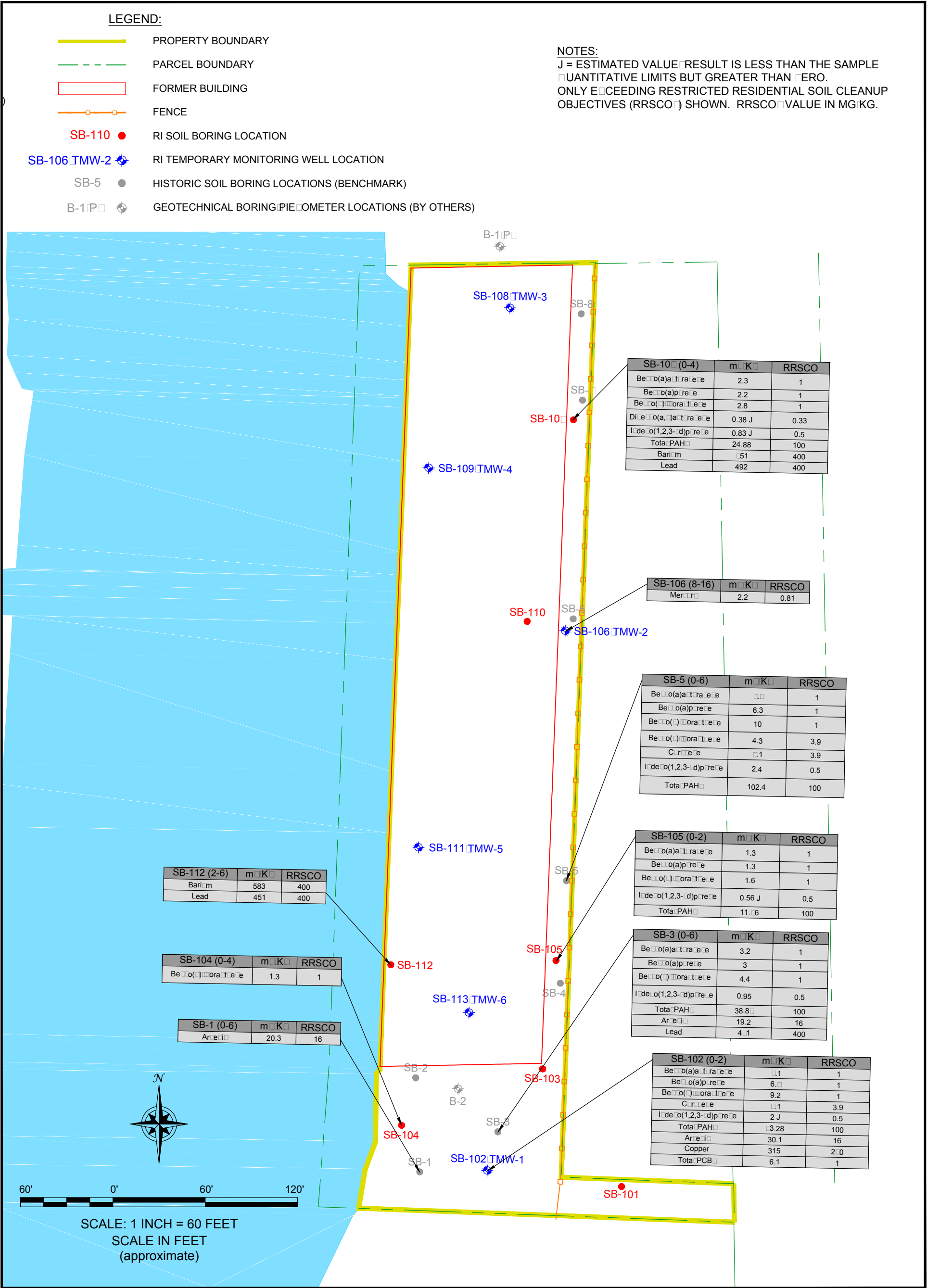
REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK

PREPARED FOR
441 OHIO STREET, LLC

FIGURE 2

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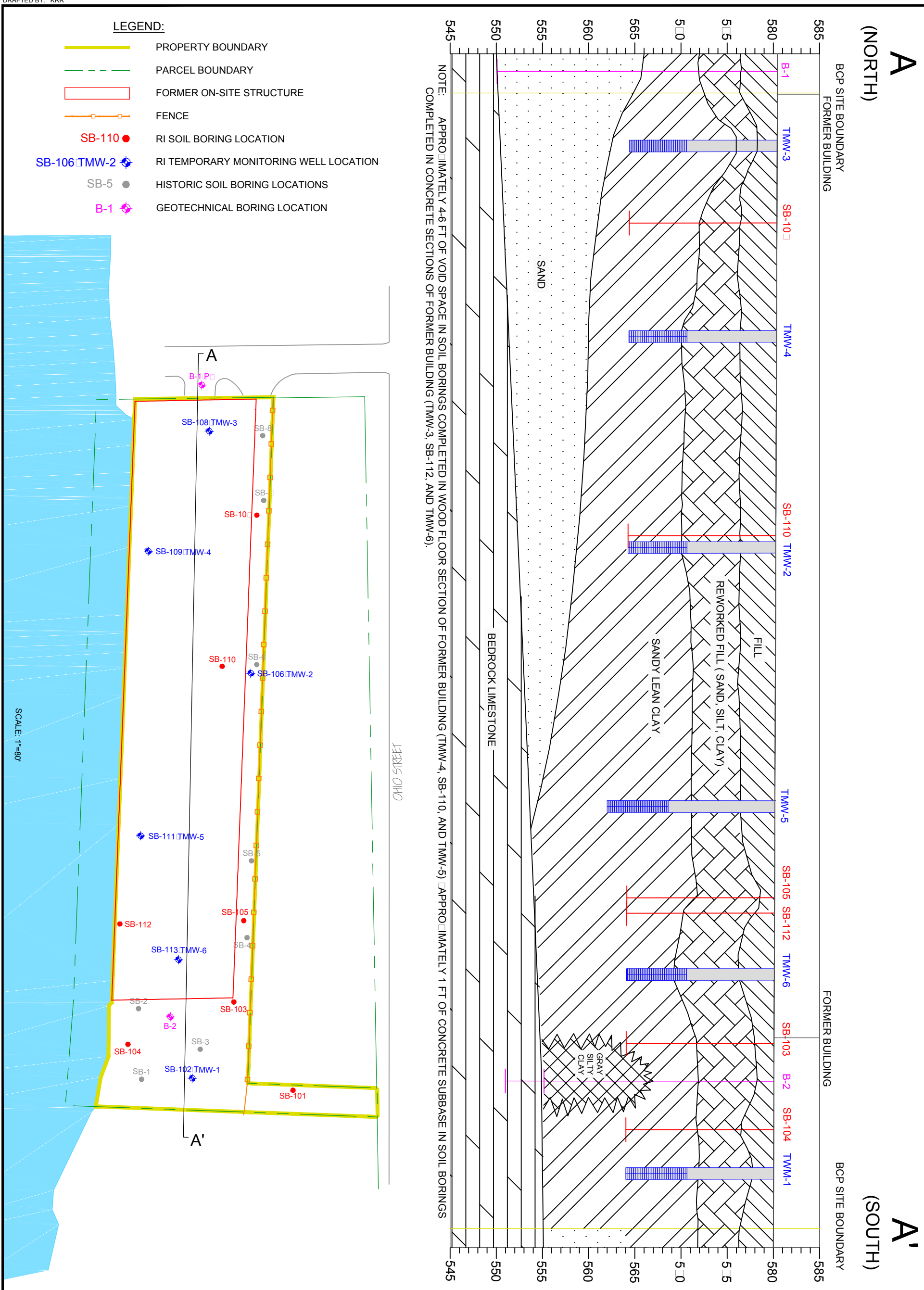


FIGURE 5

SUBSURFACE SOIL-FILL CROSS SECTION

REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK
PREPARED FOR
441 OHIO STREET, LLC



2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
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JOB NO.: 0292-013-002

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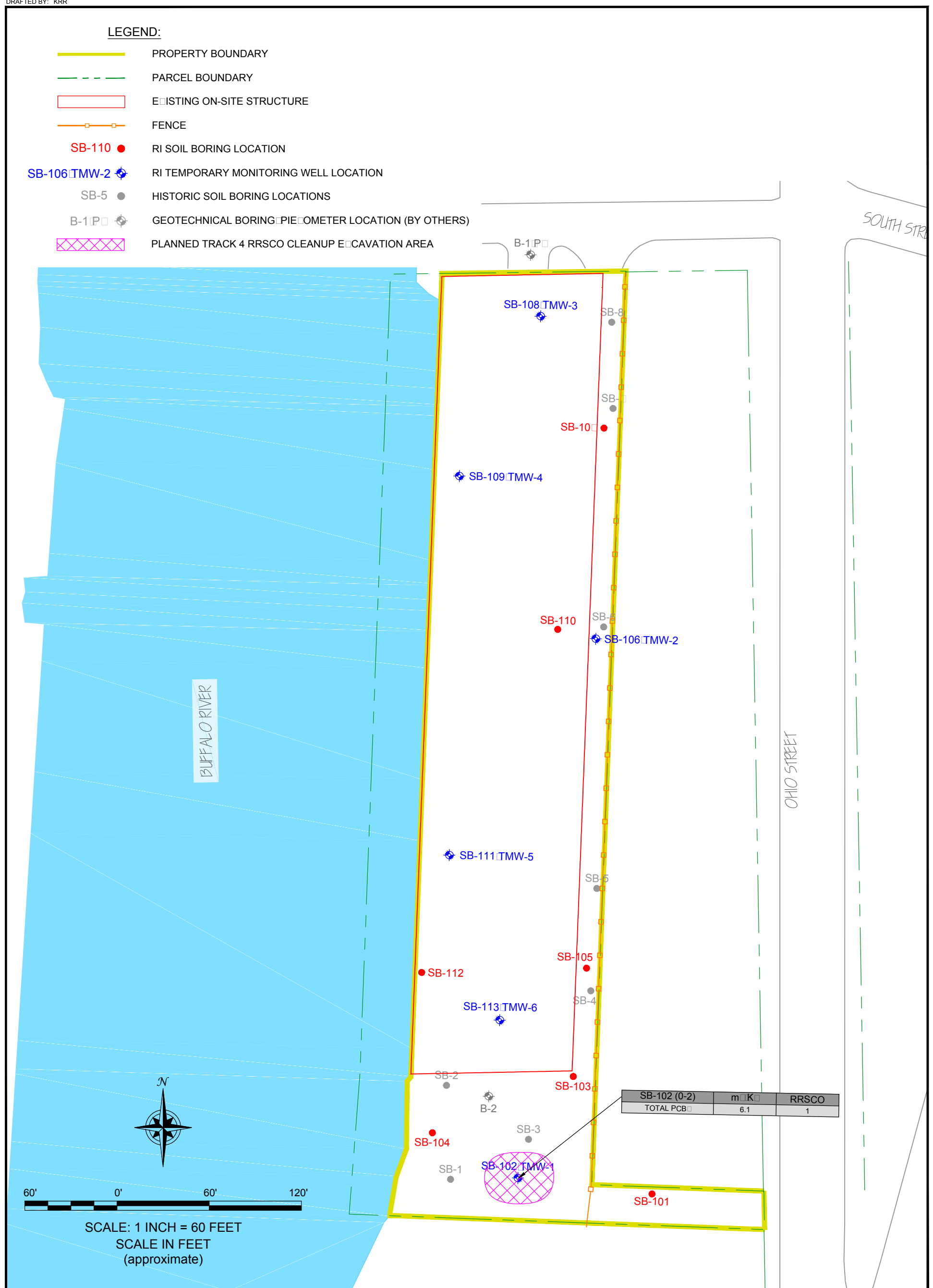


FIGURE 6

TRACK 4 RRSCO CLEANUP ALTERNATIVE

REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK

PREPARED FOR
441 OHIO STREET, LLC



2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0292-013-002

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FIGURE 7	CONCEPTUAL COVER SYSTEM LAYOUT REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT 441 OHIO STREET SITE BCP SITE NO. C915285 BUFFALO, NEW YORK PREPARED FOR 441 OHIO STREET, LLC	 2558 HAMBURG TURNPIKE SUITE 300 BUFFALO, NY 14218 (716) 856-0599
JOB NO.: 0292-013-002		
DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC.		

APPENDIX A

PROJECT PHOTOLOG

SITE PHOTOGRAPHS

Photo 1:



Photo 2:



Photo 3:



Photo 4:



Photo 1: Interior boring location SB-113/ TMW-6 (looking north)

Photo 2: Interior loading dock (void space)

Photo 3: Interior boring location SB-111/TMW-5 (looking north)

Photo 4: Advancement of SB-112 (looking north)

SITE PHOTOGRAPHS

Photo 5:



Photo 6:



Photo 7:



Photo 8:



Photo 5: Concrete coring at SB-108/TMW-3

Photo 6: Example of surface/near-surface soil/fill

Photo 7: Exterior boring location SB-104 (looking west)

Photo 8: Advancement of SB-102 (looking northwest)

APPENDIX B

BOREHOLE LOGS & TEMPORARY MONITORING WELL COMPLETION DETAILS

Project No: 0292-013-002

Borehole Number: SB-101

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Topsoil							
	-0.5								
	0.5	Fill Grey, moist, mostly fine sand with slag pieces, wood debris, fine black sand, loose when disturbed					0.0		
	-2.0								
	2.0	Reworked Lean Clay with Fill Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-1	NA	2.9		0.0		
	-4.0								
	4.0	As above, refusal at 7.5 fbgs (suspected old building foundation)					0.0		
5.0								Sample collected	
			S-2	NA	3.8		0.0		
							0.0		
	-7.5								
	7.5	End of Borehole							
10.0									

Drilled By: Trec Environmental Inc.

Drill Rig Type: Geoprobe

Drill Method: Direct Push with 4' macro-core

Comments:

Drill Date(s): 2-18-15

Hole Size: 3"

Stick-up: NA

Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-102/ TMW-1

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

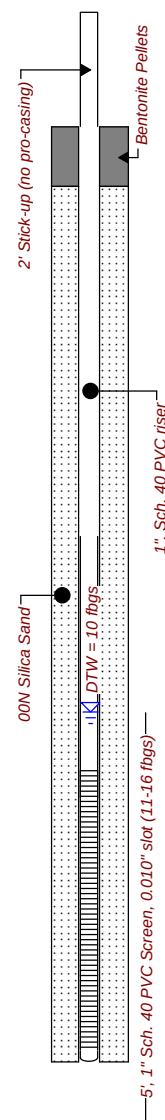
Site Location: 441 Ohio Street

Checked By: NM



Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
0.0		Ground Surface							
0.0		Topsoil							
-0.5									
0.5		Fill							
		Grey, moist, mostly fine sand with slag pieces, wood debris, fine black sand, loose when disturbed						Sample collected	
-2.0		Reworked Lean Clay with Fill	S-1	NA	2.6		0.0		
2.0		Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive					0.0		
3.0		As above					0.0		
-4.0			S-2	NA	2.8		0.0		Sample collected
4.0							0.0		
							0.0		
8.0		Sandy Lean Clay	S-3	NA	3.8		0.0		
		Brown, moist to wet (10'), mostly medium plasticity fines, some fine sand, soft, massive					0.0		
-12.0		As above, wet					0.0		
12.0			S-4	NA	4.0		0.0		
13.0							0.0		
-16.0							0.0		
16.0		End of Borehole							
18.0									



Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-18-15

Hole Size: 3"
Stick-up: 2'
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-103

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Topsoil							
	-0.5								
	0.5	Fill Grey, moist, mostly fine sand with slag pieces, wood debris, fine black sand, loose when disturbed					0.0		
	-2.0								
	2.0	Reworked Lean Clay with Fill Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-1	NA	2.7		0.0		
	-4.0								
	4.0	As above					0.0		
5.0								Sample collected	
			S-2	NA	2.8		0.0		
							0.0		
	-8.0								
	8.0	Sandy Lean Clay Brown, moist to wet (9'), mostly medium plasticity fines, some fine sand, soft					0.0		
10.0			S-3	NA	4.0		0.0		
							0.0		
	-12.0								
	12.0	As above, wet					0.0		
								Sample collected	
			S-4	NA	4.0		0.0		
							0.0		
15.0									
	-16.0								
	16.0	End of Borehole							
20.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-18-15

Hole Size: 3"
Stick-up: NA
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-104

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0 -0.5 0.5	Topsoil							
		Fill Grey, moist, mostly fine sand with slag and brick pieces, wood debris, fine black sand, loose when disturbed	S-1	NA	2.4		0.0 0.0	Sample collected	
	-4.0 4.0	Reworked Lean Clay with Fill Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-2	NA	2.2		0.0 0.0	Sample collected	
	-8.0 8.0	Sandy Lean Clay Brown, moist to wet (9'), mostly medium plasticity fines, some fine sand, soft	S-3	NA	3.7		0.0 0.0		
	-12.0 12.0	As above, wet	S-4	NA	4.0		0.0 0.0		
	-16.0 16.0	End of Borehole							
20.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-18-15

Hole Size: 3"
Stick-up: NA
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-105

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0 -0.5 0.5	Topsoil							
		Fill Grey, moist, mostly fine sand with slag pieces, wood debris, fine black sand, loose when disturbed					0.0	Sample collected	
	-2.0 2.0	Reworked Lean Clay with Fill Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-1	NA	2.4		0.0		
	-4.0 4.0	As above					0.0		
5.0			S-2	NA	2.9		0.0	Sample collected	
							0.0		
	-8.0 8.0	Sandy Lean Clay Brown, moist to wet (9'), mostly medium plasticity fines, some fine sand, stiff, soft					0.0		
10.0			S-3	NA	4.0		0.0		
	-12.0 12.0	As above, wet					0.0		
			S-4	NA	4.0		0.0		
15.0							0.0		
	-16.0 16.0	End of Borehole							
20.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-18-15

Hole Size: 3"
Stick-up: NA
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-106/ TMW-2

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

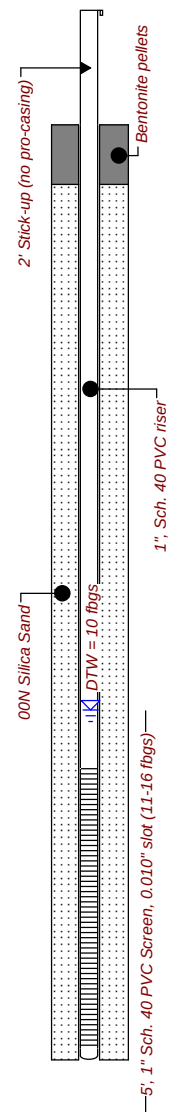
Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
	0.0	Ground Surface							
	-0.5	Topsoil							
	0.5	Fill Grey, moist, mostly fine sand with slag and brick pieces, wood debris, fine black sand, loose when disturbed	S-1	NA	2.8		0.0		
3.0							0.0		
	-4.0	Reworked Lean Clay with Fill Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-2	NA	3.0		0.0	Sample collected	
	4.0						0.0		
8.0							0.0		
	-8.0	Sandy Lean Clay Brown, moist to wet (10'), mostly medium plasticity fines, some fine sand, stiff, soft	S-3	NA	3.7		0.0		
	8.0						0.0		
	-12.0	As above, wet					0.0	Sample collected	
	12.0						0.0		
13.0			S-4	NA	4.0		0.0		
							0.0		
	-16.0	End of Borehole							
	16.0								
18.0									



Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-18-15

Hole Size: 3"
Stick-up: 2'
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-107

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0 -0.5 0.5	Topsoil							
		Fill Grey, moist, mostly fine sand with slag and brick pieces, wood debris, fine black sand, loose when disturbed	S-1	NA	2.5		0.0 0.0	Sample collected	
	-4.0 4.0	Reworked Lean Clay with Fill Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-2	NA	2.9		0.0 0.0	Sample collected	
	-8.0 8.0	Sandy Lean Clay Brown, moist to wet (9'), mostly medium plasticity fines, some fine sand, soft	S-3	NA	4.0		0.0 0.0		
	-12.0 12.0	As above, wet	S-4	NA	4.0		0.0 0.0		
	-16.0 16.0	End of Borehole							
20.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-18-15

Hole Size: 3"
Stick-up: NA
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-108/ TMW-3

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

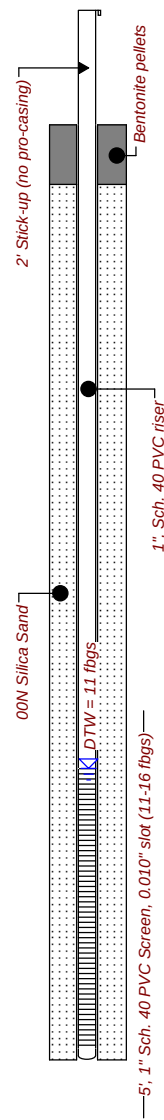
Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
	0.0	Ground Surface							
	0.0	Concrete							
	-1.0	Reworked Lean Clay with Fill							
	1.0	Grey, moist, mostly medium plasticity fines, little fine sand, gravel, brick and wood debris, firm, massive	S-1	NA	2.6		0.0		
3.0							0.0	Sample collected	
	-4.0	Sandy Lean Clay					0.0		
	4.0	Brown, moist, mostly medium plasticity fines, some fine sand, stiff, massive	S-2	NA	2.9		0.0		
							0.0		
8.0	-8.0	As above					0.0		
	8.0						0.0		
	-10.0	As above, grey, moist to wet (11'), soft	S-3	NA	4.0		0.0	Sample collected	
	10.0						0.0		
	-12.0	As above, wet					0.0		
	12.0						0.0		
13.0			S-4	NA	4.0		0.0		
							0.0		
	-16.0	End of Borehole					0.0		
	16.0								
18.0									



Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-17-15

Hole Size: 3"
Stick-up: 2'
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-109/ TMW-4

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
	0.0 0.0	Ground Surface							
		Void Space Void space between wood floor and earthen floor	S-0	NA	0				2' Stick-up (no pro-casing)
3.0									
	-4.0 4.0	Fill Grey, moist, mostly gravel and concrete fill, some medium plasticity fines, little fine sand, loose when disturbed, massive	S-1	NA	2.9		0.0		Sample collected 1" Sch. 40 PVC riser
							0.0		
8.0	-8.0 8.0	As above					0.0		Sample collected 5' 1" Sch. 40 PVC Screen, 0.010" slot (11-16 fbgs)
							0.0		
	-10.0 10.0	Sandy Lean Clay Grey, moist to wet (11'), mostly medium plasticity fines, some fine sand, soft, massive	S-2	NA	3.5		0.0		
							0.0		
	-12.0 12.0	As above, wet					0.0		
							0.0		
13.0			S-3	NA	4.0		0.0		
							0.0		
	-16.0 16.0	End of Borehole							
18.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-17-15

Hole Size: 3"
Stick-up: 2
Datum: Mean Sea Level
Sheet: 1 of 1

Borehole Number: SB-110

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25		Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol				
0.0	0.0	Ground Surface								
		Void Space Void space between wood floor and earthen floor	S-0	NA	0					

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-17-15

Hole Size: 3"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-111/ TMW-5

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
	0.0 0.0	Ground Surface							
		Void Space Void space between wood floor and earthen floor							
3.0			S-0	NA	NA				
	-6.0 6.0	Fill Grey, moist, mostly gravel and concrete fill, some medium plasticity fines, little fine sand, loose when disturbed, massive							
8.0			S-1	NA	3.8		0.0	Sample collected	
	-9.0 9.0	Lean Sandy Clay Grey, moist, mostly medium plasticity fines, some fine sand, soft, massive					0.0		
	-10.0 10.0	As above, moist to wet (11')					0.0		
			S-2	NA	4.0		0.0		
13.0							0.0		
	-14.0 14.0	As above, wet					0.0		
			S-3	NA	4.0		0.0		
							0.0		
18.0	-18.0 18.0						0.0		

2' Stick-up (no pro-casing)

1" Sch. 40 PVC riser

1" Sch. 40 PVC Screen, 0.010" slot (13-18 fbgs)

—5', 1" Sch. 40 PVC riser, 0.010" slot (13-18 fbgs)—

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-17-15

Hole Size: 3"
Stick-up: 2'
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-112

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

Site Location: 441 Ohio Street

Checked By: NM



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2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Concrete							
	-1.0						0.0	Sample collected	
	1.0	Fill Grey, moist, mostly gravel and concrete fill, some medium plasticity fines, little fine sand, loose when disturbed, massive	S-1	NA	2.6		0.0		
	-4.0						0.0	Sample collected	
	4.0	As above, red brick pieces					0.0		
5.0									
			S-2	NA	2.9		0.0		
	-8.0						0.0		
	8.0	As above					0.0		
10.0	-10.0		S-3	NA	4.0		0.0		
	10.0	Sandy Lean Clay Grey, moist to wet (11'), mostly medium plasticity fines, some fine sand, soft, massive					0.0		
	-12.0						0.0		
	12.0	As above, wet					0.0		
			S-4	NA	4.0		0.0		
							0.0		
15.0									
	-16.0						0.0		
	16.0	End of Borehole							
20.0									

Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-17-15

Hole Size: 3"
Stick-up: NA
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-002

Borehole Number: SB-113/ TMW-6

Project: Remedial Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: PWW

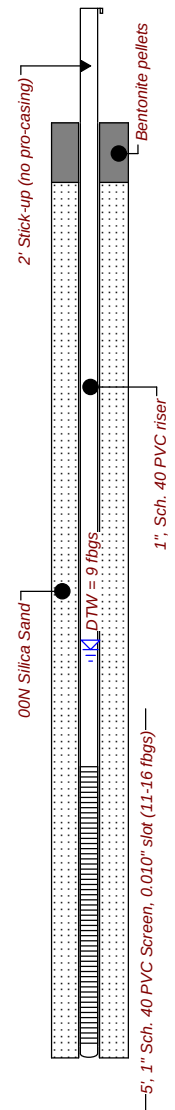
Site Location: 441 Ohio Street

Checked By: NM



Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
	0.0	Ground Surface							
	0.0	Concrete							
	-1.0	Fill							
	1.0	Grey, moist, mostly gravel and concrete fill, some medium plasticity fines, little fine sand, loose when disturbed, massive	S-1	NA	2.8		0.0		
3.0							0.0		
	-4.0	As above							
	4.0		S-2	NA	3.1		0.0	Sample collected	
							0.0		
8.0	-8.0	As above, brick pieces					0.0		
	8.0								
	-9.0	Sandy Lean Clay					0.0		
	9.0	Grey, moist to wet (9"), mostly medium plasticity fines, some fine sand, soft, massive	S-3	NA	4.0		0.0		
	-12.0	As above, wet					0.0		
	12.0								
13.0			S-4	NA	4.0		0.0		
	-16.0	End of Borehole					0.0		
	16.0								
18.0									



Drilled By: Trec Environmental Inc.
Drill Rig Type: Geoprobe
Drill Method: Direct Push with 4' macro-core
Comments:
Drill Date(s): 2-17-15

Hole Size: 3"
Stick-up: 2'
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-1

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



Benchmark Environmental Engineering & Science, PLLC
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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	-1.2	Fill reworked grey clayey fill with slag pieces, moist							
	1.2	Fill black fine sand with fine gravel, loose when disturbed, moist	1		2		0.0	Sample Collected	
	-4.0	Fill As above							
5.0	4.0								
	-5.5	Lean Clay grey, some silt, medium plasticity, soft, moist	2		3		0.0		
	5.5								
	-8.0	Lean Clay As Above, with increasing fine sand at 11 feet. Wet							
	8.0								
10.0			3		4		0.0		
	-12.0	End of Borehole							
	12.0								
15.0									
20.0									

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-2

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0 0.0	Ground Surface							
		Fill grey fine sand with slag pieces, some fine black sand and gravel at 4.0 ft	1		1		0.0	Sample Collected	
	-4.0 4.0	Fill reworked grey clayey fill with some fine sand and gravel, moist	2		3		0.0		
	-8.0 8.0	Lean Sandy Clay grey, soft, medium plasticity wet at 9.0 ft	3		4		0.0		
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Approx depth to groundwater

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-3

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0 0.0	Ground Surface							
		Fill grey fine sand with slag pieces, some fine black sand and gravel at 4.0 ft	1		3		0.0	Sample Collected	
	-4.0 4.0	Fill black fine sand and gravel, trace of fine white sand and brick fragments	2		2		0.0		
	-8.0 8.0	Lean Sandy Clay grey, soft, medium plasticity wet at 9.0 ft, increasing fine sand with depth.	3		4		0.0		
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Approx depth to groundwater

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-4

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0 0.0	Ground Surface							
	-1.6 1.6	Fill black, fine sand and gravel, some fine brown sand, moist, loose when disturbed	1		2		0.0	Sample Collected	Approx depth to groundwater
	-4.0 4.0	Fill reworked grey dense clayey fill, medium plasticity, dry							
5.0	-5.0 5.0	Fill clay fill as above, dry	2		3		0.0		
	-8.0 8.0	Lean Sandy Clay grey, soft, medium plasticity wet at 9.0 ft, increasing fine sand with depth.							
10.0		Lean Sandy Clay As above, wet at 9.0ft, increasing fine sand at 11 ft.	3		4		0.0		
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-5

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0 0.0	Ground Surface							
		Fill black, fine sand and gravel, trace of fine white sand, moist, loose when disturbed							
	-2.0 2.0	Fill reworked dense clayey fill, medium plasticity, dry	1		3		0.0	Sample Collected	
	-4.0 4.0	Fill grey clayey fill as above, moist							
5.0			2		4		0.0		
	-8.0 8.0	Lean Sandy Clay grey, soft, medium plasticity wet at 9.0 ft, increasing fine sand with depth.							
	-9.0 9.0	Fine Sand grey, loose, wet	3		4		0.0		
10.0									
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level
Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-6

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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Buffalo, NY 14218
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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Fill black, fine sand and gravel, trace of slag pieces, moist, loose when disturbed							
		Fill reworked grey clayey fill, medium plasticity, soft, moist	1		1		0.0	Sample Collected	
	-4.0 4.0	Fill grey clayey fill as above, moist							
5.0	-5.0 5.0	Lean Sandy Clay grey, soft, medium plasticity wet at 9.0 ft, increasing fine sand with depth.	2		3		0.0		
	-8.0 8.0	Fine Sand grey, loose, wet,							
10.0			3		4		0.0		
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Approx depth to groundwater

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level
Sheet: 1 of 1

Borehole Number: SB-7

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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SUBSURFACE PROFILE			SAMPLE				PID VOCs 0 ppm 25 12.5	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
		<i>Topsoil</i> brown, loose, moist							
			1		0.25		0.0		
-4.0	4.0	No sample recovery							
5.0					0				
-8.0	8.0	No sample recovery							
10.0					0				
-12.0	12.0	End of Borehole							
15.0									
20.0									

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0292-013-001

Borehole Number: SB-8

Project: 441 Ohio Street Phase II Investigation

A.K.A.:

Client: 441 Ohio Street, LLC

Logged By: RLD

Site Location: Buffalo, New York

Checked By:



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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0 0.0	Ground Surface							
		Fill reworked grey clayey, fill some fine sand and gravel, medium density, dry	1		3		0.0	Sample Collected	
		Fill grey clayey fill as above							
5.0	-4.0 4.0								
		Lean Clay grey, medium density, medium plasticity, moist	2		4		0.0		
	-6.0 6.0								
		Lean Clay as above, wet							
	-8.0 8.0								
10.0	-10.0 10.0	Sandy Lean Clay soft, wet, increasing fine sand at 11 ft.	3		4		0.0		
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Drilled By: DDS, Inc
Drill Rig Type: Geoprobe
Drill Method: Direct Push
Comments:
Drill Date(s): 11/6/13

Hole Size: 3
Stick-up: n/a
Datum: Mean Sea Level
Sheet: 1 of 1

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**Geotechnical Engineering Report for
Proposed Buffalo River Lofts
441 Ohio Street
Buffalo, New York**

Prepared For:

**Tredo Engineers
885 River Rock Drive
Suite 101
Buffalo, New York 14207**

Prepared By:

**Empire Geo-Services, Inc.
5167 South Park Avenue
Hamburg, New York 14075**



**Project No.: BE-13-134
August 2013**

EMPIRE **GEO** SERVICES, INC.



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August 19, 2013
Project No. BE-13-134

Mr. Matthew Etu, P.E.
Tredo Engineers
85 River Rock Drive, Suite 101
Buffalo, New York 14207

Re: Subsurface Exploration
and Geotechnical Engineering Evaluation
Proposed Buffalo River Lofts
441 Ohio Street
Buffalo, New York

Dear Mr. Tredo:

Empire Geo-Services, Inc. (Empire) is pleased to submit two copies of this letter report, which summarizes our geotechnical subsurface explorations and recommendations with regard to the proposed Buffalo River Lofts planned at 441 Ohio Street in Buffalo, New York. We have also e-mailed you an electronic copy (pdf file format) of this report, for your use and distribution as appropriate.

This report summarizes the findings of the subsurface exploration program completed, and presents geotechnical recommendations for design and construction of the foundations and slab-on-grade floor construction for the proposed building, along with associated site preparation work. This work was completed for Tredo Engineers (Tredo), in general accordance with our July 15, 2013 proposal.

SITE DESCRIPTION

As shown on Figure 1, the proposed project site is located off the west side of Ohio Street (street address 441 Ohio Street), just north of the intersection of Ohio Street and Louisiana Street, in the City of Buffalo, New York. An existing, generally single story, metal sided building currently occupies the property and is slated for demolition. The existing structure was the previous Great Lakes Paper Stocks, Inc. or a.k.a. the "Erie Freight House".

It is our understanding the existing building contains a depressed crawl space structure. The existing building appears is supported on a spread type foundation

system consisting generally of combination stone blocks and poured concrete foundations bearing on fill and indigenous soil deposits, as determined from the subsurface exploration program, discussed in more detail below.

The area surrounding the building consists generally of a fill parking lot on the north and south sides of the building, both with an access drive off of Ohio Street. Along the east side of the building are remnants of an old railroad line which is now overgrown. The Buffalo River abuts the west side of the existing building. The topography of the site is generally flat based on the ground surface elevations (El.) obtained at the exploration locations which vary between El. 98.5 feet and El. 99.8 feet, based on the arbitrary elevation datum, as described below.

PROJECT DESCRIPTION

Based on the information provided by Tredo, the proposed Buffalo River Lofts building is to consist of a five story, metal framed structure. The existing building is located within the footprint of the proposed new building structure, with the new building extending beyond the building limits of the existing structure. Accordingly, the existing building will be demolished and the foundations removed as necessary for construction of the new building. However, it is our understanding, the west wall of the existing building, which abuts the Buffalo River, is currently planned to remain.

The ground floor of the proposed new building is planned to consist generally of at-grade below structure parking. The proposed building and ground floor parking were planned to be supported on a shallow spread foundation system with the at grade floor constructed as slab on grade. However, based on the subsurface conditions encountered, support of the building structure on a deep foundation system end bearing on the bedrock will be necessary. No basement or crawl space structures are planned. The proposed new building is currently in the preliminary design phase, therefore, estimated foundation loads were not available to Empire prior to preparation of this report. The proposed new building structure will also be designed for seismic conditions per the Building Code of New York State (2010 Edition).

SUBSURFACE EXPLORATION PROGRAM

The subsurface exploration program completed at the proposed project site consisted of two (2) test borings, along with the installation of one (1) groundwater observation well, and four (4) test pits. The test borings, designated as B-1 and B-2, were completed by SJB Services, Inc. (SJB), our affiliated drilling

and testing company, on July 26, 2013. Following completion of test boring B-1, SJB installed a groundwater observation well at this location. The test pits, designated as TP-1 through TP-4, were excavated by Savarino Companies (Savarino) on July 23, 2013.

The exploration locations were determined on a site plan and in the field jointly by a representative of Savarino and Empire/SJB. The approximate locations of the subsurface exploration locations are shown on Figure 2. Laser survey level techniques were used to determine the relative ground surface elevations at the exploration locations using the rim of the manhole located at the southeast corner of the proposed project site as a benchmark. The approximate benchmark location is shown on Figure 2 and was assigned an arbitrary elevation datum of 100.00 feet by SJB.

The test borings were advanced through the overburden until sample spoon and auger refusal were met at depths of 30.0 feet and 23.5 feet, respectively using hollow stem auger and split spoon sampling techniques attached to a Diedrich model D-50 rubber track mounted drill rig. Split spoon samples and Standard Penetration Tests (SPT) were taken continuously from the ground surface to a depth of 12 feet and in intervals of 5 feet or less below the zone of continuous sampling until sample spoon refusal was met at a depth of 30 feet (B-1) or until a depth of 22 feet (B-2). Split spoon samples and SPT were completed in general accordance with ASTM D1586 – “*Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils*”.

The refusal material encountered in boring B-2 was cored using a NQ size double tube core barrel in accordance with ASTM D 2113 – “*Standard Practice for Rock core Drilling and Sampling of Rock for Site Investigation*”. Five (5) feet of bedrock was cored at this location after reaching auger refusal.

A groundwater observation well was installed in test boring B-1 to confirm the groundwater level on the site. The well installation consisted of a 2-inch diameter PVC well screen and riser pipe with sand filter, bentonite seal and soil backfill. The well installation detail is presented with the boring log in Appendix A.

A geologist from SJB prepared the test boring logs based on visual observations of the recovered soil samples and bedrock core, along with review of the driller’s field notes. The soil samples were described based on a visual/manual estimation of the grain size distribution, along with characteristics such as color, relative density, consistency, moisture, etc. The recovered rock core sample was also described, including characteristics such as color, rock type, hardness, weathering,

bedding thickness, core recovery and rock quality designation (RQD). The test boring logs are presented in Appendix A, along with general information and a key of terms and symbols used to prepare the logs.

The test pits were excavated by Savarino using a Kubota model KX1213 rubber track mounted backhoe. The test pit conditions were observed, photographed and logged by a geotechnical engineer from Empire. The test pit logs are included in Appendix B. Photographs of the general conditions encountered in the test pits are included in Appendix C.

SUBSURFACE CONDITIONS

General

The general stratigraphy encountered in the test borings and test pits included fill soils followed by indigenous silty clay, clayey silt, silt, sand and peat soil deposits overlying Limestone bedrock. The soil stratigraphy encountered, along with the bedrock and groundwater conditions observed are described in more detail below and on the boring logs in Appendix A.

The foundation wall of the existing building structure was exposed at each test pit location. The foundation wall and footer, when encountered, consisted generally of stone block. At test pit location TP-4, the upper three feet of the foundation wall consisted of formed and placed concrete bearing on a stone wall. A footing was not apparent at test pit locations TP-3 and TP-4. Refer to the test pit logs and photographs included in Appendix B and Appendix C, respectively for more information.

Fill Materials

In general, black cinders and slag intermixed with fine to coarse sand and silt was encountered at the ground surface of each exploration location. In some cases, brown-black to red-brown and black, clayey silt and silty clay fill soils were encountered beneath the cinder and slag fill. Gravel, organics, brick, clay tile, mulch, shale, stone cobbles and blocks, and wood were noted within the fill soils at varying locations and depths. During excavation of the test pits, occasional stone blocks and slag cobbles were encountered. However, in general, the excavation effort through the fill was relatively easy to moderate.

The fill was found to extend to depths varying from 4 feet to 10 feet below the existing site grades at the exploration locations. The following table summarizes the fill depths/elevations encountered at the boring and test pit locations.

Approximate Fill Depths and Bottom Elevations		
Test Boring	Ground Surface Elevation (feet)	Fill Depth / Bottom Elevation (feet)
B-1	99.8	4.0 / 95.8
B-2	99.5	10.0 / 89.5
TP-1	99.8	5.5 / 94.3
TP-2	98.8	6.0 / 92.8
TP-3	98.5	4.5 / 94.0
TP-4	99.4	6.0 / 93.4

The fill soils were found to extend to test pit completion at TP-4, therefore, it is indeterminate the actual depth at which the fill extends at this location. It should be expected that the fill will vary between and away from the boring locations and are expected to extend at least to the bottom of previous excavations for the existing building foundations and utility structures.

Indigenous Soils

The indigenous soil deposits encountered at the exploration locations consist of varying proportions of gray-black, gray, olive-gray, brown-gray and orange-brown, silty clay, clayey silt, silt, and fine to coarse sand. Occasional peat and organic seams as well as trace amounts of wood were noted within the indigenous soil deposits at varying locations and depths. These indigenous soils vary in composition between CL, ML and SM group soils using the Unified Soil Classification System (USCS).

The Standard Penetration Test (SPT) “N” values obtained within the indigenous soil deposits range from 1 to 7, indicating the relative density of the generally low to non-plastic sand and silt soil deposits are “very loose” while the cohesive silty clay and clayey silt vary from a “very soft” to “medium” consistency. The excavation effort within the indigenous soils, although limited, was noted to be relatively easy.

Refusal Conditions / Bedrock

The test borings were advanced until auger refusal was encountered at depths of 30.0 feet (B-1) and 23.5 feet (B-2). Five feet of bedrock was cored at test boring location B-2 following auger refusal. The bedrock core recovered consisted of gray, medium hard, sound, thinly bedded to thickly bedded, Limestone rock. Core recovery and rock quality designation (RQD) value for the recovered rock core were 100% and 88%, respectively. Based on the RQD value, the rock mass quality of bedrock is considered to be good.

Rock coring was not performed at the boring location B-1, therefore, the exact nature of the refusal material encountered at this location was not determined (i.e. bedrock or possibly a cobble/boulder obstruction), although it appears in general that it is bedrock.

Presuming the auger refusal encountered at boring location B-1 is actually bedrock, it appears the bedrock elevation slopes down from about El. 76 feet in the southern portion of the site to El. 70 feet in the northern portion of the site.

Groundwater Conditions

Following coring operations at boring location B-2, freestanding water was recorded at 4.8 feet. We note, however, water was added to this test hole to facilitate rock coring.

Freestanding water was measured at a depth of about 5 feet below the existing ground surface following completion of the excavation at test pit location TP-2. However, a water line was broken during excavation of the test pit, therefore, this water level measurement is not indicative of the groundwater conditions present on the site.

A 2-inch diameter, PVC, groundwater observation well was installed in boring B-1 following completion of overburden drilling and sampling. The well riser pipe extends about 2.6 feet above the existing ground surface.

A geologist from SJB visited the site on August 12, 2013 to record the water level in the well. The water level recorded at test boring B-1 was measured at a depth of about 9.1 feet below the existing ground surface corresponding to El. 90.7 feet.

At test boring location B-2, the upper fill soils, at varying depths, were noted to be in a moist-wet to wet condition. During excavation of the test pit TP-1, groundwater was noted to be seeping in the excavation at a depth of about 5 feet. The groundwater encountered is considered to be perched or trapped condition.

The amount of groundwater seepage encountered will be dependent upon the soil conditions encountered, as the more granular sand, cinders and slag will yield a larger quantity of water compared to the clayey silt and silty clay fill. Perched groundwater conditions can be particularly prevalent following heavy or extended periods of precipitation and during seasonally wet periods.

The groundwater conditions present on the site are expected to correspond with the water levels of the adjacent Buffalo River and nearby Lake Erie water bodies. Therefore, it should be expected that groundwater conditions will vary with fluctuations in the levels of the Buffalo River and Lake Erie.

GEOTECHNICAL CONSIDERATIONS AND RECOMMENDATIONS

General

Construction of the proposed Buffalo River Lofts will be impacted primarily by the uncontrolled fill present across the site, as well as the underlying very soft to soft and very loose to loose indigenous soil deposits encountered. Based on the subsurface conditions encountered at the test boring locations, the fill soils extend to depths varying from about 4 feet to 10 feet below the existing site grades. Settlement of conventional spread foundations constructed directly on or over the existing fill soils can be variable and difficult to predict, especially when organics, peat, wood or large debris/rubble is present.

Due to the presence of the underlying soft/loose and peat/organic soil deposits, even if the fill soils were removed in their entirety, the building structure would be susceptible to unsuitable bearing conditions and excessive settlement if founded on a conventional spread foundation system. Accordingly, considering the limitations on the use of spread foundations, it is our opinion that a deep foundation consisting of a driven H-pile or pipe pile type foundation system bearing on the underlying Limestone bedrock will be best suited to support the proposed building.

Because of the amount of uncontrolled fill present and the relatively high groundwater conditions (i.e. about 8 feet), in correlation with the anticipated foundation loads, other deep foundation systems such as drilled piers, drilled micro-piles and helical piers, may not be either economically or logistically as feasible, as compared to driven pipe piles. Therefore, it appears driven steel piles would be better suited from both a constructability and cost standpoint. Recommendations for driven steel piles are presented further below.

The existing fill present may also impact the long term performance of the slab-on-grade floor construction. As mentioned above, the depth of the fill soils generally ranges between 4 feet to 10 feet. The fill and organic materials (i.e. peat, wood, etc.) can undergo potentially excessive and unpredictable differential settlement which could cause cracking and distortion of the ground floor parking slab. Therefore, we would typically recommend the existing fill and underlying organic soils be removed and replaced with a properly controlled and compacted engineered fill beneath the slab-on-grade areas. However, due to the deeper extent of these soils, as well as the underlying unsuitable indigenous soils, complete removal of these soils will not be economically or feasibly practical.

Accordingly, the owner could consider an approach of removing a portion of the existing fill and providing some additional Subbase Stone, along with a heavy duty stabilization geotextile, beneath the slab-on-grade construction to stiffen the subgrades and reduce some of the differential settlement effects, if it was to occur. There will, however, remain some uncertainties with this approach, which the owner would need to accept.

If the Owner is willing accept the risks, then we recommend the measures presented below be implemented as minimum requirements for constructing the slab-on-grade over the existing fill soils. In addition, it is suggested the floor slabs be designed as a structurally reinforced slab to help bridge and reduce the risks of any localized subsidence effects, should they occur. We would also recommend the slab be allowed to float independently on the underlying subgrades and not be connected to, or supported on, the pile caps and grade beams.

- After removal of the existing building foundations, slabs and any asphalt pavement and excavation to the proposed subgrades, as necessary, the existing fill subgrades should be thoroughly compacted and properly proof rolled, evaluated, and prepared in accordance with our recommendations presented further below.
- The slab-on-grade system should then be constructed over a minimum 18-inch thick layer of compacted Subbase Stone, which is properly placed and compacted over the prepared subgrades. Recommendations for the Subbase Stone are provided in Appendix D.
- Any deleterious materials, such as organics, soft soils, debris, etc., which are present within the fill soils at the bottom of the subgrade excavation,

should be further undercut, removed, and replaced with additional Subbase Stone.

- A suitable heavy duty stabilization/separation geotextile, such as Mirafi 600X, should be placed between the existing fill subgrades and the overlying Subbase Stone layer.

Contingencies should be planned during construction for additional undercutting which potentially could become necessary.

If the owner is not willing to accept the risk for some possible future floor slab settlement, due to the existing uncontrolled fill soils, then it will be necessary to design the floor slab as a structural slab supported by the deep foundation system.

In addition, it will be necessary to protect the footings and foundation wall of the existing building structure which is to remain against potential undermining and lateral instability during demolition and removal of the remaining building. Proper bracing of existing foundation wall, which will be exposed during the demolition phase and during construction excavation, must also be considered. It is recommended that proper planning design and construction be implemented to protect the existing foundation wall as appropriate.

As part of the existing building demolition and site preparation, it will be also necessary to properly remove all existing foundations, slabs and buried structures/utilities from within the proposed building areas, and to properly backfill all resulting excavations in a stringently controlled manner in accordance with the recommendations presented in this report. Such backfilling should be monitored, tested and properly documented on a “full-time” basis by qualified geotechnical engineering personnel. The backfilling within the existing depressed crawl space area should proceed several months prior to the parking slab on grade floor construction to limit post construction settlement effects on the building floor slab.

More detailed recommendations to assist in planning for site development and design of building foundations and floor slabs are provided further below.

Driven Pile Foundation Design

The Limestone bedrock will provide a suitable bearing stratum for supporting the proposed building using end bearing H-piles or pipe piles driven to refusal on the bedrock. The piles should be equipped with a driving shoe to limit potential

damage when driving through the fill or onto the competent bedrock. Bedrock was encountered at a depth of 23.5 feet (El. 76.0 feet) at boring location B-2. It appears the bedrock was encountered at a depth of 30.0 feet (El. 69.8 feet) at test boring location B-1, as discussed above.

An H-pile, driven to absolute refusal on the bedrock, may be designed for an allowable axial capacity equal to 33% of the pile yield strength or 16.5 kips per square inch (ksi), whichever is less, times the cross sectional area of the pile. We recommend a 10% reduction in the cross sectional area be considered to account for potential corrosion and section loss over the pile life. In addition, it is recommended the piles be coated with a suitable coal tar epoxy to help limit potential corrosion due to the fill soils. The pile coating should conform with NYSDOT Standard Specification Item No.11572.0101, as a minimum.

Based on the above criteria, an HP12 x 53 section (Grade 50 steel), with a cross sectional area of 15.5 square inches, would provide an allowable axial capacity of about 115 tons per pile, when accounting for the 10% section loss. The piles, however, should be driven and tested for an ultimate capacity of 256 tons to account for the above reduction, assuming an HP 12 x 53 is used.

The following table summarizes the allowable axial compressive capacity and required ultimate test capacity for two H-pile sections based on the above design criteria. These capacities assume the use of Grade 50 Steel, as well as account for the 10% section loss. Alternative H-pile sections could also be used to obtain a different allowable axial capacity, using the same criteria outlined above.

H-Pile Allowable and Ultimate Test Capacities		
Pile Section	Allowable Axial Compressive Capacity per H-Pile	Required Ultimate Test Capacity
HP 12 x 53	115 tons	256 tons
HP 10 x 42	92 tons	205 tons

The ultimate test capacities presented above assume a Factor of Safety of 2.0 as required by the Building Code of New York State, as well as consider the section reduction for potential corrosion loss.

Pipe piles can also be considered. Pipe piles should have a minimum wall thickness of at least 0.313 inches and may be driven open ended or with a closed end, as determined appropriate by the pile driving contractor. If a closed end pipe pile is used, a flat steel plate, at least 0.50 inches thick, should be welded to the

pile to form the closed end. Following driving and acceptance, the annulus of the pipe pile should be filled with concrete having a 28-day compressive strength (f'_c) of 3,000 psi or greater.

A pipe pile, driven to refusal on the bedrock, may also be designed for an allowable axial capacity equal to 33% of the pile yield strength or 16.5 kips per square inch (ksi), whichever is less, times the cross sectional area of the pipe pile. As with the H-piles, a 10% reduction in the cross sectional area should also be considered to account for potential corrosion / section loss over the pile life. The pipe piles should also be coated with a suitable coal tar epoxy coating to help limit potential corrosion, as discussed above for H-piles.

The following table summarizes the allowable axial compressive capacity and required ultimate test capacity for various pipe pile sections based on the above design criteria. These capacities assume the use of Grade 50 Steel. Other pipe pile sections could also be used, based on current product availability, to obtain different allowable axial capacities, provided the same design criteria outlined above is used.

Pipe Pile Section	Allowable Axial Compressive Capacity per Pipe Pile	Required Ultimate Test Capacity
12.750" O.D. Pipe Pile (0.375" Wall Thickness)	108 tons	241 tons
10.750" O.D. Pipe Pile (0.365" Wall Thickness)	88 tons	197 tons
8.625" O.D. Pipe Pile (0.322" Wall Thickness)	62 tons	139 tons

The ultimate load test capacities presented above assume a Factor of Safety of 2.0 as required by the Building Code of New York State, as well as consider the section reduction for potential corrosion loss.

Driven pile foundations end bearing on the bedrock should undergo insignificant total settlement (i.e. generally limited to the elastic shortening of the pile) when designed and constructed in accordance with our recommendations.

Driven piles should be spaced a minimum of 3 pile widths apart, or three feet, whichever is greater. At this spacing, no group reduction factor is considered

necessary. Pile caps and grade beams for driven pile foundations should be embedded a minimum of 4 feet below final exterior grades for frost protection.

At least 4 piles should be dynamically tested in accordance with *ASTM D 4945 – “Standard Test Method for High Strain Dynamic Testing of Piles”* to confirm that the required pile test capacity has been obtained and to determine the final driving criteria for the production piles.

Slab-on-Grade Floor Design

Where the floor system is constructed as slab-on-grade over the existing fill, it is recommended that a minimum of 18-inches of Subbase Stone be placed beneath the slab-on-grade floor. For this option, the owner must be willing to accept the long term settlement risks with leaving the fill soils in place beneath the floor. Recommendations for Subbase stone are provided in Appendix D.

A suitable stabilization/separation geotextile, such as Mirafi 600X, should be placed over the existing fill soil subgrades prior to placement of the Subbase Stone layer. The existing soil subgrades should be properly prepared and evaluated in accordance with our recommendations presented further below prior to placing the geotextile and controlled fill material(s).

Floor slabs constructed as slab-on-grade may be designed using a modulus of subgrade reaction of 150 pounds per cubic inch at the top of the Subbase Stone layer. It is suggested the floor slabs be designed as a structurally reinforced slab to help bridge and reduce the risks of any localized subsidence effects, should they occur. It is also recommended that the slab-on-grade be constructed such that it floats on the subbase and subgrades and is not structurally connected to, or resting directly on, perimeter walls or column footings in order to limit differential settlement effects.

Alternatively, the at-grade floor system could be constructed as a structural slab supported by grade beams and the deep foundation system. If the floors are structurally supported by the deep foundation system, it is recommended a minimum of 4 to 6-inches Subbase Stone material be placed beneath the structural slab to provide a working surface to set the reinforcing steel and construct the slabs.

Seismic Design Considerations

Based on the subsurface conditions encountered and our knowledge of the regional geology, the upper 100 feet of the project site can be classified as Seismic Site Class “D” in accordance with Table 1613.5.2 of the Building Code of New York State - December 2010 (NYS Building Code). Therefore, seismic design may be based on this site classification.

The spectral response accelerations in the project area were obtained by Empire using the United States Geological Survey (USGS) web site application (<http://geohazards.usgs.gov/designmaps/us/application.php>). The accelerations are based on the 2009 NEHRP Recommended Seismic Provisions, which makes use of the 2008 USGS seismic hazard data. The acceleration values obtained from this application were then adjusted, as recommended by the USGS, to obtain the 2% probability in 50 years mapping accelerations, as presented in the NYS Building Code.

Using the site address, the calculated spectral response accelerations for Site Class “B” soils are 0.214g for the short period (0.2 second) response (S_S) and 0.050g for the one second response (S_1). For design purposes, these spectral response accelerations were then adjusted for the Seismic Site Class “D” soil profile determined for the project site.

Accordingly, the adjusted spectral response accelerations for Site Class “D” are as follows:

- Short Period Response (S_{MS}) - 0.343g
- 1 Second Period Response (S_{M1}) - 0.120g

The corresponding five percent damped design spectral response accelerations (S_{DS} and S_{D1}) are as follows:

- S_{DS} - 0.229g
- S_{D1} - 0.080g

Construction Considerations

Construction Dewatering

Based on the water level observed in the monitoring observation well as well as the soil samples recovered at the boring locations, it appears that the permanent

groundwater table was present within a depth of about 8 feet below the existing site grades. The permanent groundwater conditions are most likely influenced by the nearby Buffalo River and can be expected to fluctuate with changes in the level of this water body, as well as with precipitation and seasonal events.

Accordingly, it does not appear a general groundwater condition (i.e. groundwater table) will be encountered within the shallow excavations for driven pile supported foundations or utility construction. Some perched or trapped groundwater, however, may be encountered in the excavations. The amount of perched groundwater will vary with location on the site and will be dependent on the size and depth of the excavation, the actual soil and groundwater conditions present along with the time period the excavation must remain open.

Dewatering should be implemented in conjunction with excavation work such that the work generally proceeds in the dry. Groundwater levels should be maintained below the proposed excavation bottom. It is anticipated that diversion berms, proper site grading, cut-off trenches, drainage stone layers and conventional sump and pump methods of dewatering should be sufficient to control surface water and perched groundwater conditions, if encountered. Surface water and groundwater dewatering plans should include implementation of measures to control erosion, sedimentation, and the migration of soil fines.

Pipe Pile Installation

The H-piles / pipe piles should be driven to absolute refusal, into the bedrock bearing stratum, using a pile hammer having a suitable energy rating. Absolute refusal can be defined as: when about 5 blows have been recorded for less than ¼ inch of pile penetration, when the pile reaches the predetermined bedrock elevation.

The pile driving criteria should be confirmed by the contractor through the use of the wave equation, based on the actual pile, pile hammer and cushions that will be used, to determine the final driving criteria and that adequate stresses can be developed in the pile to confirm its capacity through dynamic testing and to determine that the pile will not be overstressed during driving. Pile stresses should not exceed 85% of the pile yield stress.

The pile driving Contractor should anticipate obstructions may be encountered within the fill soils. These conditions could pose some difficulties with advancing the driven piles. Therefore, the Contractor should plan that pre-drilling or pre-

excavation at the pile foundation locations could become necessary at some of the locations in order to advance the piles through the fill.

At least 4 random piles should be dynamically tested in accordance with *ASTM D 4945 – “Standard Test Method for High Strain Dynamic Testing of Piles”* to confirm the driving criteria and to evaluate that the required ultimate pile capacity has been obtained and provides an adequate factor of safety (i.e. Factor of Safety of 2.0 or greater). The dynamic testing should also include piles which are suspect of not having been seated on the bedrock, but rather may have been driven to refusal on a cobble/boulder obstruction. Plumbness of the piles should be maintained within 1% of the total length. Any misaligned or damage piles should be replaced.

A qualified individual should observe all pile driving and should prepare an individual pile driving report for each pile installed. The report should include, pile number and location, hammer and cushion types, pile size and material, installed length, blows per foot, unusual conditions encountered during driving, top of pile elevation following driving and notes on any necessary re-striking. The Contractor should mark all piles with appropriate foot and inch intervals in order to properly monitor and document the pile installations and testing. Installed piles should also be monitored for potential heaving during installation of adjacent piles. Any piles that heave should be re-driven and reseated as appropriate.

Pile Supported Foundation Construction

Excavations to prepare the proposed subgrades for driven pile supported foundation construction (i.e. pile caps / grade beams) should be performed using a method, which reduces disturbance to the subgrade soils. All exterior grade beams should be embedded a minimum of 4 feet for frost protection.

Foundation excavations should be backfilled as soon as possible and prior to construction of the superstructure. It is recommended that foundation excavations, within slab on grade and pavement areas be backfilled with a Structural Fill or Suitable Granular Fill, as recommended in Appendix D of the geotechnical report.

Subgrade Preparation for At Grade Slab-on-Grade Construction

All existing surface structures, pavements, slabs, vegetation, topsoil etc., and any other deleterious materials within the proposed slab-on-grade areas should be removed. Any deleterious materials, such as organics, soft soils, highly voided

debris, etc., which are present at the bottom of the subgrade excavation, should be further undercut, removed, and replaced with additional Structural Fill material.

Following removal of the surface materials and excavation to the proposed subgrades, the exposed existing fill soil subgrades should be thoroughly compacted/densified and then proof-rolled. Any indigenous soils should also be proof-rolled. The subgrade compaction and proof-rolling should be performed, prior to any required fill placement and ground improvement, using a vibratory smooth drum roller weighing at least 10 tons. The roller should be operated in the vibratory mode for compacting the subgrades and in the static mode for proof rolling. The roller should complete at least four (4) passes over the exposed subgrades for the compaction/densification operation and at least two (2) passes for the proof rolling evaluation.

The subgrade proof-rolling and compaction should be done under the guidance of, and observed by, a representative of Empire. It may be necessary to waive the compaction and/or proof-rolling requirement which will be dependent on the type of subgrade conditions exposed (i.e. native versus fill) and/or if wet subgrades are present. This should be determined by Empire. Any areas, which appear wet, loose, soft, unstable or otherwise contain unsuitable materials, should be undercut. Over excavation, which may be required as the result of the subgrade inspection and/or proof-rolling, should be performed based on evaluation of the conditions and guidance provided by Empire. Resulting over-excavations should be backfilled with a suitable fill material as determined by Empire.

Suitable Granular Fill as described in Appendix D, can be used to raise existing site grades for building pad areas. All fill placement to raise existing site grades should be carefully monitored and tested as recommended in Appendix D. It is recommended that utility trenches located within slab on grade, driveway and road areas be backfilled with controlled Structural Fill.

During construction the contractor should take precautions to limit construction traffic over the subgrades for floor slab construction. Any subgrades, which become damaged, rutted or unstable should be undercut and repaired as necessary prior to placement of the concrete or asphalt.

CONCLUDING REMARKS

This report was prepared to assist in planning the design and construction of the proposed Buffalo River Lofts planned at 441 Ohio Street in Buffalo, New York. The report has been prepared for the exclusive use of the Tredo Engineers and

other members of the design team, for specific application to this site and this project only.

The recommendations were prepared based on Empire Geo-Services, Inc.'s understanding of the proposed project, as described herein, and through the application of generally accepted soils and foundation engineering practices. No warranties, expressed or implied are made by the conclusions, opinions, recommendations or services provided.

Empire Geo-Services, Inc. should be informed of any changes to the planned construction so that it may be determined if any changes to the recommendations presented in this report are necessary. Empire Geo-Services, Inc. should also be retained to review final plans and specifications and monitor foundation and site work construction to verify that the recommendations were properly interpreted and implemented.

Additional information regarding the use and interpretation of this report is presented in Appendix E.

Respectfully Submitted:

EMPIRE GEO-SERVICES, INC.



Wanda M. Allen, P.E.
Geotechnical Engineer

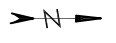


John J. Danzer, P.E.
Senior Geotechnical Engineer
and Project Reviewer

FIGURES



APPROXIMATE PROJECT SITE LOCATION



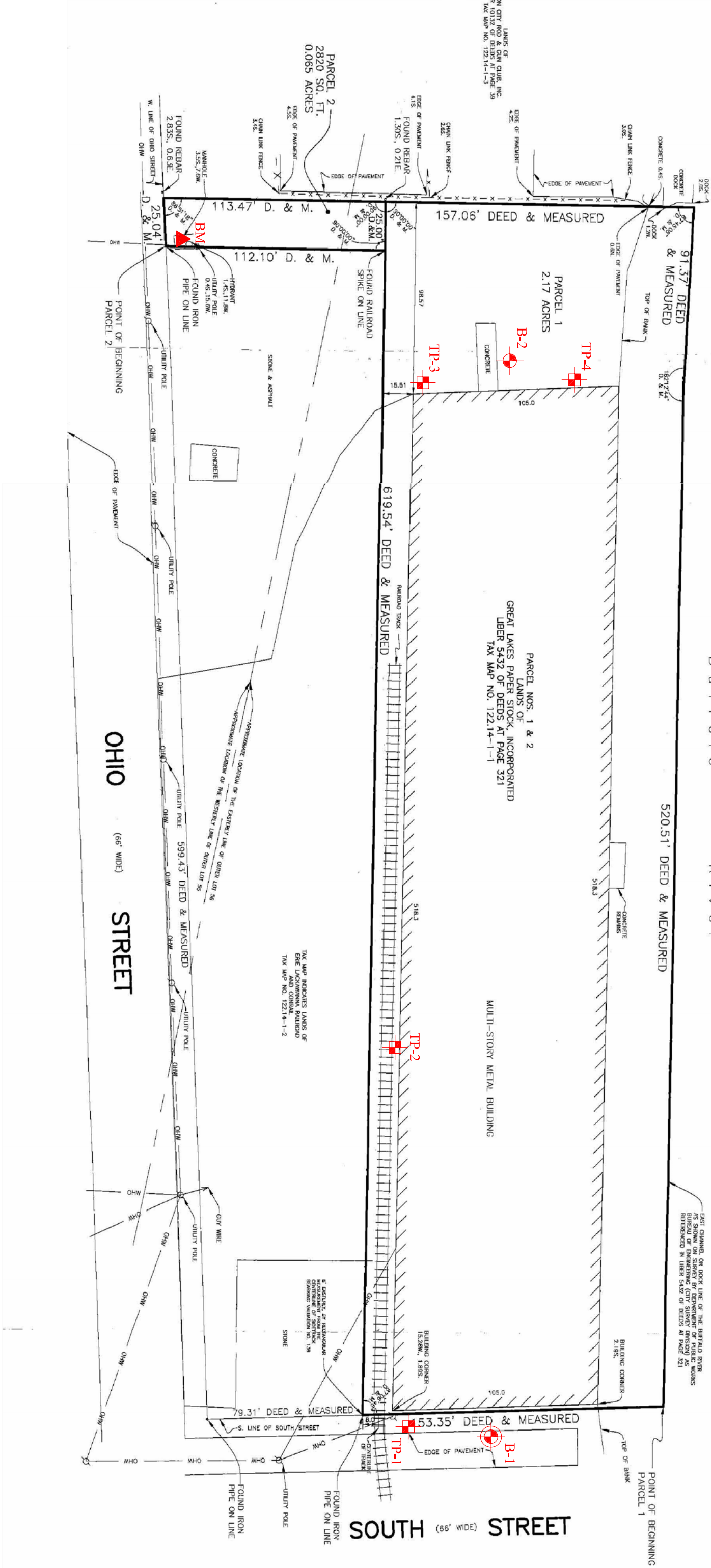
EMPIRE GEO
SERVICES INC
a subsidiary of SIB Services, Inc.

PROPOSED BUFFALO RIVER LOFTS
441 OHIO STREET
BUFFALO, NEW YORK

NOTE:
SITE LOCATION PLAN DEVELOPED
FROM MICROSOFT STREETS & TRIPS 2006

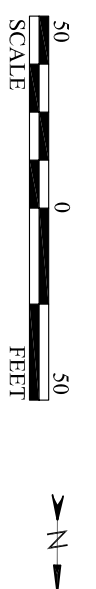
SITE LOCATION PLAN

DR BY: EDG	SCALE: NTS	PROJ NO.: BE-13-134
CHKD BY: WMA	DATE: 08/05/13	FIGURE NO: 1



LEGEND:

- BM** INDICATES APPROXIMATE BENCHMARK LOCATION, RIM OF MANHOLE, ASSIGNED ARBITRARY ELEVATION = 100.00 FEET.
- TP-1** INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST PIT.
- B-1** INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST BORING WITH GROUNDWATER OBSERVATION WELL.
- B-2** INDICATES APPROXIMATE LOCATION AND DESIGNATION OF TEST BORING.



NOTE:
FIGURE DEVELOPED FROM SITE PLAN
PROVIDED BY TREDO ENGINEERS.

EMPIRE GEO SERVICES INC a subsidiary of SJB Services, Inc.		PROPOSED BUFFALO RIVER LOFTS 441 OHIO STREET BUFFALO, NEW YORK	
SUBSURFACE EXPLORATION PLAN		DR BY: EDG	APPROX. SCALE: AS SHOWN
		CHKD BY: WMA	DATE: 08/05/13
		PROJ NO.: BF-13-134	FIGURE NO: 2

APPENDIX A
TEST BORING LOGS

DATE _____

STARTED _____

FINISHED _____

SHEET _____ OF _____



SJB SERVICES, INC. SUBSURFACE LOG

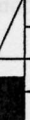
PROJ. No. _____

HOLE No. _____

SURF. ELEV. _____

G.W. DEPTH _____

PROJECT _____ LOCATION _____

DEPTH (ft)	SAMPLES	SAMPLE No.	BLOWS ON SAMPLER						BLOWS ON CASING C	SOIL OR ROCK CLASSIFICATION	NOTES	
			0 6	6 12	12 18	18 24	N					
0		1	3	3	4	8	7	10	3" TOPSOIL Brown SILT, some Sand, trace clay, ML (Moist-Loose) Gray SHALE, medium hard, weathered, thin bedded, some fractures	Groundwater at 10' upon completion, and 5' 24 hrs. after completion Run#1, 2.5'-5.0' 95% Recovery 50% RQD		
								15				
											50 / .5	
5												
	①	②	③	④			⑤	⑥	⑦ (numbered features explained on reverse)	⑧	⑨	⑩

⑦ (numbered features explained on reverse)

TABLE I

	Split Spoon Sample
	Shelby Tube Sample
	Geoprobe Macro-Core
	Auger or Test Pit Sample
	Rock Core

TABLE II

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on basis of plasticity.		
Soil Type	Soil Particle Size	
Boulder	>12"	
Cobble	3" - 12"	
Gravel - Coarse	3" - 3/4"	Coarse Grained (Granular)
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	Fine Grained
- Medium	#10 - #40	
- Fine	#40 - #200	
Silt - Non Plastic (Granular)	<#200	
Clay - Plastic (Cohesive)		

TABLE III

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.	
Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	less than 10
(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)	

TABLE IV

The relative compactness or consistency is described in accordance with the following terms:			
Granular Soils		Cohesive Soils	
Term	Blows per Foot, N	Term	Blows per Foot, N
Very Loose	0 - 4	Very Soft	0 - 2
Loose	4 - 10	Soft	2 - 4
Firm	10 - 30	Medium	4 - 8
Compact	30 - 50	Stiff	8 - 15
Very Compact	>50	Very Stiff	15 - 30
		Hard	>30
(Large particles in the soils will often significantly influence the blows per foot recorded during the penetration test)			

TABLE V

Varved	Horizontal uniform layers or seams of soil(s).
Layer	Soil deposit more than 6" thick.
Seam	Soil deposit less than 6" thick.
Parting	Soil deposit less than 1/8" thick.
Laminated	Irregular, horizontal and angled seams and partings of soil(s).

TABLE VI

Rock Classification Term	Meaning	Rock Classification Term	Meaning
Hardness - Soft	Scratched by fingernail	Bedding - Laminated	(<1")
- Medium Hard	Scratched easily by penknife	- Thin Bedded	(1" - 4")
- Hard	Scratched with difficulty by penknife	- Bedded	(4" - 12")
- Very Hard	Cannot be scratched by penknife	- Thick Bedded	(12" - 36")
Weathering - Very Weathered	Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.	- Massive	(>36")
- Weathered			
- Sound			
		(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers)	

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between the sampled intervals. The data presented on the Subsurface Logs together with the recovered samples provide a basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their significance relative to each other. Often analyses of standard boring data indicate the need for additional testing or sampling procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and recovered samples must be performed by qualified professionals. The following information defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered, consistent with the numbered identifiers shown on the Key opposite this page.

1. The figures in the Depth column define the scale of the Subsurface Log.
2. The Samples column shows, graphically, the depth range from which a sample was recovered. See Table I for descriptions of the symbols used to represent the various types of samples.
3. The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.
4. Blows-on Sampler - shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches is recorded. The first 6 inches of penetration is considered a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N.
5. Blows on Casing - Shows the number of blows required to advance the casing a distance of 12 inches. The casing size, hammer weight, and length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under the Method of Investigation at the bottom of the Subsurface Log. Alternatively, sample recovery may be shown in this column, or other data consistent with the column heading.
6. All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist or geotechnical engineer, unless noted otherwise. Visual descriptions are made on the basis of a combination of the driller's field descriptions and noted observations together with the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D 2487) with regard to the particle size and plasticity (See Table No. II), and the Unified Soil Classification System group symbols for the soil types are sometimes included with the soil classification. Additionally, the relative portion, by weight, of two or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister, ASTM Special Technical Publication 479, June 1970. (See Table No. III). Description of the relative soil density or consistency is based upon the penetration records as defined in Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet and saturated. Water introduced into the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe soil deposition in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and sampler blows or through the "action" of the drill rig as reported by the driller.
7. Rock description is based on review of the recovered rock core and the driller's notes. Frequently used rock classification terms are included in Table VI.
8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines delineate apparent changes in soil type, based upon review of recovered soil samples and the driller's notes. Dashed lines convey a lesser degree of certainty with respect to either a change in soil type or where such change may occur.
9. Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that any drill water used to advance the boring may have influenced the observations. The ground water level will fluctuate seasonally, typically. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or groundwater observation wells.
10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total length of pieces of NX core exceeding 4 inches divided by the core run. The size core barrel used is also noted in the Method of Investigation at the bottom of the Subsurface Log.

DATE START <u>7/26/2013</u> FINISH <u>7/26/2013</u> SHEET <u>1</u> OF <u>1</u>	SJB SERVICES, INC. SUBSURFACE LOG		HOLE NO. <u>B-1</u> SURF. ELEV <u>99.8'</u> G.W. DEPTH <u>See Notes</u>	
PROJECT: <u>PROPOSED BUFFALO RIVER LOFTS</u> LOCATION: <u>441 OHIO STREET</u> PROJ. NO.: <u>BE-13-134</u> <u>BUFFALO, NEW YORK</u>				
DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6 6/12 12/18 N	SOIL OR ROCK CLASSIFICATION	NOTES
	1	10 10	Black CINDERS and Silt (moist, FILL)	
		10 13	20	
	2	9 5	Red-Brown & Black Silty CLAY, tr.sand, tr.cinders, tr.gravel (moist, FILL)	
		6 6	11	
5	3	2 3	Olive-Gray Clayey SILT, tr.sand (moist, medium, ML)	
		3 3	6	
	4	4 3		
		4 2	7	
10	5	1 1	Olive-Gray Silty CLAY, little Fine Sand (wet, v.soft, CL)	
		1 1	2	
	6	2 1		
		3 3	4	
15	7	W0H/1.0	Gray Fine SAND, some Silt (wet, v.loose, SM)	W0H= Weight of Hammer and Rods
		2 2	2	
20	8	2 1	Contains occasional Organic seams, occasional Peat lenses	
		1 1	2	
25	9	4 1	Brown-Gray f-c SAND, little-some Silt (wet, v.loose, SM)	
		2 3	3	
30	10	50/0.0	Boring Complete with Sample Spoon and Auger Refusal at 30.0 feet	No Recovery Sample #10
35				2" PVC groundwater observation well installed at boring completion.
40				Refer to installation diagram for details.

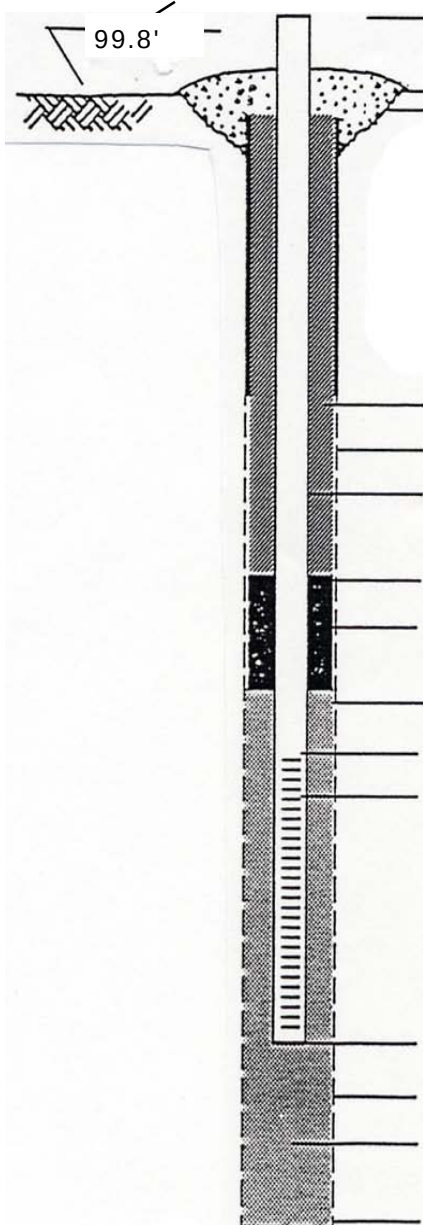
N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW CLASSIFIED BY: Geologist
 DRILLER: B. DELUDE DRILL RIG TYPE: DIEDRICH-50
 METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

MONITORING WELL COMPLETION RECORD



PROJECT: PROPOSED BUFFALO RIVER LOFTS	
PROJECT NUMBER: BE-13-134	DRILLING METHOD: ASTM D-1586
WELL NUMBER: B-1	GEOLOGIST: -----
DRILLER: B. DELUDE	INSTALLATION DATE(S): 7/26/2013

GROUND ELEVATION



ELEVATION/TOP OF RISER PIPE: 102.4
 STICK- UP/ TOP OF RISER PIPE: 2.6'
 TYPE OF SURFACE SEAL: NONE
 TYPE OF BACKFILL: Auger Cuttings
 BOREHOLE DIAMETER: +/- 8"
 I.D. OF RISER PIPE: 2.0"
 TYPE OF RISER PIPE: PVC
 DEPTH OF SEAL: 17.0'
 TYPE OF SEAL: BENTONITE CHIPS
 DEPTH OF SAND PACK: 19.0'
 DEPTH OF TOP OF SCREEN: 20.0'
 TYPE OF SCREEN: PVC
 SLOT SIZE X LENGTH: .010 X 10.0'
 I.D. OF SCREEN: 2.0"
 TYPE OF SAND PACK: MORIE "O" FILTER SAND
 DEPTH BOTTOM OF SCREEN: 30.0'
 DEPTH BOTTOM OF SAND PACK: 30.0'
 TYPE OF BACKFILL BELOW OBSERVATION WELL:
 MORIE "O" FILTER SAND
 ELEVATION/ DEPTH OF HOLE: 69.8' / 30.0'

DATE START <u>7/25/2013</u> FINISH <u>7/25/2013</u> SHEET <u>1</u> OF <u>1</u>	SJB SERVICES, INC. SUBSURFACE LOG		HOLE NO. <u>B-2</u> SURF. ELEV <u>99.5'</u> G.W. DEPTH <u>See Notes</u>	
PROJECT: <u>PROPOSED BUFFALO RIVER LOFTS</u> LOCATION: <u>441 OHIO STREET</u> PROJ. NO.: <u>BE-13-134</u> <u>BUFFALO, NEW YORK</u>				
DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6 6/12 12/18 N	SOIL OR ROCK CLASSIFICATION	NOTES
5	1	20 23	Gray-Brown SLAG and Silt (moist, FILL)	
		14 20		
	2	12 10	Becomes Black	
		5 7		
	3	4 4	Contains tr.brick, tr.wood (wet)	
		3 3		
	4	1 3		
		7 3		
10	5	1 1		
		1 1		
	6	W0H 1	Gray-Black SILT, little f-m Sand, tr.organics (moist, v.loose, ML)	W0H= Weight of Hammer and Rods
		2 2		
15	7	W0H/1.0	Gray Silty CLAY, tr.sand, occasional Fine Sand lenses (moist-wet, v.soft, CL)	
		1 1		
	8	W0H 1	Contains tr.wood fragments (medium)	NQ '2' Size Rock Core
		3 11		
25			Gray LIMESTONE Rock, medium hard, sound, bedded to thickly bedded.	Run #1 23.5' - 28.5' REC = 100% RQD = 88%
30			Boring Complete at 28.5'	Free standing water recorded at 4.8' after coring.
35				
40				

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW CLASSIFIED BY: Geologist
 DRILLER: B. DELUDE DRILL RIG TYPE: DIEDRICH-50
 METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

APPENDIX B
TEST PIT LOGS



TEST PIT FIELD LOG

Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

PROJECT PROPOSED BUFFALO RIVER LOFT
CLIENT TREDO ENGINEERS
PROJECT NO. BE-13-134
DATE 7/23/2013

TEST PIT NO. TP-1
LOCATION BUFFALO, NEW YORK
GROUND ELEV 99.5'
WEATHER/TEMP SUNNY

EXCAVATION EQUIP KUBOTA KX1213 BACKHOE
OPERATOR B. FROST (SAVARINO)
TIME START 8:49
TIME FINISHED 9:12

DEPTH	SOIL DESCRIPTION	EXCAV EFFORT	REMARK NO.
1'	Black CINDERS and Silt (moist, FILL)	Easy-Moderate	1
2'	Brown-Black Clayey SILT, little f-c Sand, little Organics (moist-wet, FILL)		2
3'	Contains numerous Wood fragments and Organics		
4'	Contains Orange-Brown & Gray Mottled Silty Clay seams		
5'			
6'	Orange-Brown & Gray Mottled Clayey SILT, tr.sand (wet, ML) Contains occasional Silt and Fine Sand seams	Easy	
7'			
8'	Test Pit Complete at 7.0'		
9'	No free standing water encountered at test pit completion		
10'			
11'			
12'			
13'			
14'			

E.G.

Stone Foundation Wall

66"

1"

6"

Stone Footing

Native Clayey Silt

Remarks:

- 1.) Copper line exposed at ~1'deep and ~4' from building
- 2.) Water seeping into excavation

ABBREVIATIONS

F - FINE F/M - FINE TO MEDIUM
C - COARSE F/C-FINE/COARSE
GR - GRAY M - MEDIUM
BN - BROWN V-VERY
YEL-YELLOW

PROP USED

TRACE (TR.) 0-10%
LITTLE (LI.) 10 - 20%
SOME (SO.) 20 -35%
AND 35 - 50%



TEST PIT FIELD LOG

Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

PROJECT PROPOSED BUFFALO RIVER LOFT
CLIENT TREDO ENGINEERS
PROJECT NO. BE-13-134
DATE 7/23/2013

TEST PIT NO. TP-2
LOCATION BUFFALO, NEW YORK
GROUND ELEV 98.8'
WEATHER/TEMP SUNNY

EXCAVATION EQUIP KUBOTA KX1213 BACKHOE
OPERATOR B. FROST (SAVARINO)
TIME START 9:22
TIME FINISHED 9:38

DEPTH	SOIL DESCRIPTION	EXCAV EFFORT	REMARK NO.
1'	Black CINDERS and f-c Sand, some Stone Cobbles, little Slag (moist, FILL)	Easy-Moderate	1
2'	Contains occasional Silty Clay seams		
3'			
4'			
5'	Contains numerous Wood fragments and Mulch Contain tr.clay tile, numerous Wood ties, occasional Clayey Silt with <u>Shale pockets</u>	Easy	
6'	Gray Clayey Silt (moist-wet, ML)		
7'	Test Pit Complete at 6.0'		
8'	Free standing water encountered at ~5.0' at test pit completion		
9'			
10			
11'			
12'			
13'			
14'			

Remarks:

1.) Water in hole from broken water line / drainage pipe encountered at ~4.5'

ABBREVIATIONS

F - FINE F/M - FINE TO MEDIUM
C - COARSE F/C-FINE/COARSE
GR - GRAY M - MEDIUM
BN - BROWN V-VERY
YEL-YELLOW

PROP USED

TRACE (TR.) 0-10%
LITTLE (LI.) 10 - 20%
SOME (SO.) 20 -35%
AND 35 - 50%



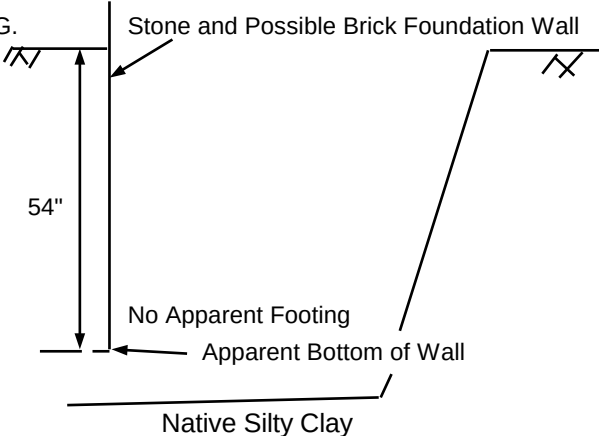
TEST PIT FIELD LOG

Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

PROJECT PROPOSED BUFFALO RIVER LOFT
CLIENT TREDO ENGINEERS
PROJECT NO. BE-13-134
DATE 7/23/2013

TEST PIT NO. TP-3
LOCATION BUFFALO, NEW YORK
GROUND ELEV 98.5'
WEATHER/TEMP SUNNY

EXCAVATION EQUIP KUBOTA KX1213 BACKHOE
OPERATOR B. FROST (SAVARINO)
TIME START 9:55
TIME FINISHED 10:10

DEPTH	SOIL DESCRIPTION	EXCAV EFFORT	REMARK NO.
1'	Black CINDERS and Slag, little f-c Sand, little Fine Gravel, tr-little Brick (moist, FILL)	Moderate	
2'			
3'	STONE Blocks and Black Cinders, some Slag, Contains pockets of Tan-Brown Clay, tr.wood		
4'			
5'	Gray Silty CLAY (moist, CL)	Easy	
6'	Test Pit Complete at 5.5' No free standing water encountered at test pit completion 		
7'			
8'			
9'			
10'			
11'			
12'			
13'			
14'			

Remarks:	ABBREVIATIONS	PROP USED
	F - FINE F/M - FINE TO MEDIUM	TRACE (TR.) 0-10%
	C - COARSE F/C-FINE/COARSE	LITTLE (LI.) 10 - 20%
	GR - GRAY M - MEDIUM	SOME (SO.) 20 -35%
	BN - BROWN V-VERY	AND 35 - 50%
	YEL-YELLOW	



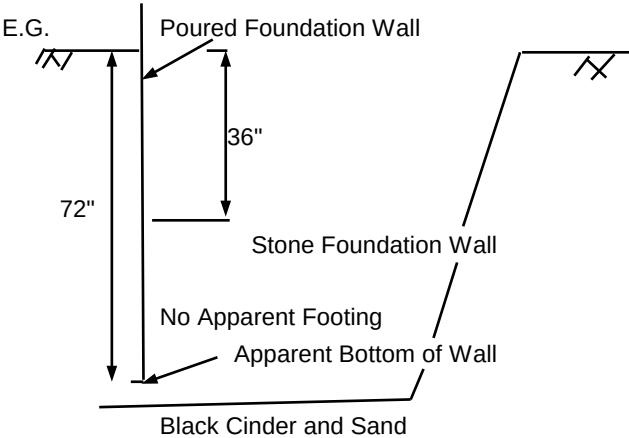
TEST PIT FIELD LOG

Western New York Office
5167 South Park Avenue
Hamburg, NY 14075
Phone: (716) 649-8110
Fax: (716) 649-8051

PROJECT PROPOSED BUFFALO RIVER LOFT
CLIENT TREDO ENGINEERS
PROJECT NO. BE-13-134
DATE 7/23/2013

TEST PIT NO. TP-4
LOCATION BUFFALO, NEW YORK
GROUND ELEV 99.4'
WEATHER/TEMP SUNNY

EXCAVATION EQUIP KUBOTA KX1213 BACKHOE
OPERATOR B. FROST (SAVARINO)
TIME START 10:09
TIME FINISHED 10:29

DEPTH	SOIL DESCRIPTION	EXCAV EFFORT	REMARK NO.
1'	Brown f-c SAND, some Cinders, little-some Slag, little Fine Gravel, tr.brick (moist, FILL)	Moderate	1
2'	Black CINDERS and Slag (moist, FILL)		2
3'			
4'			
5'	Brown-Black f-c SAND and Stone Blocks (moist, FILL)		
6'	Black CINDERS and Sand (moist, FILL)		
7'	Test Pit Complete at 6.0'		
8'	No free standing water encountered at test pit completion		
9'			
10			
11'			
12'			
13'			
14'			

Remarks:

- At ~1.5' contained boulder size slag
- Average stone block size = 2'x1'x1' (~3 to 4 blocks)

ABBREVIATIONS

F - FINE F/M - FINE TO MEDIUM
C - COARSE F/C-FINE/COARSE
GR - GRAY M - MEDIUM
BN - BROWN V-VERY
YEL-YELLOW

PROP USED

TRACE (TR.) 0-10%
LITTLE (LI.) 10 - 20%
SOME (SO.) 20 -35%
AND 35 - 50%

APPENDIX C
TEST PIT PHOTOGRAPHS

**PROPOSED BUFFALO RIVER LOFT
441 OHIO STREET
BUFFALO, NEW YORK**



Photograph 1 –Test Pit TP-1 – Stone Block Foundation Wall Exposed – Difficult to observe due to black, organic clayey silt fill.



Photograph 2 –Test Pit TP-1 – Typical Fill Soils / Materials Encountered

**PROPOSED BUFFALO RIVER LOFT
441 OHIO STREET
BUFFALO, NEW YORK**



Photograph 3 –Test Pit TP-2 – Surface Fill Soils – Top Portion of Stone Block Foundation Wall



Photograph 4 –Test Pit TP-3 –Stone Block and Possible Brick Foundation Wall – Falling Apart

**PROPOSED BUFFALO RIVER LOFT
441 OHIO STREET
BUFFALO, NEW YORK**

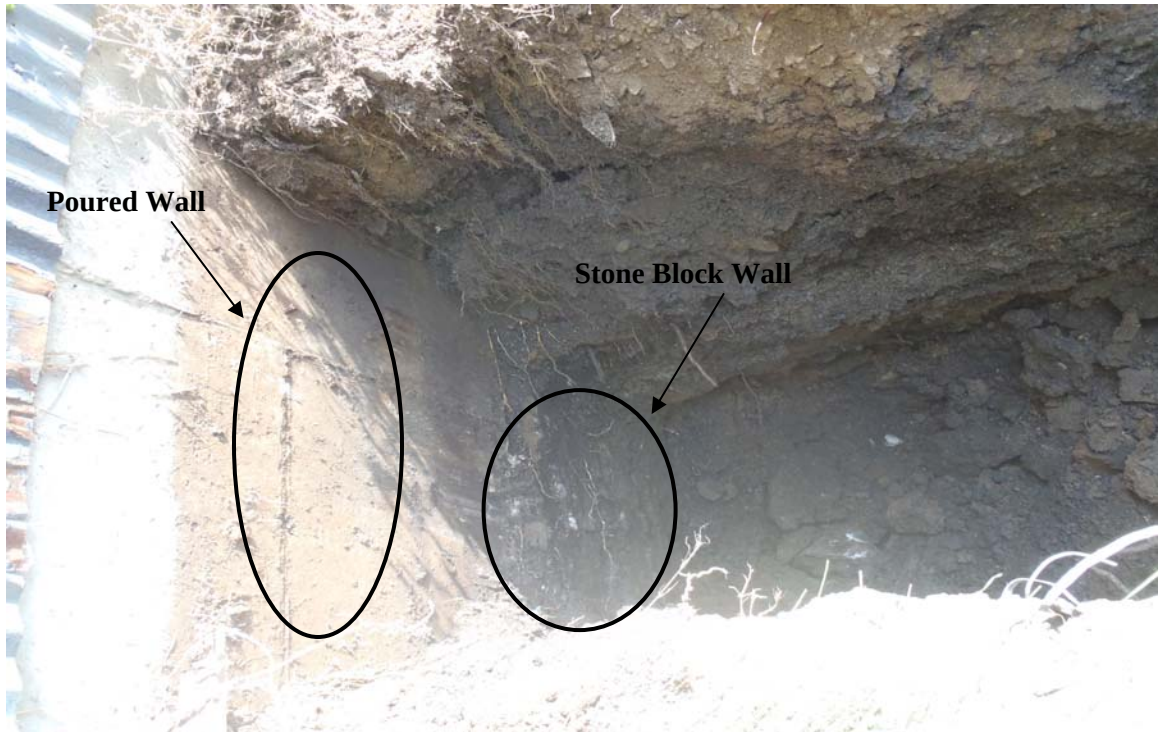


Photograph 5 –Test Pit TP-3 – Northeast Corner of Building



Photograph 6 –Test Pit TP-3 – Typical Fill Removed from Test Pit

**PROPOSED BUFFALO RIVER LOFT
441 OHIO STREET
BUFFALO, NEW YORK**



Photograph 7 –Test Pit TP-4 – Formed and Poured Foundation Wall Placed over Previous Stone Block



Photograph 8 –Test Pit TP-4 – Formed and Poured Foundation Wall Placed over Previous Stone Block

**PROPOSED BUFFALO RIVER LOFT
441 OHIO STREET
BUFFALO, NEW YORK**



Photograph 9 –Test Pit TP-4 – Stone Block Removed from Test Pit



Photograph 10 –Test Pit TP-4 – Typical Fill and Stone Block Removed from Test Pit(s)

APPENDIX D

**FILL MATERIAL AND
EARTHWORK RECOMMENDATIONS**

APPENDIX D

FILL MATERIAL AND EARTHWORK RECOMMENDATIONS

I. Material Recommendations

A. Structural Fill

Structural Fill should consist of a crusher run stone, free of clay, organics and friable or deleterious particles. As a minimum, the crusher stone should meet the requirements of New York State Department of Transportation, Standard Specifications, Item 304.12 – Type 2 Subbase, with the following gradation requirements.

<u>Sieve Size Distribution</u>	<u>Percent Finer by Weight</u>
2 inch	100
¼ inch	25-60
No. 40	5-40
No. 200	0-10

B. Subbase Stone

The subbase stone course placed as the aggregate course beneath slab-on-grade and pavement construction should conform to the same material requirements as Structural Fill as stated above.

C. Suitable Granular Fill

Suitable soil material, well graded from coarse to fine and classified as GW, GP, GM, SW, SP and SM soils using the Unified Soil Classification System (ASTM D-2487) and having no more than 85- percent by weight material passing the No. 4 sieve, no more than 20- percent by weight material passing the No. 200 sieve and which is generally free of particles greater than 6 inches, will be acceptable as Suitable Granular Fill. It should also be free of topsoil, asphalt, concrete rubble, wood, debris, clay and other deleterious materials. Suitable Granular Fill can be used as foundation backfill and as subgrade fill to raise site grades or backfill beneath slab-on-grade and pavement construction.

Material meeting the requirements of New York State Department of Transportation, Standard Specifications, Item 203.07 – Select Granular Fill is acceptable for use as Suitable Granular Fill.

D. General Fill

General Fill obtained from site excavations may be used for backfill in non-loaded areas outside of slab-on-grade and paved areas. General Fill should be free of topsoil, organics, debris and deleterious materials and should be of a moisture content suitable for proper compaction.

II. Placement and Compaction Requirements

All controlled fill placed beneath foundations, slab-on-grade construction and beneath utilities should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor test (ASTM D1557). Fill placed in non-loaded grass areas can be compacted to a minimum of 90 percent of the maximum dry density (ASTM D1557).

Placement of fill should not exceed a maximum loose lift thickness of 6 to 9 inches with the exception of subbase courses beneath slab on grade and pavement construction, which can be placed in a single lift not exceeding 12 inches. The loose lift thickness should be reduced in conjunction with the compaction equipment used so that the required density is attained. Fill should have a moisture content within two percent of the optimum moisture content prior to compaction. Subgrades should be properly drained and protected from moisture and frost. Placement of fill on frozen subgrades is not acceptable. It is recommended that all fill placement and compaction be monitored and tested by a representative of Empire Geo-Services, Inc.

III. Quality Assurance Testing

The following minimum laboratory and field quality assurance testing frequencies are recommended to confirm fill material quality and post placement and compaction conditions. These minimum frequencies are based on generally uniform material properties and placement conditions. Should material properties vary or conditions at the time of placement vary (i.e. moisture content, placement and compaction, procedures or equipment, etc.) Then additional testing is recommended. Additional testing, which may be necessary, should be determined by qualified geotechnical personnel, based on evaluation of the actual fill material and construction conditions.

A. Laboratory Testing of Material Properties

- Moisture content (ASTM D-2216) - 1 test per 4,000 cubic yards or no less than 2 tests per each material type.

- Grain Size Analysis (ASTM D-422) - 1 test per 4,000 cubic yards or no less than 2 tests per each material type.
- Liquid and Plastic Limits (ASTM D-4318) 1 test per 4,000 cubic yards or no less than 2 tests per each material type. Liquid and Plastic Limit testing is necessary only if appropriate, based on material composition (i.e. clayey or silty soils).
- Modified Proctor Moisture Density Relationship (ASTM D-1557) 1 test per 4,000 cubic yards or no less than 1 test per each material type. A maximum/minimum density relationship (ASTM D-4253 and ASTM D-4254) may be an appropriate substitute for ASTM D-1557 depending on material gradation.

B. Field In-Place Moisture/Density Testing (ASTM D-3017 and ASTM D-2922)

- Backfilling along trenches and foundation walls - 1 test per 50 lineal feet per lift.
- Backfilling Isolated Excavations (i.e. column foundations, manholes, etc.) 1 test per lift.
- Filling in open areas for slab-on-grade and pavement construction - 1 test per 2,500 square feet per lift.

APPENDIX E
GEOTECHNICAL REPORT LIMITATIONS

GEOTECHNICAL REPORT LIMITATIONS

Empire Geo-Services, Inc. (Empire) has endeavored to meet the generally accepted standard of care for the services completed, and in doing so is obliged to advise the geotechnical report user of our report limitations. Empire believes that providing information about the report preparation and limitations is essential to help the user reduce geotechnical-related delays, cost over-runs, and other problems that can develop during the design and construction process. Empire would be pleased to answer any questions regarding the following limitations and use of our report to assist the user in assessing risks and planning for site development and construction.

PROJECT SPECIFIC FACTORS: The conclusions and recommendations provided in our geotechnical report were prepared based on project specific factors described in the report, such as size, loading, and intended use of structures; general configuration of structures, roadways, and parking lots; existing and proposed site grading; and any other pertinent project information. Changes to the project details may alter the factors considered in development of the report conclusions and recommendations. *Accordingly, Empire cannot accept responsibility for problems which may develop if we are not consulted regarding any changes to the project specific factors that were assumed during the report preparation.*

SUBSURFACE CONDITIONS: The site exploration investigated subsurface conditions only at discrete test locations. Empire has used judgement to infer subsurface conditions between the discrete test locations, and on this basis the conclusions and recommendations in our geotechnical report were developed. It should be understood that the overall subsurface conditions inferred by Empire may vary from those revealed during construction, and these variations may impact on the assumptions made in developing the report conclusions and recommendations. *For this reason, Empire should be retained during construction to confirm that conditions are as expected, and to refine our conclusions and recommendations in the event that conditions are encountered that were not disclosed during the site exploration program.*

USE OF GEOTECHNICAL REPORT: Unless indicated otherwise, our geotechnical report has been prepared for the use of our client for specific application to the site and project conditions described in the report. *Without consulting with Empire, our geotechnical report should not be applied by any party to other sites or for any uses other than those originally intended.*

CHANGES IN SITE CONDITIONS: Surface and subsurface conditions are subject to change at a project site subsequent to preparation of the geotechnical report. Changes may include, but are not limited to, floods, earthquakes, groundwater fluctuations, and construction activities at the site and/or adjoining properties. *Empire should be informed of any such changes to determine if additional investigative and/or evaluation work is warranted.*

MISINTERPRETATION OF REPORT: The conclusions and recommendations contained in our geotechnical report are subject to misinterpretation. *To limit this possibility, Empire should review project plans and specifications relative to geotechnical issues to confirm that the recommendations contained in our report have been properly interpreted and applied.*

Subsurface exploration logs and other report data are also subject to misinterpretation by others if they are separated from the geotechnical report. This often occurs when copies of logs are given to contractors during the bid preparation process. *To minimize the potential for misinterpretation, the subsurface logs should not be separated from our geotechnical report and the use of excerpted or incomplete portions of the report should be avoided.*

OTHER LIMITATIONS: Geotechnical engineering is less exact than other design disciplines, as it is based partly on judgement and opinion. For this reason, our geotechnical report may include clauses that identify the limits of Empire's responsibility, or that may describe other limitations specific to a project. These clauses are intended to help all parties recognize their responsibilities and to assist them in assessing risks and decision making. Empire would be pleased to discuss these clauses and to answer any questions that may arise.

APPENDIX C

WELL ABANDONMENT & DECOMMISSIONING LOGS

WELL ABANDONMENT/ DECOMMISSIONING LOG

PROJECT INFORMATION	WELL INFORMATION
PROJECT/SITE NAME: Remedial Investigation / 441Ohio Street Site	WELL I.D.: TMW-1
Client: 441 Ohio Street, LLC	Stick-up (feet): 1.79
Project Job Number: 0292-013-002	Screen Interval (fbgs): 11 to 16
Date: 3/17/2015	Drilling Company: Trec Environmental Inc.
Weather: Sunny, 20 °F, light breeze	Drill Rig Type: Track Mounted Geoprobe
Prepared by: PWW	Drilling Company Personnel: Chad

DECOMMISSIONING PROCEDURES (per NYSDEC CP-43)

Well visible? (If not, provide directions below)
 Well I.D. visible?
 Well location matches site map? (If not, sketch actual location on back)

YES	NO
X	
X	
X	

Well I.D. as it appears on protective casing or well:

Surface seal present?
 Surface seal competent? (If cracked, heaved, etc., describe below)
 Protective casing in good condition? (If damaged, describe below)

X	
X	
NA	NA

Headspace reading (ppm) and instrument used: 0.0 ppm - MiniRae 3000
 Type of protective casing and height of stickup in feet (if applicable): NA
 Protective casing material type: NA
 Measure protective casing inside diameter (inches): NA

Lock present?
 Lock functional?
 Did you replace the lock?
 Is there evidence that the well is double cased? (If yes, describe below)
 Well measuring point visible?

	X
	X
	X
	X
X	

Measure depth to water from measuring point (feet): 10.66
 Measure well depth from measuring point (feet): 17.68
 Measure well diameter (inches): 1
 Well casing material: PVC
 Physical condition of visible well casing: Good
 Attach I.D. marker (if well I.D. is confirmed) and identify marker type: TMW-1 (Paint Marker)
 Proximity to underground or overhead utilities: None

Describe access to well: (Include accessibility to truck mounted rig, natural obstructions, overhead utilities, proximity to permanent structures, etc.); Add sketch of location on back, if necessary.
 -Exterior well, accessible by track mounted rig, no natural obstructions and no overhead utilities
 -see Figure 3

Describe well setting (for example, located in a field, in a playground, on pavement, in a garden, etc.)
 and assess the type of restoration required. Well located in gravel parking area

Identify any nearby potential sources of contamination, if present (e.g., gas station, salt pile, etc.) None

Remarks:

Drilling Contractor:

Page 2 of 12

WELL ABANDONMENT/ DECOMMISSIONING LOG

PROJECT INFORMATION	WELL INFORMATION
PROJECT/SITE NAME: Remedial Investigation / 441 Ohio Street Site	WELL I.D.: TMW-2
Client: 441 Ohio Street, LLC	Stick-up (feet): 1.95
Project Job Number: 0292-013-002	Screen Interval (fbgs): 11 to 16
Date: 3/17/2015	Drilling Company: Trec Environmental Inc.
Weather: Sunny, 20 °F, light breeze	Drill Rig Type: Track Mounted Geoprobe
Prepared by: PWW	Drilling Company Personnel: Chad

DECOMMISSIONING PROCEDURES (per NYSDEC CP-43)

	YES	NO
Well visible? (If not, provide directions below)	X	
Well I.D. visible?	X	
Well location matches site map? (If not, sketch actual location on back)	X	
Well I.D. as it appears on protective casing or well:		
Surface seal present?	X	
Surface seal competent? (If cracked, heaved, etc., describe below)	X	
Protective casing in good condition? (If damaged, describe below)	NA	NA
Headspace reading (ppm) and instrument used:	0.0 ppm - MiniRae 3000	
Type of protective casing and height of stickup in feet (if applicable):	NA	
Protective casing material type:	NA	
Measure protective casing inside diameter (inches):	NA	
Lock present?		X
Lock functional?		X
Did you replace the lock?		X
Is there evidence that the well is double cased? (If yes, describe below)		X
Well measuring point visible?	X	
Measure depth to water from measuring point (feet):	9.46	
Measure well depth from measuring point (feet):	18.04	
Measure well diameter (inches):	1	
Well casing material:	PVC	
Physical condition of visible well casing:	Good	
Attach I.D. marker (if well I.D. is confirmed) and identify marker type:	TMW-2 (Paint Marker)	
Proximity to underground or overhead utilities:	None	
Describe access to well: (Include accessibility to truck mounted rig, natural obstructions, overhead utilities, proximity to permanent structures, etc.); Add sketch of location on back, if necessary.		
-Exterior well, accessible by track mounted rig, fencing obstructions and no overhead utilities		
-see Figure 3		
Describe well setting (for example, located in a field, in a playground, on pavement, in a garden, etc.) and assess the type of restoration required.		
Well located adjacent to the building on an old rail bed		
Identify any nearby potential sources of contamination, if present (e.g., gas station, salt pile, etc.)		
None		
Remarks:		

Drilling Contractor:

Page 4 of 12

WELL ABANDONMENT/ DECOMMISSIONING LOG

PROJECT INFORMATION	WELL INFORMATION
PROJECT/SITE NAME: Remedial Investigation / 441 Ohio Street Site	WELL I.D.: TMW-3
Client: 441 Ohio Street, LLC	Stick-up (feet): 1.88
Project Job Number: 0292-013-002	Screen Interval (fbgs): 11 to 16
Date: 3/17/2015	Drilling Company: Trec Environmental Inc.
Weather: Sunny, 20 °F, light breeze	Drill Rig Type: Track Mounted Geoprobe
Prepared by: PWW	Drilling Company Personnel: Jim/Chad

DECOMMISSIONING PROCEDURES (per NYSDEC CP-43)

Well visible? (If not, provide directions below)
 Well I.D. visible?
 Well location matches site map? (If not, sketch actual location on back)

YES	NO
X	
X	
X	

Well I.D. as it appears on protective casing or well:

Surface seal present?
 Surface seal competent? (If cracked, heaved, etc., describe below)
 Protective casing in good condition? (If damaged, describe below)

X	
X	
NA	NA

Headspace reading (ppm) and instrument used: 0.0 ppm - MiniRae 3000
 Type of protective casing and height of stickup in feet (if applicable): NA
 Protective casing material type: NA
 Measure protective casing inside diameter (inches): NA

Lock present?
 Lock functional?
 Did you replace the lock?
 Is there evidence that the well is double cased? (If yes, describe below)
 Well measuring point visible?

	X
	X
	X
	X
X	

Measure depth to water from measuring point (feet): 10.02
 Measure well depth from measuring point (feet): 15.96
 Measure well diameter (inches): 1
 Well casing material: PVC
 Physical condition of visible well casing: Good
 Attach I.D. marker (if well I.D. is confirmed) and identify marker type: TMW-3 (Paint Marker)
 Proximity to underground or overhead utilities: None

Describe access to well: (Include accessibility to truck mounted rig, natural obstructions, overhead utilities, proximity to permanent structures, etc.); Add sketch of location on back, if necessary.
 -Interior well, accessible by track mounted rig, no natural obstructions and no overhead utilities
 -see Figure 3

Describe well setting (for example, located in a field, in a playground, on pavement, in a garden, etc.)
 and assess the type of restoration required. Well located in loading dock area

Identify any nearby potential sources of contamination, if present (e.g., gas station, salt pile, etc.) None

Remarks:

Drilling Contractor:

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WELL ABANDONMENT/ DECOMMISSIONING LOG

PROJECT INFORMATION	WELL INFORMATION
PROJECT/SITE NAME: Remedial Investigation / 441 Ohio Street Site	WELL I.D.: TMW-4
Client: 441 Ohio Street, LLC	Stick-up (feet): 2.26
Project Job Number: 0292-013-002	Screen Interval (fbgs): 11 to 16
Date: 3/17/2015	Drilling Company: Trec Environmental Inc.
Weather: Sunny, 20 °F, light breeze	Drill Rig Type: Track Mounted Geoprobe
Prepared by: PWW	Drilling Company Personnel: Jim/Chad

DECOMMISSIONING PROCEDURES (per NYSDEC CP-43)

Well visible? (If not, provide directions below)

Well I.D. visible?

Well location matches site map? (If not, sketch actual location on back)

YES	NO
X	
X	
X	

Well I.D. as it appears on protective casing or well:

Surface seal present?

Surface seal competent? (If cracked, heaved, etc., describe below)

Protective casing in good condition? (If damaged, describe below)

	X
	X
NA	NA

Headspace reading (ppm) and instrument used:

0.0 ppm - MiniRae 3000

Type of protective casing and height of stickup in feet (if applicable):

NA

Protective casing material type:

NA

Measure protective casing inside diameter (inches):

NA

Lock present?

Lock functional?

Did you replace the lock?

Is there evidence that the well is double cased? (If yes, describe below)

Well measuring point visible?

	X
	X
	X
	X
X	

Measure depth to water from measuring point (feet):

14.05

Measure well depth from measuring point (feet):

18.78

Measure well diameter (inches):

1

Well casing material:

PVC

Physical condition of visible well casing:

Good

Attach I.D. marker (if well I.D. is confirmed) and identify marker type:

TMW-4 (Paint Marker)

Proximity to underground or overhead utilities:

None

Describe access to well: (Include accessibility to truck mounted rig, natural obstructions, overhead utilities, proximity to permanent structures, etc.); Add sketch of location on back, if necessary.

-Interior well, accessible by track mounted rig, no natural obstructions and no overhead utilities

-see Figure 3

Describe well setting (for example, located in a field, in a playground, on pavement, in a garden, etc.)

and assess the type of restoration required.

Well located in building, through elevated wooden floor

Identify any nearby potential sources of contamination, if present (e.g., gas station, salt pile, etc.)

None

Remarks:

Drilling Contractor:

Page 8 of 12

WELL ABANDONMENT/ DECOMMISSIONING LOG

PROJECT INFORMATION	WELL INFORMATION
PROJECT/SITE NAME: Remedial Investigation / 441 Ohio Street Site	WELL I.D.: TMW-5
Client: 441 Ohio Street, LLC	Stick-up (feet): 0.55
Project Job Number: 0292-013-002	Screen Interval (fbgs): 13 to 18
Date: 3/17/2015	Drilling Company: Trec Environmental Inc.
Weather: Sunny, 20 °F, light breeze	Drill Rig Type: Track Mounted Geoprobe
Prepared by: PWW	Drilling Company Personnel: Jim/Chad

DECOMMISSIONING PROCEDURES (per NYSDEC CP-43)

Well visible? (If not, provide directions below)

Well I.D. visible?

Well location matches site map? (If not, sketch actual location on back)

YES	NO
	X
	X
X	

Well I.D. as it appears on protective casing or well:

Surface seal present?

Surface seal competent? (If cracked, heaved, etc., describe below)

Protective casing in good condition? (If damaged, describe below)

	X
X	X
NA	NA

Headspace reading (ppm) and instrument used:

0.0 ppm - MiniRae 3000

Type of protective casing and height of stickup in feet (if applicable):

NA

Protective casing material type:

NA

Measure protective casing inside diameter (inches):

NA

Lock present?

Lock functional?

Did you replace the lock?

Is there evidence that the well is double cased? (If yes, describe below)

Well measuring point visible?

	X
	X
	X
	X
X	

Measure depth to water from measuring point (feet):

13.7

Measure well depth from measuring point (feet):

19.58

Measure well diameter (inches):

1

Well casing material:

PVC

Physical condition of visible well casing:

Good

Attach I.D. marker (if well I.D. is confirmed) and identify marker type:

TMW-5 (Paint Marker)

Proximity to underground or overhead utilities:

None

Describe access to well: (Include accessibility to truck mounted rig, natural obstructions, overhead utilities, proximity to permanent structures, etc.); Add sketch of location on back, if necessary.

-Interior well, accessible by track mounted rig, no natural obstructions and no overhead utilities

-see Figure 3

Describe well setting (for example, located in a field, in a playground, on pavement, in a garden, etc.)

and assess the type of restoration required.

Well located in the building, through an elevated wooden floor

Identify any nearby potential sources of contamination, if present (e.g., gas station, salt pile, etc.)

None

Remarks:

Drilling Contractor:

Page 10 of 12

WELL ABANDONMENT/ DECOMMISSIONING LOG

PROJECT INFORMATION	WELL INFORMATION
PROJECT/SITE NAME: Remedial Investigation / 441 Ohio Street Site	WELL I.D.: TMW-6
Client: 441 Ohio Street, LLC	Stick-up (feet): 1.98
Project Job Number: 0292-013-002	Screen Interval (fbgs): 11 to 16
Date: 3/17/2015	Drilling Company: Trec Environmental Inc.
Weather: Sunny, 20 °F, light breeze	Drill Rig Type: Track Mounted Geoprobe
Prepared by: PWW	Drilling Company Personnel: Jim/Chad

DECOMMISSIONING PROCEDURES (per NYSDEC CP-43)

Well visible? (If not, provide directions below)

Well I.D. visible?

Well location matches site map? (If not, sketch actual location on back)

YES	NO
X	
X	
X	

Well I.D. as it appears on protective casing or well:

Surface seal present?

Surface seal competent? (If cracked, heaved, etc., describe below)

Protective casing in good condition? (If damaged, describe below)

X	
X	
NA	NA

Headspace reading (ppm) and instrument used:

0.0 ppm - MiniRae 3000

Type of protective casing and height of stickup in feet (if applicable):

NA

Protective casing material type:

NA

Measure protective casing inside diameter (inches):

NA

Lock present?

Lock functional?

Did you replace the lock?

Is there evidence that the well is double cased? (If yes, describe below)

Well measuring point visible?

	X
	X
	X
	X
X	

Measure depth to water from measuring point (feet):

11.47

Measure well depth from measuring point (feet):

17.08

Measure well diameter (inches):

1

Well casing material:

PVC

Physical condition of visible well casing:

Good

Attach I.D. marker (if well I.D. is confirmed) and identify marker type:

TMW-6 (Paint Marker)

Proximity to underground or overhead utilities:

None

Describe access to well: (Include accessibility to truck mounted rig, natural obstructions, overhead utilities, proximity to permanent structures, etc.); Add sketch of location on back, if necessary.

-Interior well, accessible by track mounted rig, no natural obstructions and no overhead utilities

-see Figure 3

Describe well setting (for example, located in a field, in a playground, on pavement, in a garden, etc.)

and assess the type of restoration required.

Well located in the southern portion of the building

Identify any nearby potential sources of contamination, if present (e.g., gas station, salt pile, etc.)

None

Remarks:



Drilling Contractor: _____ Department Rep.: _____

APPENDIX D

LABORATORY ANALYTICAL DATA PACKAGES
(PROVIDED ELECTRONICALLY ON ENCLOSED CD)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-49651-1

Client Project/Site: Benchmark - 441 Ohio St.

For:

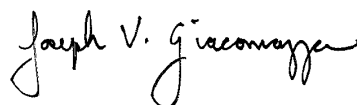
Benchmark Env. Eng. & Science, PLLC

2558 Hamburg Turnpike

Suite 300

Lackawanna, New York 14218

Attn: Mr. Tom Forbes



Authorized for release by:

11/18/2013 4:15:43 PM

Joe Giacomazza, Project Management Assistant II

joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Manager of Project Management

(716)504-9835

brian.fischer@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAP and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F	MS/MSD Recovery and/or RPD 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.

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.

GC 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
*	RPD of the LCS and LCSD exceeds the control limits
F	MS/MSD Recovery and/or RPD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Job ID: 480-49651-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-49651-1

Receipt

The samples were received on 11/7/2013 4:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

Except:

Client did not relinquish the coc at time of pickup by lab courier.

GC/MS VOA

Method(s) 8260C: The large number of analytes included in the continuing calibration verification (CCV) in batch 150885 gives a high probability that one or more analytes will be outside acceptance criteria. As indicated in the reference method, analysis may proceed as long as no more than 20% of the analytes are outside the method-defined %D criteria.

Method(s) 8260C: The method blank for batch 150885 contained 1,3-Dichlorobenzene and 1,4-Dichlorobenzene above the method detection limit. These target analyte concentrations were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. (MB 480-150885/5)

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 150885 were outside control limits for several compounds. The associated laboratory control sample (LCS) recovery met acceptance criteria. (480-49651-4 MS), (480-49651-4 MSD)

Method(s) 8260C: Reported analyte concentrations in the following samples are below 200ug/kg and may be biased low due to the samples not being collected according to 5035-L/5035A-L low-level specifications: (480-49651-4 MS), (480-49651-4 MSD), SB-8 (480-49651-4).

Method(s) 8260C: Reported analyte concentrations in the following sample(s) are below 200ug/kg and may be biased low due to the sample(s) not being collected according to 5035-L/5035A-L low-level specifications: SB-1 (480-49651-1).

No other analytical or quality issues were noted.

GC/MS Semi VOA

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: SB-5 (480-49651-3), SB-8 (480-49651-4). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-3 (480-49651-2). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The method blank for preparation batch 480-151148 contained Benzaldehyde above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 8082A: The following samples contained more than one Aroclor component: SB-3 (480-49651-2). Results are estimated due to shared peaks.

No other analytical or quality issues were noted.

Metals

Method(s) 6010C: The Matrix Spike/ Matrix Spike Duplicate ((480-49651-2 MS), (480-49651-2 MSD)) recoveries for total barium in batch 480-150948 were outside control limits. Matrix interference is suspected. The associated Laboratory Control Sample (LCS) recovery met acceptance criteria, therefore no corrective action was necessary.

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Job ID: 480-49651-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method(s) 6010C: The Matrix Spike / Matrix Spike Duplicate ((480-49651-2 MS), (480-49651-2 MSD)) precision for batch 480-150948 was outside control limits for total barium and lead. Non-homogeneity of the sample matrix is suspected. The associated Laboratory Control Sample (LCS) met acceptance criteria. No corrective action is necessary.

Method(s) 6010C: The recovery of Post Spike, (480-49651-2 PDS), in batch 480-150948 exhibited results outside the quality control limits for total cadmium and selenium. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-1

Lab Sample ID: 480-49651-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]pyrene	16	J	200	4.7	ug/Kg	1		✱	8270D	Total/NA
Benzo[b]fluoranthene	31	J	200	3.8	ug/Kg	1		✱	8270D	Total/NA
Benzo[g,h,i]perylene	17	J	200	2.3	ug/Kg	1		✱	8270D	Total/NA
Benzo[k]fluoranthene	11	J	200	2.1	ug/Kg	1		✱	8270D	Total/NA
Chrysene	25	J	200	1.9	ug/Kg	1		✱	8270D	Total/NA
Fluoranthene	19	J	200	2.8	ug/Kg	1		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	14	J	200	5.4	ug/Kg	1		✱	8270D	Total/NA
Phenanthrene	14	J	200	4.1	ug/Kg	1		✱	8270D	Total/NA
Pyrene	17	J	200	1.3	ug/Kg	1		✱	8270D	Total/NA
Arsenic	20.3		2.5		mg/Kg	1		✱	6010C	Total/NA
Barium	85.2		0.63		mg/Kg	1		✱	6010C	Total/NA
Chromium	22.9		0.63		mg/Kg	1		✱	6010C	Total/NA
Lead	165		1.3		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.11	*	0.023		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: SB-3

Lab Sample ID: 480-49651-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Biphenyl	45	J	220	14	ug/Kg	1		✱	8270D	Total/NA
2-Methylnaphthalene	160	J	220	2.6	ug/Kg	1		✱	8270D	Total/NA
4-Methylphenol	16	J	430	12	ug/Kg	1		✱	8270D	Total/NA
Acenaphthene	490		220	2.6	ug/Kg	1		✱	8270D	Total/NA
Acenaphthylene	190	J	220	1.8	ug/Kg	1		✱	8270D	Total/NA
Anthracene	1400		220	5.6	ug/Kg	1		✱	8270D	Total/NA
Benzo[a]anthracene	3200		220	3.8	ug/Kg	1		✱	8270D	Total/NA
Benzo[a]pyrene	3000		220	5.3	ug/Kg	1		✱	8270D	Total/NA
Benzo[b]fluoranthene	4400		220	4.2	ug/Kg	1		✱	8270D	Total/NA
Benzo[g,h,i]perylene	1000		220	2.6	ug/Kg	1		✱	8270D	Total/NA
Benzo[k]fluoranthene	2000		220	2.4	ug/Kg	1		✱	8270D	Total/NA
Carbazole	530		220	2.5	ug/Kg	1		✱	8270D	Total/NA
Chrysene	3000		220	2.2	ug/Kg	1		✱	8270D	Total/NA
Dibenzofuran	390		220	2.3	ug/Kg	1		✱	8270D	Total/NA
Fluorene	530		220	5.0	ug/Kg	1		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	950		220	6.0	ug/Kg	1		✱	8270D	Total/NA
Naphthalene	280		220	3.6	ug/Kg	1		✱	8270D	Total/NA
Phenanthrene	5200		220	4.6	ug/Kg	1		✱	8270D	Total/NA
Pyrene	4800		220	1.4	ug/Kg	1		✱	8270D	Total/NA
Fluoranthene - DL	7900		1100	16	ug/Kg	5		✱	8270D	Total/NA
PCB-1242	0.21	J	0.31	0.061	mg/Kg	1		✱	8082A	Total/NA
PCB-1254	0.49		0.31	0.15	mg/Kg	1		✱	8082A	Total/NA
Arsenic	19.2		2.7		mg/Kg	1		✱	6010C	Total/NA
Barium	186		0.68		mg/Kg	1		✱	6010C	Total/NA
Cadmium	2.3		0.27		mg/Kg	1		✱	6010C	Total/NA
Chromium	26.6		0.68		mg/Kg	1		✱	6010C	Total/NA
Lead	471		1.4		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.35		0.024		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: SB-5

Lab Sample ID: 480-49651-3

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-5 (Continued)

Lab Sample ID: 480-49651-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Biphenyl	210	J	2000	130	ug/Kg	10		✱	8270D	Total/NA
2-Methylnaphthalene	840	J	2000	24	ug/Kg	10		✱	8270D	Total/NA
Acenaphthene	1800	J	2000	24	ug/Kg	10		✱	8270D	Total/NA
Anthracene	3600		2000	52	ug/Kg	10		✱	8270D	Total/NA
Benzo[a]anthracene	7700		2000	35	ug/Kg	10		✱	8270D	Total/NA
Benzo[a]pyrene	6300		2000	49	ug/Kg	10		✱	8270D	Total/NA
Benzo[b]fluoranthene	10000		2000	39	ug/Kg	10		✱	8270D	Total/NA
Benzo[g,h,i]perylene	2500		2000	24	ug/Kg	10		✱	8270D	Total/NA
Benzo[k]fluoranthene	4300		2000	22	ug/Kg	10		✱	8270D	Total/NA
Carbazole	2200		2000	23	ug/Kg	10		✱	8270D	Total/NA
Chrysene	7100		2000	20	ug/Kg	10		✱	8270D	Total/NA
Dibenzofuran	1500	J	2000	21	ug/Kg	10		✱	8270D	Total/NA
Fluoranthene	20000		2000	29	ug/Kg	10		✱	8270D	Total/NA
Fluorene	1600	J	2000	46	ug/Kg	10		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2400		2000	56	ug/Kg	10		✱	8270D	Total/NA
Naphthalene	1900	J	2000	34	ug/Kg	10		✱	8270D	Total/NA
Phenanthrene	18000		2000	42	ug/Kg	10		✱	8270D	Total/NA
Pyrene	13000		2000	13	ug/Kg	10		✱	8270D	Total/NA
PCB-1254	0.18	J	0.28	0.13	mg/Kg	1		✱	8082A	Total/NA
Arsenic	7.8		2.6		mg/Kg	1		✱	6010C	Total/NA
Barium	41.3		0.66		mg/Kg	1		✱	6010C	Total/NA
Chromium	6.0		0.66		mg/Kg	1		✱	6010C	Total/NA
Lead	51.0		1.3		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.32		0.024		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: SB-8

Lab Sample ID: 480-49651-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	21	J	430	5.0	ug/Kg	2		✱	8270D	Total/NA
Anthracene	44	J	430	11	ug/Kg	2		✱	8270D	Total/NA
Benzo[a]anthracene	110	J	430	7.4	ug/Kg	2		✱	8270D	Total/NA
Benzo[a]pyrene	99	J	430	10	ug/Kg	2		✱	8270D	Total/NA
Benzo[b]fluoranthene	180	J	430	8.3	ug/Kg	2		✱	8270D	Total/NA
Benzo[g,h,i]perylene	47	J	430	5.1	ug/Kg	2		✱	8270D	Total/NA
Benzo[k]fluoranthene	95	J	430	4.7	ug/Kg	2		✱	8270D	Total/NA
Chrysene	140	J	430	4.3	ug/Kg	2		✱	8270D	Total/NA
Fluoranthene	250	J	430	6.2	ug/Kg	2		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	43	J	430	12	ug/Kg	2		✱	8270D	Total/NA
Phenanthrene	160	J	430	9.0	ug/Kg	2		✱	8270D	Total/NA
Pyrene	170	J	430	2.8	ug/Kg	2		✱	8270D	Total/NA
Arsenic	4.3		2.6		mg/Kg	1		✱	6010C	Total/NA
Barium	52.5		0.65		mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.36		0.26		mg/Kg	1		✱	6010C	Total/NA
Chromium	14.0		0.65		mg/Kg	1		✱	6010C	Total/NA
Lead	52.0		1.3		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.032		0.025		mg/Kg	1		✱	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-1

Lab Sample ID: 480-49651-1

Date Collected: 11/06/13 10:00

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 86.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.7	0.41	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,1,2,2-Tetrachloroethane	ND		5.7	0.93	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,1,2-Trichloroethane	ND		5.7	0.74	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.7	1.3	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,1-Dichloroethane	ND		5.7	0.70	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,1-Dichloroethene	ND		5.7	0.70	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,2,4-Trichlorobenzene	ND		5.7	0.35	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,2-Dibromo-3-Chloropropane	ND		5.7	2.9	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,2-Dichlorobenzene	ND		5.7	0.45	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,2-Dichloroethane	ND		5.7	0.29	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,2-Dichloropropane	ND		5.7	2.9	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,3-Dichlorobenzene	ND		5.7	0.29	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,4-Dichlorobenzene	ND		5.7	0.80	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
2-Butanone (MEK)	ND		29	2.1	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
2-Hexanone	ND		29	2.9	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
4-Methyl-2-pentanone (MIBK)	ND		29	1.9	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Acetone	ND		29	4.8	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Benzene	ND		5.7	0.28	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Bromodichloromethane	ND		5.7	0.76	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Bromoform	ND		5.7	2.9	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Bromomethane	ND		5.7	0.51	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Carbon disulfide	ND		5.7	2.9	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Carbon tetrachloride	ND		5.7	0.55	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Chlorobenzene	ND		5.7	0.75	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Dibromochloromethane	ND		5.7	0.73	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Chloroethane	ND		5.7	1.3	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Chloroform	ND		5.7	0.35	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Chloromethane	ND		5.7	0.34	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
cis-1,2-Dichloroethene	ND		5.7	0.73	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
cis-1,3-Dichloropropene	ND		5.7	0.82	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Cyclohexane	ND		5.7	0.80	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Dichlorodifluoromethane	ND		5.7	0.47	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Ethylbenzene	ND		5.7	0.39	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
1,2-Dibromoethane	ND		5.7	0.73	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Isopropylbenzene	ND		5.7	0.86	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Methyl acetate	ND		5.7	1.1	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Methyl tert-butyl ether	ND		5.7	0.56	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Methylcyclohexane	ND		5.7	0.87	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Methylene Chloride	ND		5.7	2.6	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Styrene	ND		5.7	0.29	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Tetrachloroethene	ND		5.7	0.77	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Toluene	ND		5.7	0.43	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
trans-1,2-Dichloroethene	ND		5.7	0.59	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
trans-1,3-Dichloropropene	ND		5.7	2.5	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Trichloroethene	ND		5.7	1.3	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Trichlorofluoromethane	ND		5.7	0.54	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Vinyl chloride	ND		5.7	0.70	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1
Xylenes, Total	ND		11	0.96	ug/Kg	☼	11/09/13 12:03	11/09/13 18:04	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-1

Lab Sample ID: 480-49651-1

Date Collected: 11/06/13 10:00

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 86.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		71 - 125	11/09/13 12:03	11/09/13 18:04	1
1,2-Dichloroethane-d4 (Surr)	108		64 - 126	11/09/13 12:03	11/09/13 18:04	1
4-Bromofluorobenzene (Surr)	98		72 - 126	11/09/13 12:03	11/09/13 18:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		200	12	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
bis (2-chloroisopropyl) ether	ND		200	20	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,4,5-Trichlorophenol	ND		200	42	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,4,6-Trichlorophenol	ND		200	13	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,4-Dichlorophenol	ND		200	10	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,4-Dimethylphenol	ND		200	53	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,4-Dinitrophenol	ND		380	68	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,4-Dinitrotoluene	ND		200	30	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2,6-Dinitrotoluene	ND		200	48	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2-Chloronaphthalene	ND		200	13	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2-Chlorophenol	ND		200	9.9	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2-Methylphenol	ND		200	6.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2-Methylnaphthalene	ND		200	2.4	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2-Nitroaniline	ND		380	62	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
2-Nitrophenol	ND		200	8.9	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
3,3'-Dichlorobenzidine	ND		200	170	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
3-Nitroaniline	ND		380	45	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4,6-Dinitro-2-methylphenol	ND		380	67	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Bromophenyl phenyl ether	ND		200	62	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Chloro-3-methylphenol	ND		200	8.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Chloroaniline	ND		200	57	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Chlorophenyl phenyl ether	ND		200	4.1	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Methylphenol	ND		380	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Nitroaniline	ND		380	22	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
4-Nitrophenol	ND		380	47	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Acenaphthene	ND		200	2.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Acenaphthylene	ND		200	1.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Acetophenone	ND		200	10	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Anthracene	ND		200	5.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Atrazine	ND		200	8.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Benzaldehyde	ND		200	21	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Benzo[a]anthracene	ND		200	3.4	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Benzo[a]pyrene	16	J	200	4.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Benzo[b]fluoranthene	31	J	200	3.8	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Benzo[g,h,i]perylene	17	J	200	2.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Benzo[k]fluoranthene	11	J	200	2.1	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Bis(2-chloroethoxy)methane	ND		200	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Bis(2-chloroethyl)ether	ND		200	17	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Bis(2-ethylhexyl) phthalate	ND		200	63	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Butyl benzyl phthalate	ND		200	52	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Caprolactam	ND		200	84	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Carbazole	ND		200	2.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Chrysene	25	J	200	1.9	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Dibenz(a,h)anthracene	ND		200	2.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-1

Lab Sample ID: 480-49651-1

Date Collected: 11/06/13 10:00

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 86.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		200	67	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Di-n-octyl phthalate	ND		200	4.5	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Dibenzofuran	ND		200	2.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Diethyl phthalate	ND		200	5.9	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Dimethyl phthalate	ND		200	5.1	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Fluoranthene	19	J	200	2.8	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Fluorene	ND		200	4.5	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Hexachlorobenzene	ND		200	9.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Hexachlorobutadiene	ND		200	10	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Hexachlorocyclopentadiene	ND		200	59	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Hexachloroethane	ND		200	15	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Indeno[1,2,3-cd]pyrene	14	J	200	5.4	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Isophorone	ND		200	9.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
N-Nitrosodi-n-propylamine	ND		200	15	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
N-Nitrosodiphenylamine	ND		200	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Naphthalene	ND		200	3.2	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Nitrobenzene	ND		200	8.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Pentachlorophenol	ND		380	67	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Phenanthrene	14	J	200	4.1	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Phenol	ND		200	20	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1
Pyrene	17	J	200	1.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	68		34 - 132	11/11/13 09:25	11/13/13 14:07	1
Phenol-d5 (Surr)	70		11 - 120	11/11/13 09:25	11/13/13 14:07	1
p-Terphenyl-d14 (Surr)	83		65 - 153	11/11/13 09:25	11/13/13 14:07	1
2,4,6-Tribromophenol (Surr)	86		39 - 146	11/11/13 09:25	11/13/13 14:07	1
2-Fluorobiphenyl	74		37 - 120	11/11/13 09:25	11/13/13 14:07	1
2-Fluorophenol (Surr)	69		18 - 120	11/11/13 09:25	11/13/13 14:07	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.26	0.051	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1
PCB-1221	ND		0.26	0.051	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1
PCB-1232	ND		0.26	0.051	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1
PCB-1242	ND		0.26	0.051	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1
PCB-1248	ND		0.26	0.051	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	11/08/13 09:04	11/10/13 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		46 - 175	11/08/13 09:04	11/10/13 14:50	1
DCB Decachlorobiphenyl	93		47 - 176	11/08/13 09:04	11/10/13 14:50	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	20.3		2.5		mg/Kg	☼	11/09/13 10:30	11/13/13 16:02	1
Barium	85.2		0.63		mg/Kg	☼	11/09/13 10:30	11/13/13 16:02	1
Cadmium	ND		0.25		mg/Kg	☼	11/09/13 10:30	11/14/13 15:46	1
Chromium	22.9		0.63		mg/Kg	☼	11/09/13 10:30	11/13/13 16:02	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-1

Date Collected: 11/06/13 10:00

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-1

Matrix: Solid

Percent Solids: 86.4

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	165		1.3		mg/Kg	☼	11/09/13 10:30	11/13/13 16:02	1
Selenium	ND		5.1		mg/Kg	☼	11/09/13 10:30	11/14/13 15:46	1
Silver	ND		0.63		mg/Kg	☼	11/09/13 10:30	11/13/13 16:02	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	*	0.023		mg/Kg	☼	11/12/13 07:15	11/12/13 11:37	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-3

Lab Sample ID: 480-49651-2

Date Collected: 11/06/13 10:45

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 76.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	45	J	220	14	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
bis (2-chloroisopropyl) ether	ND		220	23	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,4,5-Trichlorophenol	ND		220	48	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,4,6-Trichlorophenol	ND		220	14	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,4-Dichlorophenol	ND		220	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,4-Dimethylphenol	ND		220	59	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,4-Dinitrophenol	ND		430	76	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,4-Dinitrotoluene	ND		220	34	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2,6-Dinitrotoluene	ND		220	53	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2-Chloronaphthalene	ND		220	15	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2-Chlorophenol	ND		220	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2-Methylphenol	ND		220	6.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2-Methylnaphthalene	160	J	220	2.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2-Nitroaniline	ND		430	70	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
2-Nitrophenol	ND		220	10	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
3,3'-Dichlorobenzidine	ND		220	190	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
3-Nitroaniline	ND		430	50	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4,6-Dinitro-2-methylphenol	ND		430	75	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Bromophenyl phenyl ether	ND		220	69	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Chloro-3-methylphenol	ND		220	9.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Chloroaniline	ND		220	64	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Chlorophenyl phenyl ether	ND		220	4.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Methylphenol	16	J	430	12	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Nitroaniline	ND		430	24	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
4-Nitrophenol	ND		430	53	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Acenaphthene	490		220	2.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Acenaphthylene	190	J	220	1.8	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Acetophenone	ND		220	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Anthracene	1400		220	5.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Atrazine	ND		220	9.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Benzaldehyde	ND		220	24	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Benzo[a]anthracene	3200		220	3.8	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Benzo[a]pyrene	3000		220	5.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Benzo[b]fluoranthene	4400		220	4.2	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Benzo[g,h,i]perylene	1000		220	2.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Benzo[k]fluoranthene	2000		220	2.4	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Bis(2-chloroethoxy)methane	ND		220	12	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Bis(2-chloroethyl)ether	ND		220	19	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Bis(2-ethylhexyl) phthalate	ND		220	70	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Butyl benzyl phthalate	ND		220	59	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Caprolactam	ND		220	94	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Carbazole	530		220	2.5	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Chrysene	3000		220	2.2	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Dibenz(a,h)anthracene	ND		220	2.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Di-n-butyl phthalate	ND		220	75	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Di-n-octyl phthalate	ND		220	5.1	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Dibenzofuran	390		220	2.3	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Diethyl phthalate	ND		220	6.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Dimethyl phthalate	ND		220	5.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-3

Lab Sample ID: 480-49651-2

Date Collected: 11/06/13 10:45

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 76.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	530		220	5.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Hexachlorobenzene	ND		220	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Hexachlorobutadiene	ND		220	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Hexachlorocyclopentadiene	ND		220	66	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Hexachloroethane	ND		220	17	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Indeno[1,2,3-cd]pyrene	950		220	6.0	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Isophorone	ND		220	11	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
N-Nitrosodi-n-propylamine	ND		220	17	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
N-Nitrosodiphenylamine	ND		220	12	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Naphthalene	280		220	3.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Nitrobenzene	ND		220	9.7	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Pentachlorophenol	ND		430	75	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Phenanthrene	5200		220	4.6	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Phenol	ND		220	23	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1
Pyrene	4800		220	1.4	ug/Kg	☼	11/11/13 09:25	11/13/13 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	83		34 - 132	11/11/13 09:25	11/13/13 14:31	1
Phenol-d5 (Surr)	86		11 - 120	11/11/13 09:25	11/13/13 14:31	1
p-Terphenyl-d14 (Surr)	81		65 - 153	11/11/13 09:25	11/13/13 14:31	1
2,4,6-Tribromophenol (Surr)	96		39 - 146	11/11/13 09:25	11/13/13 14:31	1
2-Fluorobiphenyl	90		37 - 120	11/11/13 09:25	11/13/13 14:31	1
2-Fluorophenol (Surr)	81		18 - 120	11/11/13 09:25	11/13/13 14:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	7900		1100	16	ug/Kg	☼	11/11/13 09:25	11/13/13 16:06	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	75		34 - 132	11/11/13 09:25	11/13/13 16:06	5
Phenol-d5 (Surr)	81		11 - 120	11/11/13 09:25	11/13/13 16:06	5
p-Terphenyl-d14 (Surr)	89		65 - 153	11/11/13 09:25	11/13/13 16:06	5
2,4,6-Tribromophenol (Surr)	77		39 - 146	11/11/13 09:25	11/13/13 16:06	5
2-Fluorobiphenyl	88		37 - 120	11/11/13 09:25	11/13/13 16:06	5
2-Fluorophenol (Surr)	74		18 - 120	11/11/13 09:25	11/13/13 16:06	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.31	0.061	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1
PCB-1221	ND		0.31	0.061	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1
PCB-1232	ND		0.31	0.061	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1
PCB-1242	0.21	J	0.31	0.061	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1
PCB-1248	ND		0.31	0.061	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1
PCB-1254	0.49		0.31	0.15	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1
PCB-1260	ND		0.31	0.15	mg/Kg	☼	11/08/13 09:04	11/10/13 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	107		46 - 175	11/08/13 09:04	11/10/13 15:06	1
DCB Decachlorobiphenyl	103		47 - 176	11/08/13 09:04	11/10/13 15:06	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-3

Lab Sample ID: 480-49651-2

Date Collected: 11/06/13 10:45

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 76.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19.2		2.7		mg/Kg	☼	11/09/13 10:30	11/13/13 16:04	1
Barium	186		0.68		mg/Kg	☼	11/09/13 10:30	11/13/13 16:04	1
Cadmium	2.3		0.27		mg/Kg	☼	11/09/13 10:30	11/14/13 15:49	1
Chromium	26.6		0.68		mg/Kg	☼	11/09/13 10:30	11/13/13 16:04	1
Lead	471		1.4		mg/Kg	☼	11/09/13 10:30	11/13/13 16:04	1
Selenium	ND		5.5		mg/Kg	☼	11/09/13 10:30	11/14/13 15:49	1
Silver	ND		0.68		mg/Kg	☼	11/09/13 10:30	11/13/13 16:04	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.35		0.024		mg/Kg	☼	11/12/13 07:15	11/12/13 11:43	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-5

Date Collected: 11/06/13 11:20

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-3

Matrix: Solid

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	210	J	2000	130	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
bis (2-chloroisopropyl) ether	ND		2000	210	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,4,5-Trichlorophenol	ND		2000	440	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,4,6-Trichlorophenol	ND		2000	130	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,4-Dichlorophenol	ND		2000	110	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,4-Dimethylphenol	ND		2000	540	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,4-Dinitrophenol	ND		3900	700	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,4-Dinitrotoluene	ND		2000	310	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2,6-Dinitrotoluene	ND		2000	490	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2-Chloronaphthalene	ND		2000	140	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2-Chlorophenol	ND		2000	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2-Methylphenol	ND		2000	62	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2-Methylnaphthalene	840	J	2000	24	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2-Nitroaniline	ND		3900	650	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
2-Nitrophenol	ND		2000	92	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
3,3'-Dichlorobenzidine	ND		2000	1800	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
3-Nitroaniline	ND		3900	460	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4,6-Dinitro-2-methylphenol	ND		3900	700	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Bromophenyl phenyl ether	ND		2000	640	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Chloro-3-methylphenol	ND		2000	83	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Chloroaniline	ND		2000	590	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Chlorophenyl phenyl ether	ND		2000	43	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Methylphenol	ND		3900	110	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Nitroaniline	ND		3900	220	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
4-Nitrophenol	ND		3900	490	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Acenaphthene	1800	J	2000	24	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Acenaphthylene	ND		2000	16	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Acetophenone	ND		2000	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Anthracene	3600		2000	52	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Atrazine	ND		2000	90	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Benzaldehyde	ND		2000	220	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Benzo[a]anthracene	7700		2000	35	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Benzo[a]pyrene	6300		2000	49	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Benzo[b]fluoranthene	10000		2000	39	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Benzo[g,h,i]perylene	2500		2000	24	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Benzo[k]fluoranthene	4300		2000	22	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Bis(2-chloroethoxy)methane	ND		2000	110	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Bis(2-chloroethyl)ether	ND		2000	170	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Bis(2-ethylhexyl) phthalate	ND		2000	650	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Butyl benzyl phthalate	ND		2000	540	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Caprolactam	ND		2000	870	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Carbazole	2200		2000	23	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Chrysene	7100		2000	20	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Dibenz(a,h)anthracene	ND		2000	24	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Di-n-butyl phthalate	ND		2000	700	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Di-n-octyl phthalate	ND		2000	47	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Dibenzofuran	1500	J	2000	21	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Diethyl phthalate	ND		2000	61	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Dimethyl phthalate	ND		2000	53	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-5

Lab Sample ID: 480-49651-3

Date Collected: 11/06/13 11:20

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	20000		2000	29	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Fluorene	1600	J	2000	46	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Hexachlorobenzene	ND		2000	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Hexachlorobutadiene	ND		2000	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Hexachlorocyclopentadiene	ND		2000	610	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Hexachloroethane	ND		2000	160	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Indeno[1,2,3-cd]pyrene	2400		2000	56	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Isophorone	ND		2000	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
N-Nitrosodi-n-propylamine	ND		2000	160	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
N-Nitrosodiphenylamine	ND		2000	110	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Naphthalene	1900	J	2000	34	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Nitrobenzene	ND		2000	89	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Pentachlorophenol	ND		3900	690	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Phenanthrene	18000		2000	42	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Phenol	ND		2000	210	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10
Pyrene	13000		2000	13	ug/Kg	☼	11/11/13 09:25	11/13/13 16:30	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	72		34 - 132	11/11/13 09:25	11/13/13 16:30	10
Phenol-d5 (Surr)	71		11 - 120	11/11/13 09:25	11/13/13 16:30	10
p-Terphenyl-d14 (Surr)	83		65 - 153	11/11/13 09:25	11/13/13 16:30	10
2,4,6-Tribromophenol (Surr)	66		39 - 146	11/11/13 09:25	11/13/13 16:30	10
2-Fluorobiphenyl	82		37 - 120	11/11/13 09:25	11/13/13 16:30	10
2-Fluorophenol (Surr)	70		18 - 120	11/11/13 09:25	11/13/13 16:30	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.28	0.055	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1
PCB-1221	ND		0.28	0.055	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1
PCB-1232	ND		0.28	0.055	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1
PCB-1242	ND		0.28	0.055	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1
PCB-1248	ND		0.28	0.055	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1
PCB-1254	0.18	J	0.28	0.13	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1
PCB-1260	ND		0.28	0.13	mg/Kg	☼	11/08/13 09:04	11/10/13 15:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		46 - 175	11/08/13 09:04	11/10/13 15:54	1
DCB Decachlorobiphenyl	97		47 - 176	11/08/13 09:04	11/10/13 15:54	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.8		2.6		mg/Kg	☼	11/09/13 10:30	11/13/13 16:22	1
Barium	41.3		0.66		mg/Kg	☼	11/09/13 10:30	11/13/13 16:22	1
Cadmium	ND		0.26		mg/Kg	☼	11/09/13 10:30	11/14/13 16:08	1
Chromium	6.0		0.66		mg/Kg	☼	11/09/13 10:30	11/13/13 16:22	1
Lead	51.0		1.3		mg/Kg	☼	11/09/13 10:30	11/13/13 16:22	1
Selenium	ND		5.2		mg/Kg	☼	11/09/13 10:30	11/14/13 16:08	1
Silver	ND		0.66		mg/Kg	☼	11/09/13 10:30	11/13/13 16:22	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-5

Date Collected: 11/06/13 11:20

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-3

Matrix: Solid

Percent Solids: 83.0

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.32		0.024		mg/Kg	☼	11/12/13 07:15	11/12/13 11:44	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-8

Lab Sample ID: 480-49651-4

Date Collected: 11/06/13 12:30

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 77.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.4	0.47	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,1,1,2-Tetrachloroethane	ND		6.4	1.0	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,1,2-Trichloroethane	ND		6.4	0.84	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.4	1.5	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,1-Dichloroethane	ND		6.4	0.78	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,1-Dichloroethene	ND		6.4	0.79	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,2,4-Trichlorobenzene	ND		6.4	0.39	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,2-Dibromo-3-Chloropropane	ND		6.4	3.2	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,2-Dichlorobenzene	ND		6.4	0.50	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,2-Dichloroethane	ND		6.4	0.32	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,2-Dichloropropane	ND		6.4	3.2	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,3-Dichlorobenzene	ND		6.4	0.33	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,4-Dichlorobenzene	ND		6.4	0.90	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
2-Butanone (MEK)	ND		32	2.4	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
2-Hexanone	ND		32	3.2	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
4-Methyl-2-pentanone (MIBK)	ND		32	2.1	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Acetone	ND		32	5.4	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Benzene	ND		6.4	0.31	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Bromodichloromethane	ND		6.4	0.86	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Bromoform	ND		6.4	3.2	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Bromomethane	ND		6.4	0.58	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Carbon disulfide	ND		6.4	3.2	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Carbon tetrachloride	ND		6.4	0.62	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Chlorobenzene	ND		6.4	0.85	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Dibromochloromethane	ND		6.4	0.82	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Chloroethane	ND		6.4	1.5	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Chloroform	ND		6.4	0.40	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Chloromethane	ND		6.4	0.39	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
cis-1,2-Dichloroethene	ND		6.4	0.82	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
cis-1,3-Dichloropropene	ND		6.4	0.93	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Cyclohexane	ND		6.4	0.90	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Dichlorodifluoromethane	ND		6.4	0.53	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Ethylbenzene	ND		6.4	0.44	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
1,2-Dibromoethane	ND		6.4	0.83	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Isopropylbenzene	ND		6.4	0.97	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Methyl acetate	ND		6.4	1.2	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Methyl tert-butyl ether	ND		6.4	0.63	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Methylcyclohexane	ND		6.4	0.98	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Methylene Chloride	ND		6.4	3.0	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Styrene	ND		6.4	0.32	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Tetrachloroethene	ND		6.4	0.86	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Toluene	ND		6.4	0.49	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
trans-1,2-Dichloroethene	ND		6.4	0.66	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
trans-1,3-Dichloropropene	ND		6.4	2.8	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Trichloroethene	ND		6.4	1.4	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Trichlorofluoromethane	ND		6.4	0.61	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Vinyl chloride	ND		6.4	0.78	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1
Xylenes, Total	ND		13	1.1	ug/Kg	☼	11/08/13 12:27	11/09/13 04:29	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-8

Lab Sample ID: 480-49651-4

Date Collected: 11/06/13 12:30

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 77.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		71 - 125	11/08/13 12:27	11/09/13 04:29	1
1,2-Dichloroethane-d4 (Surr)	104		64 - 126	11/08/13 12:27	11/09/13 04:29	1
4-Bromofluorobenzene (Surr)	101		72 - 126	11/08/13 12:27	11/09/13 04:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		430	27	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
bis (2-chloroisopropyl) ether	ND		430	45	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,4,5-Trichlorophenol	ND		430	93	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,4,6-Trichlorophenol	ND		430	28	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,4-Dichlorophenol	ND		430	22	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,4-Dimethylphenol	ND		430	120	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,4-Dinitrophenol	ND		840	150	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,4-Dinitrotoluene	ND		430	66	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2,6-Dinitrotoluene	ND		430	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2-Chloronaphthalene	ND		430	29	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2-Chlorophenol	ND		430	22	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2-Methylphenol	ND		430	13	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2-Methylnaphthalene	ND		430	5.2	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2-Nitroaniline	ND		840	140	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
2-Nitrophenol	ND		430	20	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
3,3'-Dichlorobenzidine	ND		430	380	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
3-Nitroaniline	ND		840	98	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4,6-Dinitro-2-methylphenol	ND		840	150	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Bromophenyl phenyl ether	ND		430	140	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Chloro-3-methylphenol	ND		430	18	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Chloroaniline	ND		430	130	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Chlorophenyl phenyl ether	ND		430	9.1	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Methylphenol	ND		840	24	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Nitroaniline	ND		840	48	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
4-Nitrophenol	ND		840	100	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Acenaphthene	21	J	430	5.0	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Acenaphthylene	ND		430	3.5	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Acetophenone	ND		430	22	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Anthracene	44	J	430	11	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Atrazine	ND		430	19	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Benzaldehyde	ND		430	47	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Benzo[a]anthracene	110	J	430	7.4	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Benzo[a]pyrene	99	J	430	10	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Benzo[b]fluoranthene	180	J	430	8.3	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Benzo[g,h,i]perylene	47	J	430	5.1	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Benzo[k]fluoranthene	95	J	430	4.7	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Bis(2-chloroethoxy)methane	ND		430	23	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Bis(2-chloroethyl)ether	ND		430	37	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Bis(2-ethylhexyl) phthalate	ND		430	140	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Butyl benzyl phthalate	ND		430	110	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Caprolactam	ND		430	190	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Carbazole	ND		430	4.9	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Chrysene	140	J	430	4.3	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Dibenz(a,h)anthracene	ND		430	5.0	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-8

Lab Sample ID: 480-49651-4

Date Collected: 11/06/13 12:30

Matrix: Solid

Date Received: 11/07/13 16:00

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		430	150	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Di-n-octyl phthalate	ND		430	10	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Dibenzofuran	ND		430	4.5	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Diethyl phthalate	ND		430	13	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Dimethyl phthalate	ND		430	11	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Fluoranthene	250	J	430	6.2	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Fluorene	ND		430	9.9	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Hexachlorobenzene	ND		430	21	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Hexachlorobutadiene	ND		430	22	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Hexachlorocyclopentadiene	ND		430	130	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Hexachloroethane	ND		430	33	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Indeno[1,2,3-cd]pyrene	43	J	430	12	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Isophorone	ND		430	21	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
N-Nitrosodi-n-propylamine	ND		430	34	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
N-Nitrosodiphenylamine	ND		430	23	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Naphthalene	ND		430	7.1	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Nitrobenzene	ND		430	19	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Pentachlorophenol	ND		840	150	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Phenanthrene	160	J	430	9.0	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Phenol	ND		430	45	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2
Pyrene	170	J	430	2.8	ug/Kg	☼	11/11/13 09:25	11/13/13 16:54	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	69		34 - 132	11/11/13 09:25	11/13/13 16:54	2
Phenol-d5 (Surr)	73		11 - 120	11/11/13 09:25	11/13/13 16:54	2
p-Terphenyl-d14 (Surr)	83		65 - 153	11/11/13 09:25	11/13/13 16:54	2
2,4,6-Tribromophenol (Surr)	81		39 - 146	11/11/13 09:25	11/13/13 16:54	2
2-Fluorobiphenyl	78		37 - 120	11/11/13 09:25	11/13/13 16:54	2
2-Fluorophenol (Surr)	69		18 - 120	11/11/13 09:25	11/13/13 16:54	2

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.048	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1
PCB-1221	ND		0.24	0.048	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1
PCB-1232	ND		0.24	0.048	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1
PCB-1242	ND		0.24	0.048	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1
PCB-1248	ND		0.24	0.048	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1
PCB-1254	ND		0.24	0.11	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1
PCB-1260	ND		0.24	0.11	mg/Kg	☼	11/08/13 09:04	11/10/13 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	108		46 - 175	11/08/13 09:04	11/10/13 16:10	1
DCB Decachlorobiphenyl	110		47 - 176	11/08/13 09:04	11/10/13 16:10	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.3		2.6		mg/Kg	☼	11/09/13 10:30	11/13/13 16:24	1
Barium	52.5		0.65		mg/Kg	☼	11/09/13 10:30	11/13/13 16:24	1
Cadmium	0.36		0.26		mg/Kg	☼	11/09/13 10:30	11/14/13 16:11	1
Chromium	14.0		0.65		mg/Kg	☼	11/09/13 10:30	11/13/13 16:24	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-8

Date Collected: 11/06/13 12:30

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-4

Matrix: Solid

Percent Solids: 77.5

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	52.0		1.3		mg/Kg	☼	11/09/13 10:30	11/13/13 16:24	1
Selenium	ND		5.2		mg/Kg	☼	11/09/13 10:30	11/14/13 16:11	1
Silver	ND		0.65		mg/Kg	☼	11/09/13 10:30	11/13/13 16:24	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.032		0.025		mg/Kg	☼	11/12/13 07:15	11/12/13 11:46	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (71-125)	12DCE (64-126)	BFB (72-126)
480-49651-1	SB-1	100	108	98
480-49651-4	SB-8	100	104	101
480-49651-4 MS	SB-8	99	93	101
480-49651-4 MSD	SB-8	102	91	100
LCS 480-150885/4	Lab Control Sample	99	102	101
LCS 480-150977/4	Lab Control Sample	98	102	101
MB 480-150885/5	Method Blank	101	102	100
MB 480-150977/5	Method Blank	100	103	101

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (34-132)	PHL (11-120)	TPH (65-153)	TBP (39-146)	FBP (37-120)	2FP (18-120)
480-49651-1	SB-1	68	70	83	86	74	69
480-49651-2	SB-3	83	86	81	96	90	81
480-49651-2 - DL	SB-3	75	81	89	77	88	74
480-49651-3	SB-5	72	71	83	66	82	70
480-49651-4	SB-8	69	73	83	81	78	69
LCS 480-151148/2-A	Lab Control Sample	84	85	94	100	91	82
MB 480-151148/1-A	Method Blank	78	79	96	82	85	77

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = p-Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (46-175)	DCB1 (47-176)
480-49651-1	SB-1	97	93
480-49651-2	SB-3	107	103
480-49651-3	SB-5	95	97
480-49651-4	SB-8	108	110
LCS 480-150685/2-A	Lab Control Sample	129	121
MB 480-150685/1-A	Method Blank	110	103

Surrogate Legend

TestAmerica Buffalo

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

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QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: 480-49651-4 MS

Matrix: Solid

Analysis Batch: 150885

Client Sample ID: SB-8

Prep Type: Total/NA

Prep Batch: 150772

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.		
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,1-Dichloroethane	ND		64.2	52.1		ug/Kg	☼	81	73 - 126		
1,1-Dichloroethene	ND		64.2	42.5		ug/Kg	☼	66	59 - 125		
1,2-Dichlorobenzene	ND		64.2	43.4	F	ug/Kg	☼	68	75 - 120		
1,2-Dichloroethane	ND		64.2	50.3		ug/Kg	☼	78	77 - 122		
Benzene	ND		64.2	49.6	F	ug/Kg	☼	77	79 - 127		
Chlorobenzene	ND		64.2	47.8	F	ug/Kg	☼	74	76 - 124		
cis-1,2-Dichloroethene	ND		64.2	50.3	F	ug/Kg	☼	78	81 - 117		
Ethylbenzene	ND		64.2	43.3	F	ug/Kg	☼	67	80 - 120		
Methyl tert-butyl ether	ND		64.2	51.3		ug/Kg	☼	80	63 - 125		
Tetrachloroethene	ND		64.2	63.0		ug/Kg	☼	98	74 - 122		
Toluene	ND		64.2	43.3	F	ug/Kg	☼	67	74 - 128		
trans-1,2-Dichloroethene	ND		64.2	45.9	F	ug/Kg	☼	72	78 - 126		
Trichloroethene	ND		64.2	46.8	F	ug/Kg	☼	73	77 - 129		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	99		71 - 125								
1,2-Dichloroethane-d4 (Surr)	93		64 - 126								
4-Bromofluorobenzene (Surr)	101		72 - 126								

Lab Sample ID: 480-49651-4 MSD

Matrix: Solid

Analysis Batch: 150885

Client Sample ID: SB-8

Prep Type: Total/NA

Prep Batch: 150772

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethane	ND		63.8	51.8		ug/Kg	☼	81	73 - 126	1	30
1,1-Dichloroethene	ND		63.8	40.8		ug/Kg	☼	64	59 - 125	4	30
1,2-Dichlorobenzene	ND		63.8	41.1	F	ug/Kg	☼	64	75 - 120	5	30
1,2-Dichloroethane	ND		63.8	49.1		ug/Kg	☼	77	77 - 122	3	30
Benzene	ND		63.8	48.9	F	ug/Kg	☼	77	79 - 127	1	30
Chlorobenzene	ND		63.8	45.7	F	ug/Kg	☼	72	76 - 124	4	30
cis-1,2-Dichloroethene	ND		63.8	48.8	F	ug/Kg	☼	76	81 - 117	3	30
Ethylbenzene	ND		63.8	42.0	F	ug/Kg	☼	66	80 - 120	3	30
Methyl tert-butyl ether	ND		63.8	49.9		ug/Kg	☼	78	63 - 125	3	30
Tetrachloroethene	ND		63.8	59.6		ug/Kg	☼	94	74 - 122	6	30
Toluene	ND		63.8	42.3	F	ug/Kg	☼	66	74 - 128	2	30
trans-1,2-Dichloroethene	ND		63.8	43.5	F	ug/Kg	☼	68	78 - 126	5	30
Trichloroethene	ND		63.8	44.5	F	ug/Kg	☼	70	77 - 129	5	30
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	102		71 - 125								
1,2-Dichloroethane-d4 (Surr)	91		64 - 126								
4-Bromofluorobenzene (Surr)	100		72 - 126								

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-150885/5

Matrix: Solid

Analysis Batch: 150885

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg			11/08/13 19:47	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg			11/08/13 19:47	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg			11/08/13 19:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg			11/08/13 19:47	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg			11/08/13 19:47	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg			11/08/13 19:47	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg			11/08/13 19:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg			11/08/13 19:47	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg			11/08/13 19:47	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg			11/08/13 19:47	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg			11/08/13 19:47	1
1,3-Dichlorobenzene	1.33	J	5.0	0.26	ug/Kg			11/08/13 19:47	1
1,4-Dichlorobenzene	1.33	J	5.0	0.70	ug/Kg			11/08/13 19:47	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg			11/08/13 19:47	1
2-Hexanone	ND		25	2.5	ug/Kg			11/08/13 19:47	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg			11/08/13 19:47	1
Acetone	ND		25	4.2	ug/Kg			11/08/13 19:47	1
Benzene	ND		5.0	0.25	ug/Kg			11/08/13 19:47	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg			11/08/13 19:47	1
Bromoform	ND		5.0	2.5	ug/Kg			11/08/13 19:47	1
Bromomethane	ND		5.0	0.45	ug/Kg			11/08/13 19:47	1
Carbon disulfide	ND		5.0	2.5	ug/Kg			11/08/13 19:47	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg			11/08/13 19:47	1
Chlorobenzene	ND		5.0	0.66	ug/Kg			11/08/13 19:47	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg			11/08/13 19:47	1
Chloroethane	ND		5.0	1.1	ug/Kg			11/08/13 19:47	1
Chloroform	ND		5.0	0.31	ug/Kg			11/08/13 19:47	1
Chloromethane	ND		5.0	0.30	ug/Kg			11/08/13 19:47	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg			11/08/13 19:47	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg			11/08/13 19:47	1
Cyclohexane	ND		5.0	0.70	ug/Kg			11/08/13 19:47	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg			11/08/13 19:47	1
Ethylbenzene	ND		5.0	0.35	ug/Kg			11/08/13 19:47	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg			11/08/13 19:47	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg			11/08/13 19:47	1
Methyl acetate	ND		5.0	0.93	ug/Kg			11/08/13 19:47	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg			11/08/13 19:47	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg			11/08/13 19:47	1
Methylene Chloride	ND		5.0	2.3	ug/Kg			11/08/13 19:47	1
Styrene	ND		5.0	0.25	ug/Kg			11/08/13 19:47	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg			11/08/13 19:47	1
Toluene	ND		5.0	0.38	ug/Kg			11/08/13 19:47	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg			11/08/13 19:47	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg			11/08/13 19:47	1
Trichloroethene	ND		5.0	1.1	ug/Kg			11/08/13 19:47	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg			11/08/13 19:47	1
Vinyl chloride	ND		5.0	0.61	ug/Kg			11/08/13 19:47	1
Xylenes, Total	ND		10	0.84	ug/Kg			11/08/13 19:47	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-150885/5

Matrix: Solid

Analysis Batch: 150885

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		71 - 125		11/08/13 19:47	1
1,2-Dichloroethane-d4 (Surr)	102		64 - 126		11/08/13 19:47	1
4-Bromofluorobenzene (Surr)	100		72 - 126		11/08/13 19:47	1

Lab Sample ID: LCS 480-150885/4

Matrix: Solid

Analysis Batch: 150885

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	50.0	48.3		ug/Kg		97	73 - 126
1,1-Dichloroethene	50.0	44.8		ug/Kg		90	59 - 125
1,2-Dichlorobenzene	50.0	48.9		ug/Kg		98	75 - 120
1,2-Dichloroethane	50.0	49.7		ug/Kg		99	77 - 122
Benzene	50.0	46.2		ug/Kg		92	79 - 127
Chlorobenzene	50.0	48.2		ug/Kg		96	76 - 124
cis-1,2-Dichloroethene	50.0	47.9		ug/Kg		96	81 - 117
Ethylbenzene	50.0	44.7		ug/Kg		89	80 - 120
Methyl tert-butyl ether	50.0	48.9		ug/Kg		98	63 - 125
Tetrachloroethene	50.0	56.7		ug/Kg		113	74 - 122
Toluene	50.0	41.9		ug/Kg		84	74 - 128
trans-1,2-Dichloroethene	50.0	47.0		ug/Kg		94	78 - 126
Trichloroethene	50.0	47.6		ug/Kg		95	77 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		71 - 125
1,2-Dichloroethane-d4 (Surr)	102		64 - 126
4-Bromofluorobenzene (Surr)	101		72 - 126

Lab Sample ID: MB 480-150977/5

Matrix: Solid

Analysis Batch: 150977

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg			11/09/13 15:22	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg			11/09/13 15:22	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg			11/09/13 15:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg			11/09/13 15:22	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg			11/09/13 15:22	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg			11/09/13 15:22	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg			11/09/13 15:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg			11/09/13 15:22	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg			11/09/13 15:22	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg			11/09/13 15:22	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg			11/09/13 15:22	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg			11/09/13 15:22	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg			11/09/13 15:22	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg			11/09/13 15:22	1
2-Hexanone	ND		25	2.5	ug/Kg			11/09/13 15:22	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-150977/5

Matrix: Solid

Analysis Batch: 150977

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg			11/09/13 15:22	1
Acetone	ND		25	4.2	ug/Kg			11/09/13 15:22	1
Benzene	ND		5.0	0.25	ug/Kg			11/09/13 15:22	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg			11/09/13 15:22	1
Bromoform	ND		5.0	2.5	ug/Kg			11/09/13 15:22	1
Bromomethane	ND		5.0	0.45	ug/Kg			11/09/13 15:22	1
Carbon disulfide	ND		5.0	2.5	ug/Kg			11/09/13 15:22	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg			11/09/13 15:22	1
Chlorobenzene	ND		5.0	0.66	ug/Kg			11/09/13 15:22	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg			11/09/13 15:22	1
Chloroethane	ND		5.0	1.1	ug/Kg			11/09/13 15:22	1
Chloroform	ND		5.0	0.31	ug/Kg			11/09/13 15:22	1
Chloromethane	ND		5.0	0.30	ug/Kg			11/09/13 15:22	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg			11/09/13 15:22	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg			11/09/13 15:22	1
Cyclohexane	ND		5.0	0.70	ug/Kg			11/09/13 15:22	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg			11/09/13 15:22	1
Ethylbenzene	ND		5.0	0.35	ug/Kg			11/09/13 15:22	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg			11/09/13 15:22	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg			11/09/13 15:22	1
Methyl acetate	ND		5.0	0.93	ug/Kg			11/09/13 15:22	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg			11/09/13 15:22	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg			11/09/13 15:22	1
Methylene Chloride	ND		5.0	2.3	ug/Kg			11/09/13 15:22	1
Styrene	ND		5.0	0.25	ug/Kg			11/09/13 15:22	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg			11/09/13 15:22	1
Toluene	ND		5.0	0.38	ug/Kg			11/09/13 15:22	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg			11/09/13 15:22	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg			11/09/13 15:22	1
Trichloroethene	ND		5.0	1.1	ug/Kg			11/09/13 15:22	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg			11/09/13 15:22	1
Vinyl chloride	ND		5.0	0.61	ug/Kg			11/09/13 15:22	1
Xylenes, Total	ND		10	0.84	ug/Kg			11/09/13 15:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		71 - 125		11/09/13 15:22	1
1,2-Dichloroethane-d4 (Surr)	103		64 - 126		11/09/13 15:22	1
4-Bromofluorobenzene (Surr)	101		72 - 126		11/09/13 15:22	1

Lab Sample ID: LCS 480-150977/4

Matrix: Solid

Analysis Batch: 150977

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	50.0	47.8		ug/Kg		96	73 - 126
1,1-Dichloroethene	50.0	45.2		ug/Kg		90	59 - 125
1,2-Dichlorobenzene	50.0	47.7		ug/Kg		95	75 - 120
1,2-Dichloroethane	50.0	49.9		ug/Kg		100	77 - 122

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-150977/4

Matrix: Solid

Analysis Batch: 150977

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.6		ug/Kg		93	79 - 127
Chlorobenzene	50.0	47.3		ug/Kg		95	76 - 124
cis-1,2-Dichloroethene	50.0	47.8		ug/Kg		96	81 - 117
Ethylbenzene	50.0	44.1		ug/Kg		88	80 - 120
Methyl tert-butyl ether	50.0	49.1		ug/Kg		98	63 - 125
Tetrachloroethene	50.0	45.9		ug/Kg		92	74 - 122
Toluene	50.0	41.3		ug/Kg		83	74 - 128
trans-1,2-Dichloroethene	50.0	46.8		ug/Kg		94	78 - 126
Trichloroethene	50.0	47.1		ug/Kg		94	77 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		71 - 125
1,2-Dichloroethane-d4 (Surr)	102		64 - 126
4-Bromofluorobenzene (Surr)	101		72 - 126

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

Lab Sample ID: MB 480-151148/1-A

Matrix: Solid

Analysis Batch: 151674

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		170	10	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
bis (2-chloroisopropyl) ether	ND		170	18	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,4,5-Trichlorophenol	ND		170	37	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,4,6-Trichlorophenol	ND		170	11	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,4-Dichlorophenol	ND		170	8.8	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,4-Dimethylphenol	ND		170	45	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,4-Dinitrophenol	ND		330	59	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,4-Dinitrotoluene	ND		170	26	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2,6-Dinitrotoluene	ND		170	41	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2-Chloronaphthalene	ND		170	11	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2-Chlorophenol	ND		170	8.5	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2-Methylphenol	ND		170	5.2	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2-Methylnaphthalene	ND		170	2.0	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2-Nitroaniline	ND		330	54	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
2-Nitrophenol	ND		170	7.7	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
3,3'-Dichlorobenzidine	ND		170	150	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
3-Nitroaniline	ND		330	39	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4,6-Dinitro-2-methylphenol	ND		330	58	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Bromophenyl phenyl ether	ND		170	53	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Chloro-3-methylphenol	ND		170	6.9	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Chloroaniline	ND		170	49	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Chlorophenyl phenyl ether	ND		170	3.6	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Methylphenol	ND		330	9.3	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Nitroaniline	ND		330	19	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
4-Nitrophenol	ND		330	41	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Acenaphthene	ND		170	2.0	ug/Kg		11/11/13 09:25	11/13/13 13:19	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

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

Lab Sample ID: MB 480-151148/1-A

Matrix: Solid

Analysis Batch: 151674

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		170	1.4	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Acetophenone	ND		170	8.6	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Anthracene	ND		170	4.3	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Atrazine	ND		170	7.5	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Benzaldehyde	51.3	J	170	18	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Benzo[a]anthracene	ND		170	2.9	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Benzo[a]pyrene	ND		170	4.0	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Benzo[b]fluoranthene	ND		170	3.3	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Benzo[g,h,i]perylene	ND		170	2.0	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Benzo[k]fluoranthene	ND		170	1.8	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Bis(2-chloroethoxy)methane	ND		170	9.1	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Bis(2-chloroethyl)ether	ND		170	14	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Bis(2-ethylhexyl) phthalate	ND		170	54	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Butyl benzyl phthalate	ND		170	45	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Caprolactam	ND		170	72	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Carbazole	ND		170	1.9	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Chrysene	ND		170	1.7	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Dibenz(a,h)anthracene	ND		170	2.0	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Di-n-butyl phthalate	ND		170	58	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Di-n-octyl phthalate	ND		170	3.9	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Dibenzofuran	ND		170	1.7	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Diethyl phthalate	ND		170	5.1	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Dimethyl phthalate	ND		170	4.4	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Fluoranthene	ND		170	2.4	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Fluorene	ND		170	3.9	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Hexachlorobenzene	ND		170	8.3	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Hexachlorobutadiene	ND		170	8.6	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Hexachlorocyclopentadiene	ND		170	51	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Hexachloroethane	ND		170	13	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Indeno[1,2,3-cd]pyrene	ND		170	4.6	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Isophorone	ND		170	8.4	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
N-Nitrosodi-n-propylamine	ND		170	13	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
N-Nitrosodiphenylamine	ND		170	9.2	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Naphthalene	ND		170	2.8	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Nitrobenzene	ND		170	7.4	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Pentachlorophenol	ND		330	57	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Phenanthrene	ND		170	3.5	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Phenol	ND		170	18	ug/Kg		11/11/13 09:25	11/13/13 13:19	1
Pyrene	ND		170	1.1	ug/Kg		11/11/13 09:25	11/13/13 13:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		34 - 132	11/11/13 09:25	11/13/13 13:19	1
Phenol-d5 (Surr)	79		11 - 120	11/11/13 09:25	11/13/13 13:19	1
p-Terphenyl-d14 (Surr)	96		65 - 153	11/11/13 09:25	11/13/13 13:19	1
2,4,6-Tribromophenol (Surr)	82		39 - 146	11/11/13 09:25	11/13/13 13:19	1
2-Fluorobiphenyl	85		37 - 120	11/11/13 09:25	11/13/13 13:19	1
2-Fluorophenol (Surr)	77		18 - 120	11/11/13 09:25	11/13/13 13:19	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

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

Lab Sample ID: LCS 480-151148/2-A

Matrix: Solid

Analysis Batch: 151674

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151148

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	1650	1590		ug/Kg		96	55 - 125
2-Chlorophenol	1650	1320		ug/Kg		80	38 - 120
4-Chloro-3-methylphenol	1650	1550		ug/Kg		94	49 - 125
4-Nitrophenol	3300	3460		ug/Kg		105	43 - 137
Acenaphthene	1650	1440		ug/Kg		87	53 - 120
Atrazine	1650	1630		ug/Kg		99	60 - 164
Bis(2-ethylhexyl) phthalate	1650	1490		ug/Kg		90	61 - 133
Fluorene	1650	1490		ug/Kg		90	63 - 126
Hexachloroethane	1650	1220		ug/Kg		74	41 - 120
N-Nitrosodi-n-propylamine	1650	1310		ug/Kg		79	46 - 120
Pentachlorophenol	3300	2780		ug/Kg		84	33 - 136
Phenol	1650	1350		ug/Kg		82	36 - 120
Pyrene	1650	1400		ug/Kg		85	51 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	84		34 - 132
Phenol-d5 (Surr)	85		11 - 120
p-Terphenyl-d14 (Surr)	94		65 - 153
2,4,6-Tribromophenol (Surr)	100		39 - 146
2-Fluorobiphenyl	91		37 - 120
2-Fluorophenol (Surr)	82		18 - 120

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-150685/1-A

Matrix: Solid

Analysis Batch: 151024

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 150685

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.17	0.034	mg/Kg		11/08/13 09:04	11/10/13 09:33	1
PCB-1221	ND		0.17	0.034	mg/Kg		11/08/13 09:04	11/10/13 09:33	1
PCB-1232	ND		0.17	0.034	mg/Kg		11/08/13 09:04	11/10/13 09:33	1
PCB-1242	ND		0.17	0.034	mg/Kg		11/08/13 09:04	11/10/13 09:33	1
PCB-1248	ND		0.17	0.034	mg/Kg		11/08/13 09:04	11/10/13 09:33	1
PCB-1254	ND		0.17	0.081	mg/Kg		11/08/13 09:04	11/10/13 09:33	1
PCB-1260	ND		0.17	0.081	mg/Kg		11/08/13 09:04	11/10/13 09:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	110		46 - 175	11/08/13 09:04	11/10/13 09:33	1
DCB Decachlorobiphenyl	103		47 - 176	11/08/13 09:04	11/10/13 09:33	1

Lab Sample ID: LCS 480-150685/2-A

Matrix: Solid

Analysis Batch: 151024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 150685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.18	3.22		mg/Kg		148	51 - 185

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 480-150685/2-A

Matrix: Solid

Analysis Batch: 151024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 150685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1260	2.18	2.76		mg/Kg		126	61 - 184
Surrogate	%Recovery	LCS Qualifier	Limits				
Tetrachloro-m-xylene	129		46 - 175				
DCB Decachlorobiphenyl	121		47 - 176				

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-150948/1-A

Matrix: Solid

Analysis Batch: 152008

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 150948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.2		mg/Kg		11/09/13 10:30	11/13/13 15:55	1
Barium	ND		0.55		mg/Kg		11/09/13 10:30	11/13/13 15:55	1
Chromium	ND		0.55		mg/Kg		11/09/13 10:30	11/13/13 15:55	1
Lead	ND		1.1		mg/Kg		11/09/13 10:30	11/13/13 15:55	1
Silver	ND		0.55		mg/Kg		11/09/13 10:30	11/13/13 15:55	1

Lab Sample ID: MB 480-150948/1-A

Matrix: Solid

Analysis Batch: 152297

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 150948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.22		mg/Kg		11/09/13 10:30	11/14/13 15:39	1
Selenium	ND		4.4		mg/Kg		11/09/13 10:30	11/14/13 15:39	1

Lab Sample ID: LCDSRM 480-150948/3-A LCDSRM

Matrix: Solid

Analysis Batch: 152008

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	99.5	104.4		mg/Kg		105.0	69.3 - 130.5	1	20
Barium	310	304.1		mg/Kg		98.2	74.2 - 126.1	3	20
Chromium	136	141.7		mg/Kg		104.3	70.4 - 130.1	1	20
Lead	115	126.6		mg/Kg		110.2	72.1 - 128.7	1	20
Silver	40.4	41.75		mg/Kg		103.5	65.8 - 133.7	0	20

Lab Sample ID: LCDSRM 480-150948/3-A LCDSRM

Matrix: Solid

Analysis Batch: 152297

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium	182	181.8		mg/Kg		100.0	73.6 - 126.4	1	20

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCDSRM 480-150948/3-A LCDSRM

Matrix: Solid

Analysis Batch: 152297

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Selenium	150	156.4		mg/Kg		104.4	67.3 - 132.7	0	20

Lab Sample ID: LCSSRM 480-150948/2-A

Matrix: Solid

Analysis Batch: 152008

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	99.6	105.5		mg/Kg		105.9	69.3 - 130.5		
Barium	310	314.5		mg/Kg		101.4	74.2 - 126.1		
Chromium	136	143.8		mg/Kg		105.7	70.4 - 130.1		
Lead	115	128.4		mg/Kg		111.7	72.1 - 128.7		
Silver	40.4	41.57		mg/Kg		102.9	65.8 - 133.7		

Lab Sample ID: LCSSRM 480-150948/2-A

Matrix: Solid

Analysis Batch: 152297

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium	182	184.4		mg/Kg		101.3	73.6 - 126.4		
Selenium	150	157.1		mg/Kg		104.8	67.3 - 132.7		

Lab Sample ID: 480-49651-2 MS

Matrix: Solid

Analysis Batch: 152008

Client Sample ID: SB-3

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	19.2		55.4	63.24		mg/Kg	⚠	80	75 - 125		
Barium	186		55.4	177.4	F	mg/Kg	⚠	-16	75 - 125		
Chromium	26.6		55.4	75.21		mg/Kg	⚠	88	75 - 125		
Lead	471		55.4	233.4	4	mg/Kg	⚠	-428	75 - 125		
Silver	ND		13.8	13.94		mg/Kg	⚠	99	75 - 125		

Lab Sample ID: 480-49651-2 MS

Matrix: Solid

Analysis Batch: 152297

Client Sample ID: SB-3

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium	2.3		55.4	53.81		mg/Kg	⚠	93	75 - 125		
Selenium	ND		55.4	53.00		mg/Kg	⚠	93	75 - 125		

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-49651-2 MSD

Matrix: Solid

Analysis Batch: 152008

Client Sample ID: SB-3

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Arsenic	19.2		57.1	77.00		mg/Kg	⊛	101	75 - 125	20	20
Barium	186		57.1	317.0	F	mg/Kg	⊛	229	75 - 125	56	20
Chromium	26.6		57.1	91.06		mg/Kg	⊛	113	75 - 125	19	20
Lead	471		57.1	539.5	4 F	mg/Kg	⊛	120	75 - 125	79	20
Silver	ND		14.3	13.97		mg/Kg	⊛	96	75 - 125	0	20

Lab Sample ID: 480-49651-2 MSD

Matrix: Solid

Analysis Batch: 152297

Client Sample ID: SB-3

Prep Type: Total/NA

Prep Batch: 150948

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cadmium	2.3		57.1	55.25		mg/Kg	⊛	93	75 - 125	3	20
Selenium	ND		57.1	52.90		mg/Kg	⊛	90	75 - 125	0	20

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 480-151175/1-A

Matrix: Solid

Analysis Batch: 151516

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151175

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.019		mg/Kg		11/12/13 07:15	11/12/13 10:57	1

Lab Sample ID: LCDSRM 480-151175/3-A LCDSRM

Matrix: Solid

Analysis Batch: 151516

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 151175

Analyte	Spike	LCDSRM	LCDSRM	Unit	D	%Rec	%Rec.	RPD	Limit
							Limits		
Mercury	3.77	4.77		mg/Kg		126.6	50.9 - 149.	39	20
							1		

Lab Sample ID: LCSSRM 480-151175/2-A

Matrix: Solid

Analysis Batch: 151516

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151175

Analyte	Spike	LCSSRM	LCSSRM	Unit	D	%Rec	%Rec.	RPD	Limit
							Limits		
Mercury	3.77	3.20		mg/Kg		85.0	50.9 - 149.		
							1		

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

GC/MS VOA

Prep Batch: 150772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-4	SB-8	Total/NA	Solid	5035	
480-49651-4 MS	SB-8	Total/NA	Solid	5035	
480-49651-4 MSD	SB-8	Total/NA	Solid	5035	

Analysis Batch: 150885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-4	SB-8	Total/NA	Solid	8260C	150772
480-49651-4 MS	SB-8	Total/NA	Solid	8260C	150772
480-49651-4 MSD	SB-8	Total/NA	Solid	8260C	150772
LCS 480-150885/4	Lab Control Sample	Total/NA	Solid	8260C	
MB 480-150885/5	Method Blank	Total/NA	Solid	8260C	

Analysis Batch: 150977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	8260C	150979
LCS 480-150977/4	Lab Control Sample	Total/NA	Solid	8260C	
MB 480-150977/5	Method Blank	Total/NA	Solid	8260C	

Prep Batch: 150979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 151148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	3550C	
480-49651-2 - DL	SB-3	Total/NA	Solid	3550C	
480-49651-2	SB-3	Total/NA	Solid	3550C	
480-49651-3	SB-5	Total/NA	Solid	3550C	
480-49651-4	SB-8	Total/NA	Solid	3550C	
LCS 480-151148/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-151148/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 151674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	8270D	151148
480-49651-2	SB-3	Total/NA	Solid	8270D	151148
480-49651-2 - DL	SB-3	Total/NA	Solid	8270D	151148
480-49651-3	SB-5	Total/NA	Solid	8270D	151148
480-49651-4	SB-8	Total/NA	Solid	8270D	151148
LCS 480-151148/2-A	Lab Control Sample	Total/NA	Solid	8270D	151148
MB 480-151148/1-A	Method Blank	Total/NA	Solid	8270D	151148

GC Semi VOA

Prep Batch: 150685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	3550C	
480-49651-2	SB-3	Total/NA	Solid	3550C	

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

GC Semi VOA (Continued)

Prep Batch: 150685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-3	SB-5	Total/NA	Solid	3550C	
480-49651-4	SB-8	Total/NA	Solid	3550C	
LCS 480-150685/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-150685/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 151024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	8082A	150685
480-49651-2	SB-3	Total/NA	Solid	8082A	150685
480-49651-3	SB-5	Total/NA	Solid	8082A	150685
480-49651-4	SB-8	Total/NA	Solid	8082A	150685
LCS 480-150685/2-A	Lab Control Sample	Total/NA	Solid	8082A	150685
MB 480-150685/1-A	Method Blank	Total/NA	Solid	8082A	150685

Metals

Prep Batch: 150948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	3050B	
480-49651-2	SB-3	Total/NA	Solid	3050B	
480-49651-2 MS	SB-3	Total/NA	Solid	3050B	
480-49651-2 MSD	SB-3	Total/NA	Solid	3050B	
480-49651-3	SB-5	Total/NA	Solid	3050B	
480-49651-4	SB-8	Total/NA	Solid	3050B	
LCDSRM 480-150948/3-A LCD\$	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 480-150948/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 480-150948/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 151175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	7471B	
480-49651-2	SB-3	Total/NA	Solid	7471B	
480-49651-3	SB-5	Total/NA	Solid	7471B	
480-49651-4	SB-8	Total/NA	Solid	7471B	
LCDSRM 480-151175/3-A LCD\$	Lab Control Sample Dup	Total/NA	Solid	7471B	
LCSSRM 480-151175/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 480-151175/1-A	Method Blank	Total/NA	Solid	7471B	

Analysis Batch: 151516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	7471B	151175
480-49651-2	SB-3	Total/NA	Solid	7471B	151175
480-49651-3	SB-5	Total/NA	Solid	7471B	151175
480-49651-4	SB-8	Total/NA	Solid	7471B	151175
LCDSRM 480-151175/3-A LCD\$	Lab Control Sample Dup	Total/NA	Solid	7471B	151175
LCSSRM 480-151175/2-A	Lab Control Sample	Total/NA	Solid	7471B	151175
MB 480-151175/1-A	Method Blank	Total/NA	Solid	7471B	151175

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Metals (Continued)

Analysis Batch: 152008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	6010C	150948
480-49651-2	SB-3	Total/NA	Solid	6010C	150948
480-49651-2 MS	SB-3	Total/NA	Solid	6010C	150948
480-49651-2 MSD	SB-3	Total/NA	Solid	6010C	150948
480-49651-3	SB-5	Total/NA	Solid	6010C	150948
480-49651-4	SB-8	Total/NA	Solid	6010C	150948
LCDSRM 480-150948/3-A LCDSC	Lab Control Sample Dup	Total/NA	Solid	6010C	150948
LCSSRM 480-150948/2-A	Lab Control Sample	Total/NA	Solid	6010C	150948
MB 480-150948/1-A	Method Blank	Total/NA	Solid	6010C	150948

Analysis Batch: 152297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	6010C	150948
480-49651-2	SB-3	Total/NA	Solid	6010C	150948
480-49651-2 MS	SB-3	Total/NA	Solid	6010C	150948
480-49651-2 MSD	SB-3	Total/NA	Solid	6010C	150948
480-49651-3	SB-5	Total/NA	Solid	6010C	150948
480-49651-4	SB-8	Total/NA	Solid	6010C	150948
LCDSRM 480-150948/3-A LCDSC	Lab Control Sample Dup	Total/NA	Solid	6010C	150948
LCSSRM 480-150948/2-A	Lab Control Sample	Total/NA	Solid	6010C	150948
MB 480-150948/1-A	Method Blank	Total/NA	Solid	6010C	150948

General Chemistry

Analysis Batch: 150576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49651-1	SB-1	Total/NA	Solid	Moisture	
480-49651-2	SB-3	Total/NA	Solid	Moisture	
480-49651-3	SB-5	Total/NA	Solid	Moisture	
480-49651-4	SB-8	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-1

Date Collected: 11/06/13 10:00

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-1

Matrix: Solid

Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			150979	11/09/13 12:03	PJQ	TAL BUF
Total/NA	Analysis	8260C		1	150977	11/09/13 18:04	CDC	TAL BUF
Total/NA	Prep	3550C			151148	11/11/13 09:25	KEB	TAL BUF
Total/NA	Analysis	8270D		1	151674	11/13/13 14:07	ANM	TAL BUF
Total/NA	Prep	3550C			150685	11/08/13 09:04	CAM	TAL BUF
Total/NA	Analysis	8082A		1	151024	11/10/13 14:50	JMM	TAL BUF
Total/NA	Prep	7471B			151175	11/12/13 07:15	SS1	TAL BUF
Total/NA	Analysis	7471B		1	151516	11/12/13 11:37	SS1	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152008	11/13/13 16:02	AMH	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152297	11/14/13 15:46	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	150576	11/07/13 23:31	GTG	TAL BUF

Client Sample ID: SB-3

Date Collected: 11/06/13 10:45

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-2

Matrix: Solid

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			151148	11/11/13 09:25	KEB	TAL BUF
Total/NA	Analysis	8270D		1	151674	11/13/13 14:31	ANM	TAL BUF
Total/NA	Prep	3550C	DL		151148	11/11/13 09:25	KEB	TAL BUF
Total/NA	Analysis	8270D	DL	5	151674	11/13/13 16:06	ANM	TAL BUF
Total/NA	Prep	3550C			150685	11/08/13 09:04	CAM	TAL BUF
Total/NA	Analysis	8082A		1	151024	11/10/13 15:06	JMM	TAL BUF
Total/NA	Prep	7471B			151175	11/12/13 07:15	SS1	TAL BUF
Total/NA	Analysis	7471B		1	151516	11/12/13 11:43	SS1	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152008	11/13/13 16:04	AMH	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152297	11/14/13 15:49	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	150576	11/07/13 23:31	GTG	TAL BUF

Client Sample ID: SB-5

Date Collected: 11/06/13 11:20

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-3

Matrix: Solid

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			151148	11/11/13 09:25	KEB	TAL BUF
Total/NA	Analysis	8270D		10	151674	11/13/13 16:30	ANM	TAL BUF
Total/NA	Prep	3550C			150685	11/08/13 09:04	CAM	TAL BUF
Total/NA	Analysis	8082A		1	151024	11/10/13 15:54	JMM	TAL BUF
Total/NA	Prep	7471B			151175	11/12/13 07:15	SS1	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Client Sample ID: SB-5

Date Collected: 11/06/13 11:20

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-3

Matrix: Solid

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7471B		1	151516	11/12/13 11:44	SS1	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152008	11/13/13 16:22	AMH	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152297	11/14/13 16:08	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	150576	11/07/13 23:31	GTG	TAL BUF

Client Sample ID: SB-8

Date Collected: 11/06/13 12:30

Date Received: 11/07/13 16:00

Lab Sample ID: 480-49651-4

Matrix: Solid

Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			150772	11/08/13 12:27	PJQ	TAL BUF
Total/NA	Analysis	8260C		1	150885	11/09/13 04:29	PJQ	TAL BUF
Total/NA	Prep	3550C			151148	11/11/13 09:25	KEB	TAL BUF
Total/NA	Analysis	8270D		2	151674	11/13/13 16:54	ANM	TAL BUF
Total/NA	Prep	3550C			150685	11/08/13 09:04	CAM	TAL BUF
Total/NA	Analysis	8082A		1	151024	11/10/13 16:10	JMM	TAL BUF
Total/NA	Prep	7471B			151175	11/12/13 07:15	SS1	TAL BUF
Total/NA	Analysis	7471B		1	151516	11/12/13 11:46	SS1	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152008	11/13/13 16:24	AMH	TAL BUF
Total/NA	Prep	3050B			150948	11/09/13 10:30	NMD2	TAL BUF
Total/NA	Analysis	6010C		1	152297	11/14/13 16:11	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	150576	11/07/13 23:31	GTG	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	NELAP	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-14
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13 *
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	04-01-14
Minnesota	NELAP	5	036-999-337	12-31-13 *
New Hampshire	NELAP	1	2973	09-11-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	12-31-13
Wisconsin	State Program	5	998310390	08-31-14

* Expired certification is currently pending renewal and is considered valid.

TestAmerica Buffalo

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

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 BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49651-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-49651-1	SB-1	Solid	11/06/13 10:00	11/07/13 16:00
480-49651-2	SB-3	Solid	11/06/13 10:45	11/07/13 16:00
480-49651-3	SB-5	Solid	11/06/13 11:20	11/07/13 16:00
480-49651-4	SB-8	Solid	11/06/13 12:30	11/07/13 16:00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt _____
Drinking Water? Yes ☐ No ☒

Chain of Custody Record

TAL-4124 (1007)

Client Beaumont Env Eng & Sci, PLLC		Project Manager Tom Forbes	Date 11/21/13	Chain of Custody Number 149980
Address 2558 Hamburg Turnpike		Telephone Number (Area Code)/Fax Number 716-856-0544/0583	Lab Number	
City Buffalo	State NY	Site Contact R. Davis	Lab Contact B. Hsiao	Page 1 of 1
Zip Code 14218		Carrier/Trailer Number		

Project Name and Location (State)
441 OHIO Street

Contract/Purchase Order/Quote No.

Special Instructions/
Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)				
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	PCBs	PCBs	PCBs	PCBs	PCBs
SB-1	11/6/13	1000			X	X	X						X	X	X	X	X
SB-3	11/6/13	1045			X	X	X						X	X	X	X	X
SB-5	11/6/13	1120			X	X	X						X	X	X	X	X
SB-8	11/6/13	1230			X	X	X						X	X	X	X	X
SB-2 *	11/6/13	1030			X	X	X										
SB-4 *	11/6/13	1100			X	X	X										
SB-6 *	11/6/13	1145			X	X	X										



480-49651 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days
 Turn Around Time Required
 1. Relinquished By _____ Date _____ Time _____
 2. Relinquished By _____ Date _____ Time _____
 3. Relinquished By _____ Date _____ Time _____

QC Requirements (Specify)
 Temp 4.0 F to 7.0 F
 1. Received By _____ Date _____ Time _____
 2. Received By _____ Date _____ Time _____
 3. Received By _____ Date _____ Time _____

Comments Samples SB-2, SB-4, SB-6, to be archived until analytical data from SB-1, SB-3, SB-5 & SB-8 is reviewed.
 11/17/13 1600

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-49651-1

Login Number: 49651

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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.	False	client did not relinquish coc
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.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	N/A	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-49652-1

Client Project/Site: Benchmark - 441 Ohio St.

For:

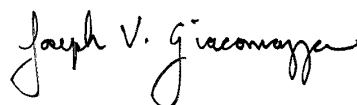
Benchmark Env. Eng. & Science, PLLC

2558 Hamburg Turnpike

Suite 300

Lackawanna, New York 14218

Attn: Mr. Tom Forbes



Authorized for release by:

11/12/2013 5:06:21 PM

Joe Giacomazza, Project Management Assistant II

joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Manager of Project Management

(716)504-9835

brian.fischer@testamericainc.com

LINKS

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results through

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Job ID: 480-49652-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-49652-1

Receipt

The sample was received on 11/7/2013 4:00 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

GC/MS VOA

Method(s) 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 150799 exceeded control limits for the following analyte: 2-Butanone. This is due to the coelution with Ethyl Acetate in the spiking solution.

No other analytical or quality issues were noted.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Client Sample ID: Piezometer-North End

Lab Sample ID: 480-49652-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	10	*	10	1.3	ug/L	1		8260C	Total/NA
Acetone	10		10	3.0	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Client Sample ID: Piezometer-North End

Lab Sample ID: 480-49652-1

Date Collected: 11/06/13 09:00

Matrix: Water

Date Received: 11/07/13 16:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			11/09/13 06:28	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			11/09/13 06:28	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			11/09/13 06:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			11/09/13 06:28	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			11/09/13 06:28	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			11/09/13 06:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			11/09/13 06:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			11/09/13 06:28	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			11/09/13 06:28	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/09/13 06:28	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			11/09/13 06:28	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			11/09/13 06:28	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			11/09/13 06:28	1
2-Butanone (MEK)	10	*	10	1.3	ug/L			11/09/13 06:28	1
2-Hexanone	ND		5.0	1.2	ug/L			11/09/13 06:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			11/09/13 06:28	1
Acetone	10		10	3.0	ug/L			11/09/13 06:28	1
Benzene	ND		1.0	0.41	ug/L			11/09/13 06:28	1
Bromodichloromethane	ND		1.0	0.39	ug/L			11/09/13 06:28	1
Bromoform	ND		1.0	0.26	ug/L			11/09/13 06:28	1
Bromomethane	ND		1.0	0.69	ug/L			11/09/13 06:28	1
Carbon disulfide	ND		1.0	0.19	ug/L			11/09/13 06:28	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			11/09/13 06:28	1
Chlorobenzene	ND		1.0	0.75	ug/L			11/09/13 06:28	1
Dibromochloromethane	ND		1.0	0.32	ug/L			11/09/13 06:28	1
Chloroethane	ND		1.0	0.32	ug/L			11/09/13 06:28	1
Chloroform	ND		1.0	0.34	ug/L			11/09/13 06:28	1
Chloromethane	ND		1.0	0.35	ug/L			11/09/13 06:28	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			11/09/13 06:28	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			11/09/13 06:28	1
Cyclohexane	ND		1.0	0.18	ug/L			11/09/13 06:28	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			11/09/13 06:28	1
Ethylbenzene	ND		1.0	0.74	ug/L			11/09/13 06:28	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			11/09/13 06:28	1
Isopropylbenzene	ND		1.0	0.79	ug/L			11/09/13 06:28	1
Methyl acetate	ND		1.0	0.50	ug/L			11/09/13 06:28	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			11/09/13 06:28	1
Methylcyclohexane	ND		1.0	0.16	ug/L			11/09/13 06:28	1
Methylene Chloride	ND		1.0	0.44	ug/L			11/09/13 06:28	1
Styrene	ND		1.0	0.73	ug/L			11/09/13 06:28	1
Tetrachloroethene	ND		1.0	0.36	ug/L			11/09/13 06:28	1
Toluene	ND		1.0	0.51	ug/L			11/09/13 06:28	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			11/09/13 06:28	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			11/09/13 06:28	1
Trichloroethene	ND		1.0	0.46	ug/L			11/09/13 06:28	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			11/09/13 06:28	1
Vinyl chloride	ND		1.0	0.90	ug/L			11/09/13 06:28	1
Xylenes, Total	ND		2.0	0.66	ug/L			11/09/13 06:28	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Client Sample ID: Piezometer-North End

Lab Sample ID: 480-49652-1

Date Collected: 11/06/13 09:00

Matrix: Water

Date Received: 11/07/13 16:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	98		71 - 126		11/09/13 06:28	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	96		66 - 137		11/09/13 06:28	1
<i>4-Bromofluorobenzene (Surr)</i>	100		73 - 120		11/09/13 06:28	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (71-126)	12DCE (66-137)	BFB (73-120)
480-49652-1	Piezometer-North End	98	96	100
LCS 480-150799/4	Lab Control Sample	96	102	98
LCSD 480-150799/5	Lab Control Sample Dup	96	104	101
MB 480-150799/7	Method Blank	98	102	101

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-150799/7

Matrix: Water

Analysis Batch: 150799

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			11/09/13 00:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			11/09/13 00:32	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			11/09/13 00:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			11/09/13 00:32	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			11/09/13 00:32	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			11/09/13 00:32	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			11/09/13 00:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			11/09/13 00:32	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			11/09/13 00:32	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/09/13 00:32	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			11/09/13 00:32	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			11/09/13 00:32	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			11/09/13 00:32	1
2-Butanone (MEK)	ND		10	1.3	ug/L			11/09/13 00:32	1
2-Hexanone	ND		5.0	1.2	ug/L			11/09/13 00:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			11/09/13 00:32	1
Acetone	ND		10	3.0	ug/L			11/09/13 00:32	1
Benzene	ND		1.0	0.41	ug/L			11/09/13 00:32	1
Bromodichloromethane	ND		1.0	0.39	ug/L			11/09/13 00:32	1
Bromoform	ND		1.0	0.26	ug/L			11/09/13 00:32	1
Bromomethane	ND		1.0	0.69	ug/L			11/09/13 00:32	1
Carbon disulfide	ND		1.0	0.19	ug/L			11/09/13 00:32	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			11/09/13 00:32	1
Chlorobenzene	ND		1.0	0.75	ug/L			11/09/13 00:32	1
Dibromochloromethane	ND		1.0	0.32	ug/L			11/09/13 00:32	1
Chloroethane	ND		1.0	0.32	ug/L			11/09/13 00:32	1
Chloroform	ND		1.0	0.34	ug/L			11/09/13 00:32	1
Chloromethane	ND		1.0	0.35	ug/L			11/09/13 00:32	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			11/09/13 00:32	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			11/09/13 00:32	1
Cyclohexane	ND		1.0	0.18	ug/L			11/09/13 00:32	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			11/09/13 00:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			11/09/13 00:32	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			11/09/13 00:32	1
Isopropylbenzene	ND		1.0	0.79	ug/L			11/09/13 00:32	1
Methyl acetate	ND		1.0	0.50	ug/L			11/09/13 00:32	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			11/09/13 00:32	1
Methylcyclohexane	ND		1.0	0.16	ug/L			11/09/13 00:32	1
Methylene Chloride	ND		1.0	0.44	ug/L			11/09/13 00:32	1
Styrene	ND		1.0	0.73	ug/L			11/09/13 00:32	1
Tetrachloroethene	ND		1.0	0.36	ug/L			11/09/13 00:32	1
Toluene	ND		1.0	0.51	ug/L			11/09/13 00:32	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			11/09/13 00:32	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			11/09/13 00:32	1
Trichloroethene	ND		1.0	0.46	ug/L			11/09/13 00:32	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			11/09/13 00:32	1
Vinyl chloride	ND		1.0	0.90	ug/L			11/09/13 00:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			11/09/13 00:32	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-150799/7

Matrix: Water

Analysis Batch: 150799

Client Sample ID: Method Blank

Prep Type: Total/NA

<i>Surrogate</i>	<i>MB</i> <i>%Recovery</i>	<i>MB</i> <i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	98		71 - 126		11/09/13 00:32	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	102		66 - 137		11/09/13 00:32	1
<i>4-Bromofluorobenzene (Surr)</i>	101		73 - 120		11/09/13 00:32	1

Lab Sample ID: LCS 480-150799/4

Matrix: Water

Analysis Batch: 150799

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

<i>Analyte</i>	<i>Spike</i> <i>Added</i>	<i>LCS</i> <i>Result</i>	<i>LCS</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec.</i> <i>Limits</i>
1,1-Dichloroethane	25.0	25.1		ug/L		101	71 - 129
1,1-Dichloroethene	25.0	24.5		ug/L		98	58 - 121
1,2-Dichlorobenzene	25.0	24.4		ug/L		97	80 - 124
1,2-Dichloroethane	25.0	24.0		ug/L		96	75 - 127
Benzene	25.0	24.7		ug/L		99	71 - 124
Chlorobenzene	25.0	24.5		ug/L		98	72 - 120
cis-1,2-Dichloroethene	25.0	24.3		ug/L		97	74 - 124
Ethylbenzene	25.0	24.3		ug/L		97	77 - 123
Methyl tert-butyl ether	25.0	24.6		ug/L		99	64 - 127
Tetrachloroethene	25.0	26.7		ug/L		107	74 - 122
Toluene	25.0	24.7		ug/L		99	80 - 122
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	73 - 127
Trichloroethene	25.0	24.7		ug/L		99	74 - 123

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
<i>Toluene-d8 (Surr)</i>	96		71 - 126
<i>1,2-Dichloroethane-d4 (Surr)</i>	102		66 - 137
<i>4-Bromofluorobenzene (Surr)</i>	98		73 - 120

Lab Sample ID: LCSD 480-150799/5

Matrix: Water

Analysis Batch: 150799

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

<i>Analyte</i>	<i>Spike</i> <i>Added</i>	<i>LCSD</i> <i>Result</i>	<i>LCSD</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec.</i> <i>Limits</i>	<i>RPD</i>	<i>RPD</i> <i>Limit</i>
1,1-Dichloroethane	25.0	25.1		ug/L		101	71 - 129	0	20
1,1-Dichloroethene	25.0	24.8		ug/L		99	58 - 121	1	16
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	80 - 124	1	20
1,2-Dichloroethane	25.0	24.2		ug/L		97	75 - 127	1	20
Benzene	25.0	24.5		ug/L		98	71 - 124	1	13
Chlorobenzene	25.0	24.5		ug/L		98	72 - 120	0	25
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	74 - 124	0	15
Ethylbenzene	25.0	23.9		ug/L		95	77 - 123	2	15
Methyl tert-butyl ether	25.0	25.5		ug/L		102	64 - 127	3	37
Tetrachloroethene	25.0	26.6		ug/L		107	74 - 122	0	20
Toluene	25.0	23.7		ug/L		95	80 - 122	4	15
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	73 - 127	2	20
Trichloroethene	25.0	24.5		ug/L		98	74 - 123	1	16

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 480-150799/5

Matrix: Water

Analysis Batch: 150799

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	96		71 - 126
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	101		73 - 120

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

GC/MS VOA

Analysis Batch: 150799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-49652-1	Piezometer-North End	Total/NA	Water	8260C	
LCS 480-150799/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-150799/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-150799/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Client Sample ID: Piezometer-North End
Date Collected: 11/06/13 09:00
Date Received: 11/07/13 16:00

Lab Sample ID: 480-49652-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	150799	11/09/13 06:28	NMD1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-14
California	NELAP	9	1169CA	09-30-14
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-14
Illinois	NELAP	5	200003	09-30-14
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	04-01-14
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	12-31-13
Wisconsin	State Program	5	998310390	08-31-14

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF

Protocol References:

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-49652-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-49652-1	Piezometer-North End	Water	11/06/13 09:00	11/07/13 16:00

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

THE LEADER IN ENVIRONMENTAL TESTING

ITAL-4124 (1007)

[illegible]

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Slays with the Sample: PINK - Field Copy

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-49652-1

Login Number: 49652

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	N/A	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-75578-1

Client Project/Site: Benchmark - 441 Ohio St.

For:

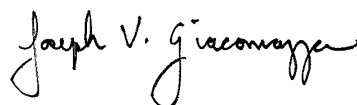
Benchmark Env. Eng. & Science, PLLC

2558 Hamburg Turnpike

Suite 300

Lackawanna, New York 14218

Attn: Mr. Tom Forbes



Authorized for release by:

2/25/2015 4:29:02 PM

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Qualifiers

GC/MS VOA

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.
*	LCS or LCSD exceeds the control limits
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	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.
X	Surrogate is outside control limits

GC 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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Job ID: 480-75578-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-75578-1

Receipt

The samples were received on 2/18/2015 5:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.3° C.

GC/MS VOA

Method(s) 8260C: The laboratory control sample (LCS) for batch 227386 recovered outside control limits for the following analytes: Cyclohexane. These were not requested spike compounds; therefore, the data have been qualified and reported.
(LCS 480-227392/1-A)

Method(s) 8260C: The method blank for batch 227386 contained Acetone and 2-Hexanone above the method detection limit. These target analyte concentrations were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D: The large number of analytes included in the continuing calibration verification (CCV) gives a high probability that one or more analytes will be outside acceptance criteria. As indicated in the reference method, analysis may proceed as long as no more than 20% of the analytes of interest are outside the method-defined %D criteria.

Method(s) 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 227725 was outside criteria for the following analyte: 2-Nitrophenol. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The laboratory control sample (LCS) Matrix Spike (MS) and Matrix Spike Duplicate(MSD) for batch 227544 recovered outside control limits for the following analytes: N-Nitrosodiphenylamine. These analytes were biased high and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for batch 227544 recovered outside control limits for the following analytes: 3-Nitroaniline and, 4-Chloroaniline. 3-Nitroaniline and, 4-Chloroaniline has been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8270D: The matrix spike and matrix spike duplicate (MS/MS) precision for batch 227544 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows two of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SB-102 (2-8) (480-75578-15). These results have been reported and qualified.

Method(s) 8270D: The following samples were diluted due to solid particles in extracted samples: BLIND DUP 2 (480-75578-4), SB-101 (2-7.5) (480-75578-13), SB-102 (2-8) (480-75578-15), SB-106 (4-8) (480-75578-9), SB-106 (8-16) (480-75578-10), SB-107 (0-4) (480-75578-11), SB-107 (4-8) (480-75578-12), SB-109 (4-10) (480-75578-1), SB-110 (10-16) (480-75578-3), SB-110 (4-10) (480-75578-2), SB-111 (6-9) (480-75578-5), SB-112 (0-2) (480-75578-6), SB-112 (2-6) (480-75578-7), SB-112 (2-6) (480-75578-7 MS), SB-112 (2-6) (480-75578-7 MSD), SB-113 (2-6) (480-75578-8). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The following sample(s) was diluted due to the nature of the sample matrix and abundance of target analytes: SB-102 (0-2) (480-75578-14). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8081B: The following samples were diluted due to the nature of the sample matrix : BLIND DUP (480-75578-19), SB-104 (0-4)

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Job ID: 480-75578-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

(480-75578-18), SB-104 (4-8) (480-75578-20). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method(s) 8081B: The following sample was diluted due to the nature of the sample matrix: SB-110 (4-10) (480-75578-2). Elevated reporting limits (RLs) are provided.

Method(s) 8151A: The continuing calibration verification (CCV) associated with batch 227459 recovered above the upper control limit for 2,4,5-T, 2,4-D, and 2,4-Dichlorophenylacetic acid.. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 480-227739/16).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010C: The continuing calibration blank (CCB) for analytical batch 480-227796/34 contained iron above the reporting limit (RL). All reported samples SB-108 (1-4) (480-75578-23 MS), SB-108 (1-4) (480-75578-23 MSD), SB-108 (4-16) (480-75578-24) associated with this CCB contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The low level continuing calibration verification (CCVL 480-227796/35) recovered above the upper control limit for iron, manganese and barium. The sample(s) SB-108 (1-4) (480-75578-23 MS), SB-108 (1-4) (480-75578-23 MSD), SB-108 (4-16) (480-75578-24) associated with this CCVL contained these analytes at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The low level continuing calibration verification (CCVL 480-227796/27) recovered above the upper control limit for iron and manganese. The sample(s) (480-75578-23 PDS), (480-75578-23 SD), (LCSSRM 480-227499/2-), (MB 480-227499/1-A), SB-105 (0-2) (480-75578-21), SB-105 (2-8) (480-75578-22), SB-108 (1-4) (480-75578-23), SB-108 (1-4) (480-75578-23 MS), SB-108 (1-4) (480-75578-23 MSD), SB-108 (4-16) (480-75578-24) associated with this CCVL were either ND or less than the reporting limit (RL) for these analytes or contained these analytes at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The serial dilution performed for the following sample(s) associated with batch 480-227499 was outside control limits for iron, manganese, manganese and zinc: (480-75578-23 SD). Matrix effects are suspected.

Method(s) 6010C: The post digestion spike % recovery for manganese associated with batch 480-227796 was outside of control limits. Matrix effects are suspected.

Method(s) 6010C: The recovery of Post Spike, (480-75578-7 PDS), in batch 227840 exhibited results below the quality control limits for total silver, iron, and manganese. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

Method(s) 6010C: The Continuing Calibration Verification 480-227840/37 and 480-227840/48 recovered above the upper control limit for total thallium. The sample SB-113 (2-6) (480-75578-8) associated with this CCV was non-detect for the affected analytes; therefore, the data have been reported.

Method(s) 6010C: The following sample(s) was diluted due to the presence of total calcium which interferes with total copper: SB-113 (2-6) (480-75578-8). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The following sample(s) was diluted due to the presence of total calcium which interferes with total copper: BLIND DUP (480-75578-19). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The continuing calibration blank (CCB) for analytical batch 227840 contained total calcium above the reporting limit (RL). All reported samples BLIND DUP (480-75578-19) associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The Continuing Calibration Verification 480-227840/37 and 480-227840/48 recovered above the upper control limit for

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Job ID: 480-75578-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

total thallium. The samples SB-101 (2-7.5) (480-75578-13), SB-106 (4-8) (480-75578-9), SB-106 (8-16) (480-75578-10), SB-107 (0-4) (480-75578-11), SB-107 (4-8) (480-75578-12) associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported.

Method(s) 6010C: The continuing calibration blank (CCB) 480-227840/60 for analytical batch 227840 contained total aluminum, calcium, and iron above the reporting limit (RL). All reported samples SB-102 (0-2) (480-75578-14), SB-102 (2-8) (480-75578-15), SB-103 (2-8) (480-75578-16), SB-104 (0-4) (480-75578-18), SB-104 (4-8) (480-75578-20) associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The continuing calibration blank (CCB) 480-227840/60 for analytical batch 227840 contained total aluminum and iron above the reporting limit (RL). All reported samples BLIND DUP (480-75578-19), SB-103 (8-16) (480-75578-17) associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The Serial Dilution (480-75578-7 SD) in batch 227907, exhibited results outside the quality control limits for total zinc. However, the Post Digestion Spike was compliant so no corrective action was necessary

Method(s) 6010C: The low level continuing calibration verification (CCVL 480-227907/34 and 480-227907/40) recovered above the upper control limit for total manganese. The sample(s) SB-102 (0-2) (480-75578-14), SB-102 (2-8) (480-75578-15) associated with this CCVL contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed

Method(s) 6010C: The low level continuing calibration verification (CCVL 480-227907/40 and 480-227907/48) recovered above the upper control limit for total manganese. The sample(s) BLIND DUP (480-75578-19), SB-103 (2-8) (480-75578-16), SB-103 (8-16) (480-75578-17), SB-104 (0-4) (480-75578-18), SB-104 (4-8) (480-75578-20) associated with this CCVL contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed

Method(s) 6010C: The following sample(s) was diluted due to the presence of total calcium which interferes with total copper: SB-112 (0-2) (480-75578-6). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The Continuing Calibration Verification 480-227840/48 recovered above the upper control limit for total thallium. The samples BLIND DUP (480-75578-19), SB-102 (0-2) (480-75578-14), SB-102 (2-8) (480-75578-15), SB-103 (2-8) (480-75578-16), SB-103 (8-16) (480-75578-17), SB-104 (0-4) (480-75578-18), SB-104 (4-8) (480-75578-20) associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-109 (4-10)

Lab Sample ID: 480-75578-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7870		12.3		mg/Kg	1	☼	6010C	Total/NA
Arsenic	7.2		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	76.5		0.61		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.49		0.25		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.35		0.25		mg/Kg	1	☼	6010C	Total/NA
Calcium	4290		61.4		mg/Kg	1	☼	6010C	Total/NA
Chromium	12.4		0.61		mg/Kg	1	☼	6010C	Total/NA
Cobalt	10.6		0.61		mg/Kg	1	☼	6010C	Total/NA
Copper	260		1.2		mg/Kg	1	☼	6010C	Total/NA
Iron	18500		12.3		mg/Kg	1	☼	6010C	Total/NA
Lead	111		1.2		mg/Kg	1	☼	6010C	Total/NA
Magnesium	3760		24.5		mg/Kg	1	☼	6010C	Total/NA
Manganese	383		0.25		mg/Kg	1	☼	6010C	Total/NA
Nickel	24.3		6.1		mg/Kg	1	☼	6010C	Total/NA
Potassium	1230		36.8		mg/Kg	1	☼	6010C	Total/NA
Vanadium	16.0		0.61		mg/Kg	1	☼	6010C	Total/NA
Zinc	98.0		2.5		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.33		0.024		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-110 (4-10)

Lab Sample ID: 480-75578-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	220	J	1100	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	250	J	1100	160	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	220	J	1100	170	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	350	J	1100	120	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	210	J	1100	160	ug/Kg	5	☼	8270D	Total/NA
Pyrene	200	J	1100	130	ug/Kg	5	☼	8270D	Total/NA
Endosulfan sulfate	2.0	J	4.4	0.82	ug/Kg	2	☼	8081B	Total/NA
Endrin	1.0	J	4.4	0.87	ug/Kg	2	☼	8081B	Total/NA
Endrin ketone	1.5	J	4.4	1.1	ug/Kg	2	☼	8081B	Total/NA
Aluminum	6910		13.4		mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.7		2.7		mg/Kg	1	☼	6010C	Total/NA
Barium	62.7		0.67		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.38		0.27		mg/Kg	1	☼	6010C	Total/NA
Calcium	9950		67.2		mg/Kg	1	☼	6010C	Total/NA
Chromium	9.4		0.67		mg/Kg	1	☼	6010C	Total/NA
Cobalt	5.9		0.67		mg/Kg	1	☼	6010C	Total/NA
Copper	37.1		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	12700		13.4		mg/Kg	1	☼	6010C	Total/NA
Lead	155		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	2980		26.9		mg/Kg	1	☼	6010C	Total/NA
Manganese	252		0.27		mg/Kg	1	☼	6010C	Total/NA
Nickel	17.6		6.7		mg/Kg	1	☼	6010C	Total/NA
Potassium	1130		40.3		mg/Kg	1	☼	6010C	Total/NA
Vanadium	12.8		0.67		mg/Kg	1	☼	6010C	Total/NA
Zinc	57.0		2.7		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.069		0.026		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16) (Continued)

Lab Sample ID: 480-75578-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.8	J B	28	4.8	ug/Kg	1	☼	8260C	Total/NA
delta-BHC	0.46	J	2.1	0.39	ug/Kg	1	☼	8081B	Total/NA
Endrin aldehyde	0.57	J	2.1	0.53	ug/Kg	1	☼	8081B	Total/NA
gamma-BHC (Lindane)	0.52	J	2.1	0.38	ug/Kg	1	☼	8081B	Total/NA
Methoxychlor	0.51	J	2.1	0.42	ug/Kg	1	☼	8081B	Total/NA
Aluminum	9190		12.1		mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.8		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	52.0		0.61		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.50		0.24		mg/Kg	1	☼	6010C	Total/NA
Calcium	1280		60.7		mg/Kg	1	☼	6010C	Total/NA
Chromium	13.3		0.61		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.5		0.61		mg/Kg	1	☼	6010C	Total/NA
Copper	24.8		1.2		mg/Kg	1	☼	6010C	Total/NA
Iron	19300		12.1		mg/Kg	1	☼	6010C	Total/NA
Lead	11.8		1.2		mg/Kg	1	☼	6010C	Total/NA
Magnesium	3240		24.3		mg/Kg	1	☼	6010C	Total/NA
Manganese	200		0.24		mg/Kg	1	☼	6010C	Total/NA
Nickel	27.5		6.1		mg/Kg	1	☼	6010C	Total/NA
Potassium	1110		36.4		mg/Kg	1	☼	6010C	Total/NA
Vanadium	17.9		0.61		mg/Kg	1	☼	6010C	Total/NA
Zinc	63.2		2.4		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: BLIND DUP 2

Lab Sample ID: 480-75578-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	220	J	1900	190	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	280	J	1900	270	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	300	J	1900	200	ug/Kg	5	☼	8270D	Total/NA
PCB-1248	0.11	J	0.40	0.077	mg/Kg	1	☼	8082A	Total/NA
Aluminum	12100		20.6		mg/Kg	1	☼	6010C	Total/NA
Arsenic	7.3		4.1		mg/Kg	1	☼	6010C	Total/NA
Barium	124		1.0		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.72		0.41		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.54		0.41		mg/Kg	1	☼	6010C	Total/NA
Calcium	9970		103		mg/Kg	1	☼	6010C	Total/NA
Chromium	16.5		1.0		mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.8		1.0		mg/Kg	1	☼	6010C	Total/NA
Copper	210		2.1		mg/Kg	1	☼	6010C	Total/NA
Iron	21900		20.6		mg/Kg	1	☼	6010C	Total/NA
Lead	220		2.1		mg/Kg	1	☼	6010C	Total/NA
Magnesium	4620		41.2		mg/Kg	1	☼	6010C	Total/NA
Manganese	225		0.41		mg/Kg	1	☼	6010C	Total/NA
Nickel	26.8		10.3		mg/Kg	1	☼	6010C	Total/NA
Potassium	2080		61.8		mg/Kg	1	☼	6010C	Total/NA
Sodium	343		288		mg/Kg	1	☼	6010C	Total/NA
Vanadium	22.5		1.0		mg/Kg	1	☼	6010C	Total/NA
Zinc	111		4.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.23		0.043		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-111 (6-9)

Lab Sample ID: 480-75578-5

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-111 (6-9) (Continued)

Lab Sample ID: 480-75578-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	180	J	1000	100	ug/Kg	5	☆	8270D	Total/NA	
Benzo[a]pyrene	220	J	1000	150	ug/Kg	5	☆	8270D	Total/NA	
Benzo[b]fluoranthene	210	J	1000	160	ug/Kg	5	☆	8270D	Total/NA	
Fluoranthene	290	J	1000	110	ug/Kg	5	☆	8270D	Total/NA	
Phenanthrene	210	J	1000	150	ug/Kg	5	☆	8270D	Total/NA	
Aluminum	11100		11.7		mg/Kg	1	☆	6010C	Total/NA	
Arsenic	6.1		2.3		mg/Kg	1	☆	6010C	Total/NA	
Barium	70.2		0.59		mg/Kg	1	☆	6010C	Total/NA	
Beryllium	0.66		0.23		mg/Kg	1	☆	6010C	Total/NA	
Cadmium	0.28		0.23		mg/Kg	1	☆	6010C	Total/NA	
Calcium	37700		58.6		mg/Kg	1	☆	6010C	Total/NA	
Chromium	16.1		0.59		mg/Kg	1	☆	6010C	Total/NA	
Cobalt	11.1		0.59		mg/Kg	1	☆	6010C	Total/NA	
Copper	92.5		1.2		mg/Kg	1	☆	6010C	Total/NA	
Iron	20500		11.7		mg/Kg	1	☆	6010C	Total/NA	
Lead	24.9		1.2		mg/Kg	1	☆	6010C	Total/NA	
Magnesium	13800		23.4		mg/Kg	1	☆	6010C	Total/NA	
Manganese	399		0.23		mg/Kg	1	☆	6010C	Total/NA	
Nickel	26.1		5.9		mg/Kg	1	☆	6010C	Total/NA	
Potassium	2130		35.2		mg/Kg	1	☆	6010C	Total/NA	
Sodium	176		164		mg/Kg	1	☆	6010C	Total/NA	
Vanadium	23.2		0.59		mg/Kg	1	☆	6010C	Total/NA	
Zinc	69.7		2.3		mg/Kg	1	☆	6010C	Total/NA	
Mercury	0.085		0.024		mg/Kg	1	☆	7471B	Total/NA	

Client Sample ID: SB-112 (0-2)

Lab Sample ID: 480-75578-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	2070		10.6		mg/Kg	1		☼	6010C	Total/NA
Arsenic	3.0		2.1		mg/Kg	1		☼	6010C	Total/NA
Barium	9.1		0.53		mg/Kg	1		☼	6010C	Total/NA
Calcium	186000		266		mg/Kg	5		☼	6010C	Total/NA
Chromium	4.7		0.53		mg/Kg	1		☼	6010C	Total/NA
Cobalt	1.9		0.53		mg/Kg	1		☼	6010C	Total/NA
Copper	14.3		5.3		mg/Kg	5		☼	6010C	Total/NA
Iron	6590		10.6		mg/Kg	1		☼	6010C	Total/NA
Lead	7.4		1.1		mg/Kg	1		☼	6010C	Total/NA
Magnesium	114000		106		mg/Kg	5		☼	6010C	Total/NA
Manganese	175		0.21		mg/Kg	1		☼	6010C	Total/NA
Nickel	6.9		5.3		mg/Kg	1		☼	6010C	Total/NA
Potassium	902		31.9		mg/Kg	1		☼	6010C	Total/NA
Sodium	199		149		mg/Kg	1		☼	6010C	Total/NA
Vanadium	8.0		0.53		mg/Kg	1		☼	6010C	Total/NA
Zinc	7.6		2.1		mg/Kg	1		☼	6010C	Total/NA
Mercury	0.044		0.020		mg/Kg	1		☼	7471B	Total/NA

Client Sample ID: SB-112 (2-6)

Lab Sample ID: 480-75578-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	8360		11.1		mg/Kg	1		☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (2-6) (Continued)

Lab Sample ID: 480-75578-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.5		2.2		mg/Kg	1		✱	6010C	Total/NA
Barium	583		0.55		mg/Kg	1		✱	6010C	Total/NA
Beryllium	0.47		0.22		mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.22		0.22		mg/Kg	1		✱	6010C	Total/NA
Calcium	2360		55.4		mg/Kg	1		✱	6010C	Total/NA
Chromium	12.2		0.55		mg/Kg	1		✱	6010C	Total/NA
Cobalt	8.4		0.55		mg/Kg	1		✱	6010C	Total/NA
Copper	20.4		1.1		mg/Kg	1		✱	6010C	Total/NA
Iron	19000		11.1		mg/Kg	1		✱	6010C	Total/NA
Lead	451		1.1		mg/Kg	1		✱	6010C	Total/NA
Magnesium	3110		22.2		mg/Kg	1		✱	6010C	Total/NA
Manganese	414		0.22		mg/Kg	1		✱	6010C	Total/NA
Nickel	25.1		5.5		mg/Kg	1		✱	6010C	Total/NA
Potassium	834		33.2		mg/Kg	1		✱	6010C	Total/NA
Vanadium	16.5		0.55		mg/Kg	1		✱	6010C	Total/NA
Zinc	59.6		2.2		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.066		0.024		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: SB-113 (2-6)

Lab Sample ID: 480-75578-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Anthracene	460	J	890	220	ug/Kg	5		✱	8270D	Total/NA
Benzo[a]anthracene	660	J	890	89	ug/Kg	5		✱	8270D	Total/NA
Benzo[a]pyrene	450	J	890	130	ug/Kg	5		✱	8270D	Total/NA
Benzo[b]fluoranthene	660	J	890	140	ug/Kg	5		✱	8270D	Total/NA
Benzo[g,h,i]perylene	110	J	890	94	ug/Kg	5		✱	8270D	Total/NA
Benzo[k]fluoranthene	330	J	890	110	ug/Kg	5		✱	8270D	Total/NA
Carbazole	310	J	890	100	ug/Kg	5		✱	8270D	Total/NA
Chrysene	620	J	890	200	ug/Kg	5		✱	8270D	Total/NA
Fluoranthene	1700		890	94	ug/Kg	5		✱	8270D	Total/NA
Fluorene	120	J	890	100	ug/Kg	5		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	200	J	890	110	ug/Kg	5		✱	8270D	Total/NA
Phenanthrene	1800		890	130	ug/Kg	5		✱	8270D	Total/NA
Pyrene	980		890	100	ug/Kg	5		✱	8270D	Total/NA
Aluminum	3360		10.8		mg/Kg	1		✱	6010C	Total/NA
Arsenic	4.9		2.2		mg/Kg	1		✱	6010C	Total/NA
Barium	10.1		0.54		mg/Kg	1		✱	6010C	Total/NA
Calcium	163000		270		mg/Kg	5		✱	6010C	Total/NA
Chromium	7.0		0.54		mg/Kg	1		✱	6010C	Total/NA
Cobalt	3.3		0.54		mg/Kg	1		✱	6010C	Total/NA
Copper	8.9		5.4		mg/Kg	5		✱	6010C	Total/NA
Iron	9840		10.8		mg/Kg	1		✱	6010C	Total/NA
Lead	8.1		1.1		mg/Kg	1		✱	6010C	Total/NA
Magnesium	104000		108		mg/Kg	5		✱	6010C	Total/NA
Manganese	174		0.22		mg/Kg	1		✱	6010C	Total/NA
Nickel	11.5		5.4		mg/Kg	1		✱	6010C	Total/NA
Potassium	1440		32.4		mg/Kg	1		✱	6010C	Total/NA
Sodium	196		151		mg/Kg	1		✱	6010C	Total/NA
Vanadium	9.4		0.54		mg/Kg	1		✱	6010C	Total/NA
Zinc	10.2		2.2		mg/Kg	1		✱	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-113 (2-6) (Continued)

Lab Sample ID: 480-75578-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.11		0.020		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-106 (4-8)

Lab Sample ID: 480-75578-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.8	J B	28	4.8	ug/Kg	1	☼	8260C	Total/NA
Benzo[a]anthracene	140	J	1100	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	170	J	1100	160	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	240	J	1100	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	310	J	1100	160	ug/Kg	5	☼	8270D	Total/NA
delta-BHC	0.47	J	2.1	0.38	ug/Kg	1	☼	8081B	Total/NA
Aluminum	11800		12.8		mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.4		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	72.2		0.64		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.59		0.26		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.30		0.26		mg/Kg	1	☼	6010C	Total/NA
Calcium	21600		63.8		mg/Kg	1	☼	6010C	Total/NA
Chromium	15.7		0.64		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.8		0.64		mg/Kg	1	☼	6010C	Total/NA
Copper	27.6		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	19200		12.8		mg/Kg	1	☼	6010C	Total/NA
Lead	16.2		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	4740		25.5		mg/Kg	1	☼	6010C	Total/NA
Manganese	337		0.26		mg/Kg	1	☼	6010C	Total/NA
Nickel	29.2		6.4		mg/Kg	1	☼	6010C	Total/NA
Potassium	1360		38.3		mg/Kg	1	☼	6010C	Total/NA
Sodium	431		179		mg/Kg	1	☼	6010C	Total/NA
Vanadium	20.4		0.64		mg/Kg	1	☼	6010C	Total/NA
Zinc	82.9		2.6		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.030		0.025		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-106 (8-16)

Lab Sample ID: 480-75578-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	39	J B	70	12	ug/Kg	1	☼	8260C	Total/NA
Aluminum	7390		13.3		mg/Kg	1	☼	6010C	Total/NA
Barium	44.5		0.66		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.40		0.27		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.34		0.27		mg/Kg	1	☼	6010C	Total/NA
Calcium	1520		66.3		mg/Kg	1	☼	6010C	Total/NA
Chromium	10.6		0.66		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.1		0.66		mg/Kg	1	☼	6010C	Total/NA
Copper	19.5		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	11800		13.3		mg/Kg	1	☼	6010C	Total/NA
Lead	9.6		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	2780		26.5		mg/Kg	1	☼	6010C	Total/NA
Manganese	122		0.27		mg/Kg	1	☼	6010C	Total/NA
Nickel	22.2		6.6		mg/Kg	1	☼	6010C	Total/NA
Potassium	1040		39.8		mg/Kg	1	☼	6010C	Total/NA
Vanadium	14.4		0.66		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (8-16) (Continued)

Lab Sample ID: 480-75578-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	56.6		2.7		mg/Kg	1	☼	6010C	Total/NA
Mercury	2.2		0.26		mg/Kg	10	☼	7471B	Total/NA

Client Sample ID: SB-107 (0-4)

Lab Sample ID: 480-75578-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	190	J	1100	160	ug/Kg	5	☼	8270D	Total/NA
Acenaphthylene	220	J	1100	140	ug/Kg	5	☼	8270D	Total/NA
Anthracene	650	J	1100	260	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	2300		1100	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	2200		1100	160	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	2800		1100	170	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	870	J	1100	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	1200		1100	140	ug/Kg	5	☼	8270D	Total/NA
Carbazole	260	J	1100	120	ug/Kg	5	☼	8270D	Total/NA
Chrysene	2300		1100	240	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	380	J	1100	190	ug/Kg	5	☼	8270D	Total/NA
Dibenzofuran	200	J	1100	120	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	4500		1100	110	ug/Kg	5	☼	8270D	Total/NA
Fluorene	270	J	1100	120	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	830	J	1100	130	ug/Kg	5	☼	8270D	Total/NA
Naphthalene	190	J	1100	140	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	2700		1100	160	ug/Kg	5	☼	8270D	Total/NA
Pyrene	3400		1100	120	ug/Kg	5	☼	8270D	Total/NA
Aluminum	5250		11.6		mg/Kg	1	☼	6010C	Total/NA
Arsenic	11.5		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	751		0.58		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.41		0.23		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.3		0.23		mg/Kg	1	☼	6010C	Total/NA
Calcium	59200		57.8		mg/Kg	1	☼	6010C	Total/NA
Chromium	10		0.58		mg/Kg	1	☼	6010C	Total/NA
Cobalt	4.8		0.58		mg/Kg	1	☼	6010C	Total/NA
Copper	267		1.2		mg/Kg	1	☼	6010C	Total/NA
Iron	15700		11.6		mg/Kg	1	☼	6010C	Total/NA
Lead	492		1.2		mg/Kg	1	☼	6010C	Total/NA
Magnesium	25500		23.1		mg/Kg	1	☼	6010C	Total/NA
Manganese	455		0.23		mg/Kg	1	☼	6010C	Total/NA
Nickel	14.5		5.8		mg/Kg	1	☼	6010C	Total/NA
Potassium	823		34.7		mg/Kg	1	☼	6010C	Total/NA
Sodium	169		162		mg/Kg	1	☼	6010C	Total/NA
Vanadium	14.7		0.58		mg/Kg	1	☼	6010C	Total/NA
Zinc	370		2.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.37		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-107 (4-8)

Lab Sample ID: 480-75578-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	12300		12.7		mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.4		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	70.5		0.63		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (4-8) (Continued)

Lab Sample ID: 480-75578-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.64		0.25		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.32		0.25		mg/Kg	1	☼	6010C	Total/NA
Calcium	1870		63.4		mg/Kg	1	☼	6010C	Total/NA
Chromium	17.0		0.63		mg/Kg	1	☼	6010C	Total/NA
Cobalt	11.4		0.63		mg/Kg	1	☼	6010C	Total/NA
Copper	24.0		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	24400		12.7		mg/Kg	1	☼	6010C	Total/NA
Lead	16.2		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	3740		25.4		mg/Kg	1	☼	6010C	Total/NA
Manganese	616		0.25		mg/Kg	1	☼	6010C	Total/NA
Nickel	30.6		6.3		mg/Kg	1	☼	6010C	Total/NA
Potassium	1700		38.1		mg/Kg	1	☼	6010C	Total/NA
Sodium	213		178		mg/Kg	1	☼	6010C	Total/NA
Vanadium	21.9		0.63		mg/Kg	1	☼	6010C	Total/NA
Zinc	83.9		2.5		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.048		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-101 (2-7.5)

Lab Sample ID: 480-75578-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	580	J	1000	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	570	J	1000	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	600	J	1000	170	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	120	J	1000	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	340	J	1000	130	ug/Kg	5	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	370	J	1000	360	ug/Kg	5	☼	8270D	Total/NA
Chrysene	590	J	1000	230	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	190	J	1000	180	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	910	J	1000	110	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	200	J	1000	130	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	350	J	1000	150	ug/Kg	5	☼	8270D	Total/NA
Pyrene	710	J	1000	120	ug/Kg	5	☼	8270D	Total/NA
Aluminum	13500		12.7		mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.9		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	103		0.64		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.69		0.25		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.33		0.25		mg/Kg	1	☼	6010C	Total/NA
Calcium	48900		63.6		mg/Kg	1	☼	6010C	Total/NA
Chromium	18.6		0.64		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.8		0.64		mg/Kg	1	☼	6010C	Total/NA
Copper	32.0		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	20900		12.7		mg/Kg	1	☼	6010C	Total/NA
Lead	78.7		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	17400		25.4		mg/Kg	1	☼	6010C	Total/NA
Manganese	428		0.25		mg/Kg	1	☼	6010C	Total/NA
Nickel	24.6		6.4		mg/Kg	1	☼	6010C	Total/NA
Potassium	3120		38.1		mg/Kg	1	☼	6010C	Total/NA
Sodium	223		178		mg/Kg	1	☼	6010C	Total/NA
Vanadium	26.0		0.64		mg/Kg	1	☼	6010C	Total/NA
Zinc	92.7		2.5		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-101 (2-7.5) (Continued)

Lab Sample ID: 480-75578-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.042		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-102 (0-2)

Lab Sample ID: 480-75578-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	930	J	4000	600	ug/Kg	20	☼	8270D	Total/NA
Acenaphthylene	650	J	4000	520	ug/Kg	20	☼	8270D	Total/NA
Anthracene	2700	J	4000	1000	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]anthracene	7100		4000	400	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]pyrene	6700		4000	600	ug/Kg	20	☼	8270D	Total/NA
Benzo[b]fluoranthene	9200		4000	640	ug/Kg	20	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1700	J	4000	430	ug/Kg	20	☼	8270D	Total/NA
Benzo[k]fluoranthene	3600	J	4000	520	ug/Kg	20	☼	8270D	Total/NA
Chrysene	7100		4000	910	ug/Kg	20	☼	8270D	Total/NA
Dibenzofuran	720	J	4000	480	ug/Kg	20	☼	8270D	Total/NA
Fluoranthene	15000		4000	430	ug/Kg	20	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2000	J	4000	500	ug/Kg	20	☼	8270D	Total/NA
Phenanthrene	9200		4000	600	ug/Kg	20	☼	8270D	Total/NA
Pyrene	11000		4000	480	ug/Kg	20	☼	8270D	Total/NA
PCB-1242	4.6		0.24	0.047	mg/Kg	1	☼	8082A	Total/NA
PCB-1254	1.1		0.24	0.11	mg/Kg	1	☼	8082A	Total/NA
PCB-1260	0.40		0.24	0.11	mg/Kg	1	☼	8082A	Total/NA
Aluminum	6240	^	11.3		mg/Kg	1	☼	6010C	Total/NA
Arsenic	30.1		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	137		0.57		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.54		0.23		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.5		0.23		mg/Kg	1	☼	6010C	Total/NA
Calcium	44800	^	56.5		mg/Kg	1	☼	6010C	Total/NA
Chromium	22.4		0.57		mg/Kg	1	☼	6010C	Total/NA
Cobalt	21.4		0.57		mg/Kg	1	☼	6010C	Total/NA
Copper	315		1.1		mg/Kg	1	☼	6010C	Total/NA
Iron	42100	^	11.3		mg/Kg	1	☼	6010C	Total/NA
Lead	261		1.1		mg/Kg	1	☼	6010C	Total/NA
Magnesium	15200		22.6		mg/Kg	1	☼	6010C	Total/NA
Manganese	605	B ^	0.23		mg/Kg	1	☼	6010C	Total/NA
Nickel	82.9		5.7		mg/Kg	1	☼	6010C	Total/NA
Potassium	1170		33.9		mg/Kg	1	☼	6010C	Total/NA
Sodium	185		158		mg/Kg	1	☼	6010C	Total/NA
Vanadium	31.9		0.57		mg/Kg	1	☼	6010C	Total/NA
Zinc	352		2.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.28		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	58	J B	78	13	ug/Kg	1	☼	8260C	Total/NA
Aluminum	8790	^	15.4		mg/Kg	1	☼	6010C	Total/NA
Arsenic	7.2		3.1		mg/Kg	1	☼	6010C	Total/NA
Barium	74.0		0.77		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.54		0.31		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (2-8) (Continued)

Lab Sample ID: 480-75578-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.35		0.31		mg/Kg	1	☼	6010C	Total/NA
Calcium	4320	^	76.8		mg/Kg	1	☼	6010C	Total/NA
Chromium	13.1		0.77		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.4		0.77		mg/Kg	1	☼	6010C	Total/NA
Copper	26.3		1.5		mg/Kg	1	☼	6010C	Total/NA
Iron	19200	^	15.4		mg/Kg	1	☼	6010C	Total/NA
Lead	93.7		1.5		mg/Kg	1	☼	6010C	Total/NA
Magnesium	3990		30.7		mg/Kg	1	☼	6010C	Total/NA
Manganese	140	B ^	0.31		mg/Kg	1	☼	6010C	Total/NA
Nickel	25.4		7.7		mg/Kg	1	☼	6010C	Total/NA
Potassium	1050		46.1		mg/Kg	1	☼	6010C	Total/NA
Vanadium	16.9		0.77		mg/Kg	1	☼	6010C	Total/NA
Zinc	69.4		3.1		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SB-103 (2-8)

Lab Sample ID: 480-75578-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	21800	^	13.2		mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.5		2.6		mg/Kg	1	☼	6010C	Total/NA
Barium	145		0.66		mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.1		0.26		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.47		0.26		mg/Kg	1	☼	6010C	Total/NA
Calcium	2620	^	65.9		mg/Kg	1	☼	6010C	Total/NA
Chromium	28.0		0.66		mg/Kg	1	☼	6010C	Total/NA
Cobalt	17.3		0.66		mg/Kg	1	☼	6010C	Total/NA
Copper	24.5		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	29700	^	13.2		mg/Kg	1	☼	6010C	Total/NA
Lead	20.3		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	6510		26.4		mg/Kg	1	☼	6010C	Total/NA
Manganese	218	B ^	0.26		mg/Kg	1	☼	6010C	Total/NA
Nickel	41.5		6.6		mg/Kg	1	☼	6010C	Total/NA
Potassium	2670		39.5		mg/Kg	1	☼	6010C	Total/NA
Sodium	459		185		mg/Kg	1	☼	6010C	Total/NA
Vanadium	37.2		0.66		mg/Kg	1	☼	6010C	Total/NA
Zinc	74.1		2.6		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.028		0.026		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-103 (8-16)

Lab Sample ID: 480-75578-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	94	J	220	75	ug/Kg	1	☼	8270D	Total/NA
Aluminum	9090	^	12.1		mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.6		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	58.1		0.61		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.48		0.24		mg/Kg	1	☼	6010C	Total/NA
Calcium	1260		60.6		mg/Kg	1	☼	6010C	Total/NA
Chromium	13.1		0.61		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.5		0.61		mg/Kg	1	☼	6010C	Total/NA
Copper	22.2		1.2		mg/Kg	1	☼	6010C	Total/NA
Iron	20000	^	12.1		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (8-16) (Continued)

Lab Sample ID: 480-75578-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	11.9		1.2		mg/Kg	1	☼	6010C	Total/NA
Magnesium	3290		24.3		mg/Kg	1	☼	6010C	Total/NA
Manganese	156	B ^	0.24		mg/Kg	1	☼	6010C	Total/NA
Nickel	26.6		6.1		mg/Kg	1	☼	6010C	Total/NA
Potassium	939		36.4		mg/Kg	1	☼	6010C	Total/NA
Sodium	211		170		mg/Kg	1	☼	6010C	Total/NA
Vanadium	17.0		0.61		mg/Kg	1	☼	6010C	Total/NA
Zinc	62.5		2.4		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	4.0	J	7.6	1.5	ug/Kg	1	☼	8260C	Total/NA
1,3,5-Trimethylbenzene	2.5	J	7.6	0.49	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.94	J	7.6	0.37	ug/Kg	1	☼	8260C	Total/NA
Carbon disulfide	4.0	J	7.6	3.8	ug/Kg	1	☼	8260C	Total/NA
Cyclohexane	17	*	7.6	1.1	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.90	J	7.6	0.52	ug/Kg	1	☼	8260C	Total/NA
Methylcyclohexane	26		7.6	1.2	ug/Kg	1	☼	8260C	Total/NA
m,p-Xylene	3.6	J	15	1.3	ug/Kg	1	☼	8260C	Total/NA
o-Xylene	1.4	J	7.6	0.99	ug/Kg	1	☼	8260C	Total/NA
Toluene	1.6	J	7.6	0.57	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	5.0	J	15	1.3	ug/Kg	1	☼	8260C	Total/NA
Anthracene	230	J	910	230	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	890	J	910	91	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	920		910	130	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	1300		910	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	430	J	910	97	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	580	J	910	120	ug/Kg	5	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	570	J	910	310	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1000		910	200	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	1700		910	97	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	450	J	910	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	950		910	130	ug/Kg	5	☼	8270D	Total/NA
Pyrene	1300		910	110	ug/Kg	5	☼	8270D	Total/NA
alpha-BHC	20	J	90	16	ug/Kg	50	☼	8081B	Total/NA
Endosulfan sulfate	26	J	90	17	ug/Kg	50	☼	8081B	Total/NA
Endrin ketone	40	J	90	22	ug/Kg	50	☼	8081B	Total/NA
Aluminum	12400	^	11.3		mg/Kg	1	☼	6010C	Total/NA
Arsenic	8.9		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	135		0.57		mg/Kg	1	☼	6010C	Total/NA
Beryllium	2.0		0.23		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.47		0.23		mg/Kg	1	☼	6010C	Total/NA
Calcium	87700	^	56.6		mg/Kg	1	☼	6010C	Total/NA
Chromium	13.6		0.57		mg/Kg	1	☼	6010C	Total/NA
Cobalt	3.9		0.57		mg/Kg	1	☼	6010C	Total/NA
Copper	56.7		1.1		mg/Kg	1	☼	6010C	Total/NA
Iron	15700	^	11.3		mg/Kg	1	☼	6010C	Total/NA
Lead	248		1.1		mg/Kg	1	☼	6010C	Total/NA
Magnesium	16400		22.6		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4) (Continued)

Lab Sample ID: 480-75578-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Manganese	869	B ^	0.23		mg/Kg	1		✱	6010C	Total/NA
Nickel	12.0		5.7		mg/Kg	1		✱	6010C	Total/NA
Potassium	1240		34.0		mg/Kg	1		✱	6010C	Total/NA
Sodium	391		158		mg/Kg	1		✱	6010C	Total/NA
Vanadium	14.3		0.57		mg/Kg	1		✱	6010C	Total/NA
Zinc	125		2.3		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.17		0.022		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Cyclohexane	3.5	J *	9.1	1.3	ug/Kg	1		✱	8260C	Total/NA
Methylcyclohexane	5.6	J	9.1	1.4	ug/Kg	1		✱	8260C	Total/NA
Acenaphthene	150	J	930	140	ug/Kg	5		✱	8270D	Total/NA
Anthracene	430	J	930	230	ug/Kg	5		✱	8270D	Total/NA
Benzo[a]anthracene	1400		930	93	ug/Kg	5		✱	8270D	Total/NA
Benzo[a]pyrene	1400		930	140	ug/Kg	5		✱	8270D	Total/NA
Benzo[b]fluoranthene	1800		930	150	ug/Kg	5		✱	8270D	Total/NA
Benzo[g,h,i]perylene	720	J	930	98	ug/Kg	5		✱	8270D	Total/NA
Benzo[k]fluoranthene	760	J	930	120	ug/Kg	5		✱	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	570	J	930	320	ug/Kg	5		✱	8270D	Total/NA
Carbazole	210	J	930	110	ug/Kg	5		✱	8270D	Total/NA
Chrysene	1500		930	210	ug/Kg	5		✱	8270D	Total/NA
Fluoranthene	3100		930	98	ug/Kg	5		✱	8270D	Total/NA
Fluorene	150	J	930	110	ug/Kg	5		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	670	J	930	110	ug/Kg	5		✱	8270D	Total/NA
Phenanthrene	2100		930	140	ug/Kg	5		✱	8270D	Total/NA
Pyrene	2500		930	110	ug/Kg	5		✱	8270D	Total/NA
4,4'-DDT	18	J	36	8.5	ug/Kg	20		✱	8081B	Total/NA
Endosulfan sulfate	11	J	36	6.8	ug/Kg	20		✱	8081B	Total/NA
Endrin ketone	14	J	36	8.9	ug/Kg	20		✱	8081B	Total/NA
Aluminum	26500	^	10.8		mg/Kg	1		✱	6010C	Total/NA
Arsenic	3.6		2.2		mg/Kg	1		✱	6010C	Total/NA
Barium	191		0.54		mg/Kg	1		✱	6010C	Total/NA
Beryllium	4.5		0.22		mg/Kg	1		✱	6010C	Total/NA
Calcium	185000	^	270		mg/Kg	5		✱	6010C	Total/NA
Chromium	11.9		0.54		mg/Kg	1		✱	6010C	Total/NA
Cobalt	1.9		0.54		mg/Kg	1		✱	6010C	Total/NA
Copper	52.0		5.4		mg/Kg	5		✱	6010C	Total/NA
Iron	6400	^	10.8		mg/Kg	1		✱	6010C	Total/NA
Lead	64.4		1.1		mg/Kg	1		✱	6010C	Total/NA
Magnesium	33100		21.6		mg/Kg	1		✱	6010C	Total/NA
Manganese	1870	B ^	0.22		mg/Kg	1		✱	6010C	Total/NA
Potassium	1440		32.3		mg/Kg	1		✱	6010C	Total/NA
Sodium	715		151		mg/Kg	1		✱	6010C	Total/NA
Vanadium	8.2		0.54		mg/Kg	1		✱	6010C	Total/NA
Zinc	32.8		2.2		mg/Kg	1		✱	6010C	Total/NA
Mercury	0.030		0.022		mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: SB-104 (4-8)

Lab Sample ID: 480-75578-20

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (4-8) (Continued)

Lab Sample ID: 480-75578-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	250	J	1200	120	ug/Kg	5	☆	8270D	Total/NA	
Benzo[a]pyrene	310	J	1200	180	ug/Kg	5	☆	8270D	Total/NA	
Benzo[b]fluoranthene	260	J	1200	190	ug/Kg	5	☆	8270D	Total/NA	
Bis(2-ethylhexyl) phthalate	550	J	1200	420	ug/Kg	5	☆	8270D	Total/NA	
Chrysene	280	J	1200	270	ug/Kg	5	☆	8270D	Total/NA	
Fluoranthene	470	J	1200	130	ug/Kg	5	☆	8270D	Total/NA	
Phenanthrene	390	J	1200	180	ug/Kg	5	☆	8270D	Total/NA	
Pyrene	250	J	1200	140	ug/Kg	5	☆	8270D	Total/NA	
Methoxychlor	15	J	49	10	ug/Kg	20	☆	8081B	Total/NA	
Aluminum	7500	^	15.3		mg/Kg	1	☆	6010C	Total/NA	
Arsenic	6.0		3.1		mg/Kg	1	☆	6010C	Total/NA	
Barium	58.8		0.77		mg/Kg	1	☆	6010C	Total/NA	
Beryllium	0.44		0.31		mg/Kg	1	☆	6010C	Total/NA	
Calcium	5810	^	76.7		mg/Kg	1	☆	6010C	Total/NA	
Chromium	10.8		0.77		mg/Kg	1	☆	6010C	Total/NA	
Cobalt	7.5		0.77		mg/Kg	1	☆	6010C	Total/NA	
Copper	32.4		1.5		mg/Kg	1	☆	6010C	Total/NA	
Iron	14500	^	15.3		mg/Kg	1	☆	6010C	Total/NA	
Lead	146		1.5		mg/Kg	1	☆	6010C	Total/NA	
Magnesium	3950		30.7		mg/Kg	1	☆	6010C	Total/NA	
Manganese	207	B ^	0.31		mg/Kg	1	☆	6010C	Total/NA	
Nickel	20.8		7.7		mg/Kg	1	☆	6010C	Total/NA	
Potassium	969		46.0		mg/Kg	1	☆	6010C	Total/NA	
Vanadium	14.7		0.77		mg/Kg	1	☆	6010C	Total/NA	
Zinc	62.7		3.1		mg/Kg	1	☆	6010C	Total/NA	
Mercury	0.060		0.029		mg/Kg	1	☆	7471B	Total/NA	

Client Sample ID: SB-105 (0-2)

Lab Sample ID: 480-75578-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthylene	180	J	950	120	ug/Kg	5	☆	8270D	Total/NA	
Benzo[a]anthracene	1300		950	95	ug/Kg	5	☆	8270D	Total/NA	
Benzo[a]pyrene	1300		950	140	ug/Kg	5	☆	8270D	Total/NA	
Benzo[b]fluoranthene	1600		950	150	ug/Kg	5	☆	8270D	Total/NA	
Benzo[g,h,i]perylene	530	J	950	100	ug/Kg	5	☆	8270D	Total/NA	
Benzo[k]fluoranthene	760	J	950	120	ug/Kg	5	☆	8270D	Total/NA	
Carbazole	120	J	950	110	ug/Kg	5	☆	8270D	Total/NA	
Chrysene	1500		950	210	ug/Kg	5	☆	8270D	Total/NA	
Fluoranthene	1800		950	100	ug/Kg	5	☆	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	560	J	950	120	ug/Kg	5	☆	8270D	Total/NA	
Phenanthrene	610	J	950	140	ug/Kg	5	☆	8270D	Total/NA	
Pyrene	1500		950	110	ug/Kg	5	☆	8270D	Total/NA	
Aluminum	5190		11.6		mg/Kg	1	☆	6010C	Total/NA	
Arsenic	15.2		2.3		mg/Kg	1	☆	6010C	Total/NA	
Barium	60.8		0.58		mg/Kg	1	☆	6010C	Total/NA	
Beryllium	0.68		0.23		mg/Kg	1	☆	6010C	Total/NA	
Cadmium	0.81		0.23		mg/Kg	1	☆	6010C	Total/NA	
Calcium	7400		58.0		mg/Kg	1	☆	6010C	Total/NA	
Chromium	10.5		0.58		mg/Kg	1	☆	6010C	Total/NA	
Cobalt	8.0		0.58		mg/Kg	1	☆	6010C	Total/NA	

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (0-2) (Continued)

Lab Sample ID: 480-75578-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	139		1.2		mg/Kg	1	☼	6010C	Total/NA
Iron	20000	^	11.6		mg/Kg	1	☼	6010C	Total/NA
Lead	288		1.2		mg/Kg	1	☼	6010C	Total/NA
Magnesium	2440		23.2		mg/Kg	1	☼	6010C	Total/NA
Manganese	254	^	0.23		mg/Kg	1	☼	6010C	Total/NA
Nickel	20.5		5.8		mg/Kg	1	☼	6010C	Total/NA
Potassium	653		34.8		mg/Kg	1	☼	6010C	Total/NA
Vanadium	15.8		0.58		mg/Kg	1	☼	6010C	Total/NA
Zinc	307		2.3		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.20		0.021		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-105 (2-8)

Lab Sample ID: 480-75578-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	17900		11.4		mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.5		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	104		0.57		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.60		0.23		mg/Kg	1	☼	6010C	Total/NA
Calcium	15800		57.0		mg/Kg	1	☼	6010C	Total/NA
Chromium	20.6		0.57		mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.3		0.57		mg/Kg	1	☼	6010C	Total/NA
Copper	11.5		1.1		mg/Kg	1	☼	6010C	Total/NA
Iron	21300	^	11.4		mg/Kg	1	☼	6010C	Total/NA
Lead	10.6		1.1		mg/Kg	1	☼	6010C	Total/NA
Magnesium	7790		22.8		mg/Kg	1	☼	6010C	Total/NA
Manganese	361	^	0.23		mg/Kg	1	☼	6010C	Total/NA
Nickel	21.7		5.7		mg/Kg	1	☼	6010C	Total/NA
Potassium	1640		34.2		mg/Kg	1	☼	6010C	Total/NA
Sodium	440		160		mg/Kg	1	☼	6010C	Total/NA
Vanadium	28.1		0.57		mg/Kg	1	☼	6010C	Total/NA
Zinc	60.9		2.3		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
alpha-BHC	0.61	J	1.9	0.34	ug/Kg	1	☼	8081B	Total/NA
Aluminum	6320		11.9		mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.7		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	84.0		0.59		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.37		0.24		mg/Kg	1	☼	6010C	Total/NA
Calcium	24700		59.3		mg/Kg	1	☼	6010C	Total/NA
Chromium	8.1		0.59		mg/Kg	1	☼	6010C	Total/NA
Cobalt	4.6		0.59		mg/Kg	1	☼	6010C	Total/NA
Copper	66.0		1.2		mg/Kg	1	☼	6010C	Total/NA
Iron	9040	^	11.9		mg/Kg	1	☼	6010C	Total/NA
Lead	122		1.2		mg/Kg	1	☼	6010C	Total/NA
Magnesium	4250		23.7		mg/Kg	1	☼	6010C	Total/NA
Manganese	341	^	0.24		mg/Kg	1	☼	6010C	Total/NA
Nickel	12.0		5.9		mg/Kg	1	☼	6010C	Total/NA
Potassium	786		35.6		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (1-4) (Continued)

Lab Sample ID: 480-75578-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	661		166		mg/Kg	1	☼	6010C	Total/NA
Vanadium	10.2		0.59		mg/Kg	1	☼	6010C	Total/NA
Zinc	41.2		2.4		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.038		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-108 (4-16)

Lab Sample ID: 480-75578-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8520		12.7		mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.4		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	54.7	^	0.64		mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.48		0.25		mg/Kg	1	☼	6010C	Total/NA
Calcium	1350		63.7		mg/Kg	1	☼	6010C	Total/NA
Chromium	13.1		0.64		mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.3		0.64		mg/Kg	1	☼	6010C	Total/NA
Copper	28.4		1.3		mg/Kg	1	☼	6010C	Total/NA
Iron	18400	^	12.7		mg/Kg	1	☼	6010C	Total/NA
Lead	11.6		1.3		mg/Kg	1	☼	6010C	Total/NA
Magnesium	2690		25.5		mg/Kg	1	☼	6010C	Total/NA
Manganese	154	^	0.25		mg/Kg	1	☼	6010C	Total/NA
Nickel	23.1		6.4		mg/Kg	1	☼	6010C	Total/NA
Potassium	1120		38.2		mg/Kg	1	☼	6010C	Total/NA
Sodium	510		178		mg/Kg	1	☼	6010C	Total/NA
Vanadium	19.6		0.64		mg/Kg	1	☼	6010C	Total/NA
Zinc	53.8		2.5		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.024		0.024		mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-109 (4-10)

Lab Sample ID: 480-75578-1

Date Collected: 02/17/15 14:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
bis (2-chloroisopropyl) ether	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,4,5-Trichlorophenol	ND		1000	280	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,4,6-Trichlorophenol	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,4-Dichlorophenol	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,4-Dimethylphenol	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,4-Dinitrophenol	ND		2000	620	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,4-Dinitrotoluene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2,6-Dinitrotoluene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2-Chloronaphthalene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2-Chlorophenol	ND		1000	190	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2-Methylphenol	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2-Methylnaphthalene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2-Nitroaniline	ND		2000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
2-Nitrophenol	ND		1000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
3,3'-Dichlorobenzidine	ND		2000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
3-Nitroaniline	ND	*	2000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4,6-Dinitro-2-methylphenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Bromophenyl phenyl ether	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Chloro-3-methylphenol	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Chloroaniline	ND	*	1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Chlorophenyl phenyl ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Methylphenol	ND		2000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Nitroaniline	ND		2000	540	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
4-Nitrophenol	ND		2000	720	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Acenaphthene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Acetophenone	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Anthracene	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Atrazine	ND		1000	360	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Benzaldehyde	ND		1000	820	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Benzo[a]anthracene	ND		1000	100	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Benzo[a]pyrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Benzo[b]fluoranthene	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Benzo[g,h,i]perylene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Benzo[k]fluoranthene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Bis(2-chloroethoxy)methane	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Bis(2-chloroethyl)ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Bis(2-ethylhexyl) phthalate	ND		1000	350	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Butyl benzyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Caprolactam	ND		1000	310	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Carbazole	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Chrysene	ND		1000	230	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Dibenz(a,h)anthracene	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Di-n-butyl phthalate	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Di-n-octyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Dibenzofuran	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Diethyl phthalate	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Dimethyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-109 (4-10)

Lab Sample ID: 480-75578-1

Date Collected: 02/17/15 14:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Fluorene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Hexachlorobenzene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Hexachlorobutadiene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Hexachlorocyclopentadiene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Hexachloroethane	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Indeno[1,2,3-cd]pyrene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Isophorone	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
N-Nitrosodi-n-propylamine	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
N-Nitrosodiphenylamine	ND *		1000	840	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Nitrobenzene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Pentachlorophenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Phenanthrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Phenol	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5
Pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:19	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	66		34 - 132	02/19/15 13:56	02/20/15 17:19	5
Phenol-d5 (Surr)	69		11 - 120	02/19/15 13:56	02/20/15 17:19	5
p-Terphenyl-d14 (Surr)	73		65 - 153	02/19/15 13:56	02/20/15 17:19	5
2,4,6-Tribromophenol (Surr)	61		39 - 146	02/19/15 13:56	02/20/15 17:19	5
2-Fluorobiphenyl	68		37 - 120	02/19/15 13:56	02/20/15 17:19	5
2-Fluorophenol (Surr)	71		18 - 120	02/19/15 13:56	02/20/15 17:19	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1
PCB-1221	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1
PCB-1232	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1
PCB-1242	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1
PCB-1248	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1
PCB-1254	ND		0.27	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1
PCB-1260	ND		0.27	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	105		46 - 175	02/19/15 11:01	02/20/15 17:00	1
DCB Decachlorobiphenyl	116		47 - 176	02/19/15 11:01	02/20/15 17:00	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7870		12.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Antimony	ND		18.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Arsenic	7.2		2.5		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Barium	76.5		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Beryllium	0.49		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Cadmium	0.35		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Calcium	4290		61.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Chromium	12.4		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Cobalt	10.6		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-109 (4-10)

Lab Sample ID: 480-75578-1

Date Collected: 02/17/15 14:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.9

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	260		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Iron	18500		12.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Lead	111		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Magnesium	3760		24.5		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Manganese	383		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Nickel	24.3		6.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Potassium	1230		36.8		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Selenium	ND		4.9		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Silver	ND		0.74		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Sodium	ND		172		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Thallium	ND		7.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Vanadium	16.0		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:24	1
Zinc	98.0		2.5		mg/Kg	☼	02/19/15 15:35	02/20/15 14:02	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.33		0.024		mg/Kg	☼	02/19/15 09:55	02/19/15 11:50	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (4-10)

Lab Sample ID: 480-75578-2

Date Collected: 02/17/15 13:05

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
bis (2-chloroisopropyl) ether	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,4,5-Trichlorophenol	ND		1100	290	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,4,6-Trichlorophenol	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,4-Dichlorophenol	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,4-Dimethylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,4-Dinitrophenol	ND		2100	650	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,4-Dinitrotoluene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2,6-Dinitrotoluene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2-Chloronaphthalene	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2-Chlorophenol	ND		1100	200	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2-Methylphenol	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2-Methylnaphthalene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2-Nitroaniline	ND		2100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
2-Nitrophenol	ND		1100	310	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
3,3'-Dichlorobenzidine	ND		2100	1300	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
3-Nitroaniline	ND	*	2100	300	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4,6-Dinitro-2-methylphenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Bromophenyl phenyl ether	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Chloro-3-methylphenol	ND		1100	270	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Chloroaniline	ND	*	1100	270	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Methylphenol	ND		2100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Nitroaniline	ND		2100	570	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
4-Nitrophenol	ND		2100	760	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Acenaphthene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Acenaphthylene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Acetophenone	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Anthracene	ND		1100	270	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Atrazine	ND		1100	380	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Benzaldehyde	ND		1100	860	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Benzo[a]anthracene	220	J	1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Benzo[a]pyrene	250	J	1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Benzo[b]fluoranthene	220	J	1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Benzo[g,h,i]perylene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Benzo[k]fluoranthene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Bis(2-chloroethoxy)methane	ND		1100	230	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Bis(2-chloroethyl)ether	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Bis(2-ethylhexyl) phthalate	ND		1100	370	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Butyl benzyl phthalate	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Caprolactam	ND		1100	330	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Carbazole	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Chrysene	ND		1100	240	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Dibenz(a,h)anthracene	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Di-n-butyl phthalate	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Di-n-octyl phthalate	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Dibenzofuran	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Diethyl phthalate	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Dimethyl phthalate	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (4-10)

Lab Sample ID: 480-75578-2

Date Collected: 02/17/15 13:05

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	350	J	1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Fluorene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Hexachlorobenzene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Hexachlorobutadiene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Hexachlorocyclopentadiene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Hexachloroethane	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Indeno[1,2,3-cd]pyrene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Isophorone	ND		1100	230	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
N-Nitrosodi-n-propylamine	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
N-Nitrosodiphenylamine	ND	*	1100	880	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Naphthalene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Nitrobenzene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Pentachlorophenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Phenanthrene	210	J	1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Phenol	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5
Pyrene	200	J	1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 17:42	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	71		34 - 132	02/19/15 13:56	02/20/15 17:42	5
Phenol-d5 (Surr)	80		11 - 120	02/19/15 13:56	02/20/15 17:42	5
p-Terphenyl-d14 (Surr)	73		65 - 153	02/19/15 13:56	02/20/15 17:42	5
2,4,6-Tribromophenol (Surr)	71		39 - 146	02/19/15 13:56	02/20/15 17:42	5
2-Fluorobiphenyl	67		37 - 120	02/19/15 13:56	02/20/15 17:42	5
2-Fluorophenol (Surr)	80		18 - 120	02/19/15 13:56	02/20/15 17:42	5

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		4.4	0.85	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
4,4'-DDE	ND		4.4	0.92	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
4,4'-DDT	ND		4.4	1.0	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Aldrin	ND		4.4	1.1	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
alpha-BHC	ND		4.4	0.79	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
alpha-Chlordane	ND		4.4	2.2	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
beta-BHC	ND		4.4	0.79	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
delta-BHC	ND		4.4	0.81	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Dieldrin	ND		4.4	1.1	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Endosulfan I	ND		4.4	0.84	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Endosulfan II	ND		4.4	0.79	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Endosulfan sulfate	2.0	J	4.4	0.82	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Endrin	1.0	J	4.4	0.87	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Endrin aldehyde	ND		4.4	1.1	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Endrin ketone	1.5	J	4.4	1.1	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
gamma-BHC (Lindane)	ND		4.4	0.80	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
gamma-Chlordane	ND		4.4	1.4	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Heptachlor	ND		4.4	0.95	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Heptachlor epoxide	ND		4.4	1.1	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Methoxychlor	ND		4.4	0.89	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2
Toxaphene	ND		44	25	ug/Kg	☼	02/19/15 14:14	02/20/15 16:37	2

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (4-10)

Lab Sample ID: 480-75578-2

Date Collected: 02/17/15 13:05

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	119		32 - 136	02/19/15 14:14	02/20/15 16:37	2
Tetrachloro-m-xylene	87		30 - 124	02/19/15 14:14	02/20/15 16:37	2

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.28	0.054	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1
PCB-1221	ND		0.28	0.054	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1
PCB-1232	ND		0.28	0.054	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1
PCB-1242	ND		0.28	0.054	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1
PCB-1248	ND		0.28	0.054	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1
PCB-1254	ND		0.28	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1
PCB-1260	ND		0.28	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		46 - 175	02/19/15 11:01	02/20/15 17:14	1
DCB Decachlorobiphenyl	103		47 - 176	02/19/15 11:01	02/20/15 17:14	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		22	6.9	ug/Kg	☼	02/19/15 09:07	02/23/15 10:38	1
Silvex (2,4,5-TP)	ND		22	7.7	ug/Kg	☼	02/19/15 09:07	02/23/15 10:38	1
2,4-D	ND		22	14	ug/Kg	☼	02/19/15 09:07	02/23/15 10:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	46		39 - 120	02/19/15 09:07	02/23/15 10:38	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6910		13.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Antimony	ND		20.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Arsenic	3.7		2.7		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Barium	62.7		0.67		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Beryllium	0.38		0.27		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Cadmium	ND		0.27		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Calcium	9950		67.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Chromium	9.4		0.67		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Cobalt	5.9		0.67		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Copper	37.1		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Iron	12700		13.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Lead	155		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Magnesium	2980		26.9		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Manganese	252		0.27		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Nickel	17.6		6.7		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Potassium	1130		40.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Selenium	ND		5.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Silver	ND		0.81		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Sodium	ND		188		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Thallium	ND		8.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Vanadium	12.8		0.67		mg/Kg	☼	02/19/15 15:35	02/21/15 17:27	1
Zinc	57.0		2.7		mg/Kg	☼	02/19/15 15:35	02/20/15 14:13	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (4-10)

Lab Sample ID: 480-75578-2

Date Collected: 02/17/15 13:05

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.069		0.026		mg/Kg	☼	02/19/15 09:55	02/19/15 11:52	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

Date Collected: 02/17/15 13:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.6	0.41	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,1,2,2-Tetrachloroethane	ND		5.6	0.92	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.6	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,1,2-Trichloroethane	ND		5.6	0.73	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,1-Dichloroethane	ND		5.6	0.69	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,1-Dichloroethene	ND		5.6	0.69	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2,4-Trichlorobenzene	ND		5.6	0.34	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2,4-Trimethylbenzene	ND		5.6	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2-Dibromo-3-Chloropropane	ND		5.6	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2-Dichlorobenzene	ND		5.6	0.44	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2-Dichloroethane	ND		5.6	0.28	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2-Dichloropropane	ND		5.6	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,3,5-Trimethylbenzene	ND		5.6	0.36	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,3-Dichlorobenzene	ND		5.6	0.29	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,4-Dichlorobenzene	ND		5.6	0.79	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
2-Butanone (MEK)	ND		28	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
2-Hexanone	ND		28	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
4-Isopropyltoluene	ND		5.6	0.45	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
4-Methyl-2-pentanone (MIBK)	ND		28	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Acetone	5.8	J B	28	4.8	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Benzene	ND		5.6	0.28	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Bromoform	ND		5.6	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Bromomethane	ND		5.6	0.51	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Carbon disulfide	ND		5.6	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Carbon tetrachloride	ND		5.6	0.55	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Chlorobenzene	ND		5.6	0.75	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Dibromochloromethane	ND		5.6	0.72	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Chloroethane	ND		5.6	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Chloroform	ND		5.6	0.35	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Chloromethane	ND		5.6	0.34	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
cis-1,2-Dichloroethene	ND		5.6	0.72	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Cyclohexane	ND	*	5.6	0.79	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Bromodichloromethane	ND		5.6	0.76	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Dichlorodifluoromethane	ND		5.6	0.47	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Ethylbenzene	ND		5.6	0.39	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
1,2-Dibromoethane	ND		5.6	0.72	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Isopropylbenzene	ND		5.6	0.85	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Methyl acetate	ND		5.6	3.4	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Methyl tert-butyl ether	ND		5.6	0.55	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Methylcyclohexane	ND		5.6	0.86	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Methylene Chloride	ND		5.6	2.6	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
m,p-Xylene	ND		11	0.95	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
n-Butylbenzene	ND		5.6	0.49	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
N-Propylbenzene	ND		5.6	0.45	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
o-Xylene	ND		5.6	0.74	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
sec-Butylbenzene	ND		5.6	0.49	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Tetrachloroethene	ND		5.6	0.76	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Toluene	ND		5.6	0.43	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
trans-1,2-Dichloroethene	ND		5.6	0.58	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

Date Collected: 02/17/15 13:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.6	2.5	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Trichloroethene	ND		5.6	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Trichlorofluoromethane	ND		5.6	0.53	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Vinyl chloride	ND		5.6	0.69	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Xylenes, Total	ND		11	0.95	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
cis-1,3-Dichloropropene	ND		5.6	0.81	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
Styrene	ND		5.6	0.28	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1
tert-Butylbenzene	ND		5.6	0.59	ug/Kg	☼	02/18/15 20:44	02/19/15 02:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 126	02/18/15 20:44	02/19/15 02:57	1
4-Bromofluorobenzene (Surr)	99		72 - 126	02/18/15 20:44	02/19/15 02:57	1
Toluene-d8 (Surr)	102		71 - 125	02/18/15 20:44	02/19/15 02:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
bis (2-chloroisopropyl) ether	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,4,5-Trichlorophenol	ND		1100	280	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,4,6-Trichlorophenol	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,4-Dichlorophenol	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,4-Dimethylphenol	ND		1100	250	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,4-Dinitrophenol	ND		2000	630	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,4-Dinitrotoluene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2,6-Dinitrotoluene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2-Chloronaphthalene	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2-Chlorophenol	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2-Methylphenol	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2-Methylnaphthalene	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2-Nitroaniline	ND		2000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
2-Nitrophenol	ND		1100	300	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
3,3'-Dichlorobenzidine	ND		2000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
3-Nitroaniline	ND *		2000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4,6-Dinitro-2-methylphenol	ND		2000	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Bromophenyl phenyl ether	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Chloro-3-methylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Chloroaniline	ND *		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Methylphenol	ND		2000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Nitroaniline	ND		2000	550	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
4-Nitrophenol	ND		2000	740	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Acenaphthene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Acenaphthylene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Acetophenone	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Anthracene	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Atrazine	ND		1100	370	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Benzaldehyde	ND		1100	840	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Benzo[a]anthracene	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Benzo[a]pyrene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Benzo[b]fluoranthene	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

Date Collected: 02/17/15 13:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Benzo[k]fluoranthene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Bis(2-chloroethoxy)methane	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Bis(2-chloroethyl)ether	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Bis(2-ethylhexyl) phthalate	ND		1100	360	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Butyl benzyl phthalate	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Caprolactam	ND		1100	320	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Carbazole	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Chrysene	ND		1100	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Dibenz(a,h)anthracene	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Di-n-butyl phthalate	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Di-n-octyl phthalate	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Dibenzofuran	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Diethyl phthalate	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Dimethyl phthalate	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Fluoranthene	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Fluorene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Hexachlorobenzene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Hexachlorobutadiene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Hexachlorocyclopentadiene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Hexachloroethane	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Indeno[1,2,3-cd]pyrene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Isophorone	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
N-Nitrosodi-n-propylamine	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
N-Nitrosodiphenylamine	ND *		1100	850	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Naphthalene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Nitrobenzene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Pentachlorophenol	ND		2000	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Phenanthrene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Phenol	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5
Pyrene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:06	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	74		34 - 132	02/19/15 13:56	02/20/15 18:06	5
Phenol-d5 (Surr)	77		11 - 120	02/19/15 13:56	02/20/15 18:06	5
p-Terphenyl-d14 (Surr)	80		65 - 153	02/19/15 13:56	02/20/15 18:06	5
2,4,6-Tribromophenol (Surr)	68		39 - 146	02/19/15 13:56	02/20/15 18:06	5
2-Fluorobiphenyl	71		37 - 120	02/19/15 13:56	02/20/15 18:06	5
2-Fluorophenol (Surr)	74		18 - 120	02/19/15 13:56	02/20/15 18:06	5

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.40	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
4,4'-DDE	ND		2.1	0.44	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
4,4'-DDT	ND		2.1	0.49	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Aldrin	ND		2.1	0.51	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
alpha-BHC	ND		2.1	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
alpha-Chlordane	ND		2.1	1.0	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
beta-BHC	ND		2.1	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
delta-BHC	0.46	J	2.1	0.39	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

Date Collected: 02/17/15 13:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	ND		2.1	0.50	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Endosulfan I	ND		2.1	0.40	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Endosulfan II	ND		2.1	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Endosulfan sulfate	ND		2.1	0.39	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Endrin	ND		2.1	0.41	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Endrin aldehyde	0.57	J	2.1	0.53	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Endrin ketone	ND		2.1	0.51	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
gamma-BHC (Lindane)	0.52	J	2.1	0.38	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
gamma-Chlordane	ND		2.1	0.66	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Heptachlor	ND		2.1	0.45	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Heptachlor epoxide	ND		2.1	0.54	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Methoxychlor	0.51	J	2.1	0.42	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1
Toxaphene	ND		21	12	ug/Kg	☼	02/19/15 14:14	02/20/15 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	90		32 - 136	02/19/15 14:14	02/20/15 15:27	1
Tetrachloro-m-xylene	90		30 - 124	02/19/15 14:14	02/20/15 15:27	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.048	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1
PCB-1221	ND		0.25	0.048	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1
PCB-1232	ND		0.25	0.048	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1
PCB-1242	ND		0.25	0.048	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1
PCB-1248	ND		0.25	0.048	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	02/19/15 11:01	02/20/15 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	103		46 - 175	02/19/15 11:01	02/20/15 17:29	1
DCB Decachlorobiphenyl	113		47 - 176	02/19/15 11:01	02/20/15 17:29	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	6.6	ug/Kg	☼	02/19/15 09:07	02/21/15 00:09	1
Silvex (2,4,5-TP)	ND		21	7.4	ug/Kg	☼	02/19/15 09:07	02/21/15 00:09	1
2,4-D	ND		21	13	ug/Kg	☼	02/19/15 09:07	02/21/15 00:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	71		39 - 120	02/19/15 09:07	02/21/15 00:09	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9190		12.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Antimony	ND		18.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Arsenic	4.8		2.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Barium	52.0		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Beryllium	0.50		0.24		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Cadmium	ND		0.24		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Calcium	1280		60.7		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Chromium	13.3		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

Date Collected: 02/17/15 13:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	9.5		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Copper	24.8		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Iron	19300		12.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Lead	11.8		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Magnesium	3240		24.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Manganese	200		0.24		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Nickel	27.5		6.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Potassium	1110		36.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Selenium	ND		4.9		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Silver	ND		0.73		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Sodium	ND		170		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Thallium	ND		7.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Vanadium	17.9		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 17:29	1
Zinc	63.2		2.4		mg/Kg	☼	02/19/15 15:35	02/20/15 14:16	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.023		mg/Kg	☼	02/19/15 09:55	02/19/15 11:54	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP 2

Lab Sample ID: 480-75578-4

Date Collected: 02/17/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 45.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1900	270	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
bis (2-chloroisopropyl) ether	ND		1900	370	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,4,5-Trichlorophenol	ND		1900	500	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,4,6-Trichlorophenol	ND		1900	370	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,4-Dichlorophenol	ND		1900	200	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,4-Dimethylphenol	ND		1900	450	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,4-Dinitrophenol	ND		3600	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,4-Dinitrotoluene	ND		1900	380	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2,6-Dinitrotoluene	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2-Chloronaphthalene	ND		1900	310	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2-Chlorophenol	ND		1900	340	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2-Methylphenol	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2-Methylnaphthalene	ND		1900	370	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2-Nitroaniline	ND		3600	270	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
2-Nitrophenol	ND		1900	520	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
3,3'-Dichlorobenzidine	ND		3600	2200	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
3-Nitroaniline	ND	*	3600	510	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4,6-Dinitro-2-methylphenol	ND		3600	1900	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Bromophenyl phenyl ether	ND		1900	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Chloro-3-methylphenol	ND		1900	460	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Chloroaniline	ND	*	1900	460	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Chlorophenyl phenyl ether	ND		1900	230	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Methylphenol	ND		3600	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Nitroaniline	ND		3600	970	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
4-Nitrophenol	ND		3600	1300	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Acenaphthene	ND		1900	270	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Acenaphthylene	ND		1900	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Acetophenone	ND		1900	250	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Anthracene	ND		1900	460	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Atrazine	ND		1900	640	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Benzaldehyde	ND		1900	1500	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Benzo[a]anthracene	220	J	1900	190	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Benzo[a]pyrene	280	J	1900	270	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Benzo[b]fluoranthene	ND		1900	290	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Benzo[g,h,i]perylene	ND		1900	200	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Benzo[k]fluoranthene	ND		1900	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Bis(2-chloroethoxy)methane	ND		1900	390	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Bis(2-chloroethyl)ether	ND		1900	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Bis(2-ethylhexyl) phthalate	ND		1900	630	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Butyl benzyl phthalate	ND		1900	310	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Caprolactam	ND		1900	560	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Carbazole	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Chrysene	ND		1900	410	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Dibenz(a,h)anthracene	ND		1900	330	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Di-n-butyl phthalate	ND		1900	320	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Di-n-octyl phthalate	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Dibenzofuran	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Diethyl phthalate	ND		1900	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Dimethyl phthalate	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP 2

Lab Sample ID: 480-75578-4

Date Collected: 02/17/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 45.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	300	J	1900	200	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Fluorene	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Hexachlorobenzene	ND		1900	250	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Hexachlorobutadiene	ND		1900	270	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Hexachlorocyclopentadiene	ND		1900	250	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Hexachloroethane	ND		1900	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Indeno[1,2,3-cd]pyrene	ND		1900	230	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Isophorone	ND		1900	390	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
N-Nitrosodi-n-propylamine	ND		1900	320	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
N-Nitrosodiphenylamine	ND	*	1900	1500	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Naphthalene	ND		1900	240	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Nitrobenzene	ND		1900	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Pentachlorophenol	ND		3600	1900	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Phenanthrene	ND		1900	270	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Phenol	ND		1900	280	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5
Pyrene	ND		1900	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:30	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	72		34 - 132	02/19/15 13:56	02/20/15 18:30	5
Phenol-d5 (Surr)	80		11 - 120	02/19/15 13:56	02/20/15 18:30	5
p-Terphenyl-d14 (Surr)	72		65 - 153	02/19/15 13:56	02/20/15 18:30	5
2,4,6-Tribromophenol (Surr)	70		39 - 146	02/19/15 13:56	02/20/15 18:30	5
2-Fluorobiphenyl	68		37 - 120	02/19/15 13:56	02/20/15 18:30	5
2-Fluorophenol (Surr)	78		18 - 120	02/19/15 13:56	02/20/15 18:30	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.40	0.077	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1
PCB-1221	ND		0.40	0.077	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1
PCB-1232	ND		0.40	0.077	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1
PCB-1242	ND		0.40	0.077	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1
PCB-1248	0.11	J	0.40	0.077	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1
PCB-1254	ND		0.40	0.18	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1
PCB-1260	ND		0.40	0.18	mg/Kg	☼	02/19/15 11:01	02/20/15 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	104		46 - 175	02/19/15 11:01	02/20/15 17:44	1
DCB Decachlorobiphenyl	118		47 - 176	02/19/15 11:01	02/20/15 17:44	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12100		20.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Antimony	ND		30.9		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Arsenic	7.3		4.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Barium	124		1.0		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Beryllium	0.72		0.41		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Cadmium	0.54		0.41		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Calcium	9970		103		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Chromium	16.5		1.0		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Cobalt	7.8		1.0		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP 2

Lab Sample ID: 480-75578-4

Date Collected: 02/17/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 45.0

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	210		2.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Iron	21900		20.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Lead	220		2.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Magnesium	4620		41.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Manganese	225		0.41		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Nickel	26.8		10.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Potassium	2080		61.8		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Selenium	ND		8.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Silver	ND		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Sodium	343		288		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Thallium	ND		12.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Vanadium	22.5		1.0		mg/Kg	☼	02/19/15 15:35	02/21/15 17:32	1
Zinc	111		4.1		mg/Kg	☼	02/19/15 15:35	02/20/15 14:19	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.23		0.043		mg/Kg	☼	02/19/15 09:55	02/19/15 11:55	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-111 (6-9)

Lab Sample ID: 480-75578-5

Date Collected: 02/17/15 12:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
bis (2-chloroisopropyl) ether	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,4,5-Trichlorophenol	ND		1000	280	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,4,6-Trichlorophenol	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,4-Dichlorophenol	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,4-Dimethylphenol	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,4-Dinitrophenol	ND		2000	620	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,4-Dinitrotoluene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2,6-Dinitrotoluene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2-Chloronaphthalene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2-Chlorophenol	ND		1000	190	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2-Methylphenol	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2-Methylnaphthalene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2-Nitroaniline	ND		2000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
2-Nitrophenol	ND		1000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
3,3'-Dichlorobenzidine	ND		2000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
3-Nitroaniline	ND	*	2000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4,6-Dinitro-2-methylphenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Bromophenyl phenyl ether	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Chloro-3-methylphenol	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Chloroaniline	ND	*	1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Chlorophenyl phenyl ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Methylphenol	ND		2000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Nitroaniline	ND		2000	540	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
4-Nitrophenol	ND		2000	720	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Acenaphthene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Acetophenone	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Anthracene	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Atrazine	ND		1000	360	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Benzaldehyde	ND		1000	820	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Benzo[a]anthracene	180	J	1000	100	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Benzo[a]pyrene	220	J	1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Benzo[b]fluoranthene	210	J	1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Benzo[g,h,i]perylene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Benzo[k]fluoranthene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Bis(2-chloroethoxy)methane	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Bis(2-chloroethyl)ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Bis(2-ethylhexyl) phthalate	ND		1000	350	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Butyl benzyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Caprolactam	ND		1000	310	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Carbazole	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Chrysene	ND		1000	230	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Dibenz(a,h)anthracene	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Di-n-butyl phthalate	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Di-n-octyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Dibenzofuran	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Diethyl phthalate	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Dimethyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-111 (6-9)

Lab Sample ID: 480-75578-5

Date Collected: 02/17/15 12:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	290	J	1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Fluorene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Hexachlorobenzene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Hexachlorobutadiene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Hexachlorocyclopentadiene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Hexachloroethane	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Indeno[1,2,3-cd]pyrene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Isophorone	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
N-Nitrosodi-n-propylamine	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
N-Nitrosodiphenylamine	ND	*	1000	840	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Nitrobenzene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Pentachlorophenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Phenanthrene	210	J	1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Phenol	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5
Pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 18:53	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	74		34 - 132	02/19/15 13:56	02/20/15 18:53	5
Phenol-d5 (Surr)	75		11 - 120	02/19/15 13:56	02/20/15 18:53	5
p-Terphenyl-d14 (Surr)	67		65 - 153	02/19/15 13:56	02/20/15 18:53	5
2,4,6-Tribromophenol (Surr)	70		39 - 146	02/19/15 13:56	02/20/15 18:53	5
2-Fluorobiphenyl	69		37 - 120	02/19/15 13:56	02/20/15 18:53	5
2-Fluorophenol (Surr)	78		18 - 120	02/19/15 13:56	02/20/15 18:53	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.28	0.056	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1
PCB-1221	ND		0.28	0.056	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1
PCB-1232	ND		0.28	0.056	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1
PCB-1242	ND		0.28	0.056	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1
PCB-1248	ND		0.28	0.056	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1
PCB-1254	ND		0.28	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1
PCB-1260	ND		0.28	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 17:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	105		46 - 175	02/19/15 11:01	02/20/15 17:59	1
DCB Decachlorobiphenyl	120		47 - 176	02/19/15 11:01	02/20/15 17:59	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11100		11.7		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Antimony	ND		17.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Arsenic	6.1		2.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Barium	70.2		0.59		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Beryllium	0.66		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Cadmium	0.28		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Calcium	37700		58.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Chromium	16.1		0.59		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Cobalt	11.1		0.59		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-111 (6-9)

Lab Sample ID: 480-75578-5

Date Collected: 02/17/15 12:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.5

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	92.5		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Iron	20500		11.7		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Lead	24.9		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Magnesium	13800		23.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Manganese	399		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Nickel	26.1		5.9		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Potassium	2130		35.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Selenium	ND		4.7		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Silver	ND		0.70		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Sodium	176		164		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Thallium	ND		7.0		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Vanadium	23.2		0.59		mg/Kg	☼	02/19/15 15:35	02/21/15 17:35	1
Zinc	69.7		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 14:22	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.085		0.024		mg/Kg	☼	02/19/15 09:55	02/19/15 11:57	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (0-2)

Lab Sample ID: 480-75578-6

Date Collected: 02/17/15 11:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		870	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
bis (2-chloroisopropyl) ether	ND		870	170	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,4,5-Trichlorophenol	ND		870	240	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,4,6-Trichlorophenol	ND		870	170	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,4-Dichlorophenol	ND		870	92	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,4-Dimethylphenol	ND		870	210	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,4-Dinitrophenol	ND		1700	520	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,4-Dinitrotoluene	ND		870	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2,6-Dinitrotoluene	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2-Chloronaphthalene	ND		870	140	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2-Chlorophenol	ND		870	160	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2-Methylphenol	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2-Methylnaphthalene	ND		870	170	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2-Nitroaniline	ND		1700	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
2-Nitrophenol	ND		870	250	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
3,3'-Dichlorobenzidine	ND		1700	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
3-Nitroaniline	ND	*	1700	240	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4,6-Dinitro-2-methylphenol	ND		1700	870	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Bromophenyl phenyl ether	ND		870	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Chloro-3-methylphenol	ND		870	210	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Chloroaniline	ND	*	870	210	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Chlorophenyl phenyl ether	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Methylphenol	ND		1700	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Nitroaniline	ND		1700	460	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
4-Nitrophenol	ND		1700	610	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Acenaphthene	ND		870	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Acenaphthylene	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Acetophenone	ND		870	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Anthracene	ND		870	210	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Atrazine	ND		870	300	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Benzaldehyde	ND		870	690	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Benzo[a]anthracene	ND		870	87	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Benzo[a]pyrene	ND		870	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Benzo[b]fluoranthene	ND		870	140	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Benzo[g,h,i]perylene	ND		870	92	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Benzo[k]fluoranthene	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Bis(2-chloroethoxy)methane	ND		870	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Bis(2-chloroethyl)ether	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Bis(2-ethylhexyl) phthalate	ND		870	300	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Butyl benzyl phthalate	ND		870	140	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Caprolactam	ND		870	260	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Carbazole	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Chrysene	ND		870	190	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Dibenz(a,h)anthracene	ND		870	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Di-n-butyl phthalate	ND		870	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Di-n-octyl phthalate	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Dibenzofuran	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Diethyl phthalate	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Dimethyl phthalate	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (0-2)

Lab Sample ID: 480-75578-6

Date Collected: 02/17/15 11:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		870	92	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Fluorene	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Hexachlorobenzene	ND		870	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Hexachlorobutadiene	ND		870	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Hexachlorocyclopentadiene	ND		870	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Hexachloroethane	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Indeno[1,2,3-cd]pyrene	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Isophorone	ND		870	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
N-Nitrosodi-n-propylamine	ND		870	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
N-Nitrosodiphenylamine	ND	*	870	710	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Naphthalene	ND		870	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Nitrobenzene	ND		870	97	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Pentachlorophenol	ND		1700	870	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Phenanthrene	ND		870	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Phenol	ND		870	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5
Pyrene	ND		870	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	87		34 - 132	02/19/15 13:56	02/20/15 19:17	5
Phenol-d5 (Surr)	94		11 - 120	02/19/15 13:56	02/20/15 19:17	5
p-Terphenyl-d14 (Surr)	90		65 - 153	02/19/15 13:56	02/20/15 19:17	5
2,4,6-Tribromophenol (Surr)	87		39 - 146	02/19/15 13:56	02/20/15 19:17	5
2-Fluorobiphenyl	88		37 - 120	02/19/15 13:56	02/20/15 19:17	5
2-Fluorophenol (Surr)	92		18 - 120	02/19/15 13:56	02/20/15 19:17	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.049	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1
PCB-1221	ND		0.25	0.049	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1
PCB-1232	ND		0.25	0.049	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1
PCB-1242	ND		0.25	0.049	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1
PCB-1248	ND		0.25	0.049	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	02/19/15 11:01	02/20/15 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	111		46 - 175	02/19/15 11:01	02/20/15 18:43	1
DCB Decachlorobiphenyl	127		47 - 176	02/19/15 11:01	02/20/15 18:43	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2070		10.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Antimony	ND		16.0		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Arsenic	3.0		2.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Barium	9.1		0.53		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Beryllium	ND		0.21		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Cadmium	ND		0.21		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Calcium	186000		266		mg/Kg	☼	02/19/15 15:35	02/23/15 11:25	5
Chromium	4.7		0.53		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Cobalt	1.9		0.53		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (0-2)

Lab Sample ID: 480-75578-6

Date Collected: 02/17/15 11:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	14.3		5.3		mg/Kg	☼	02/19/15 15:35	02/23/15 11:25	5
Iron	6590		10.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Lead	7.4		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Magnesium	114000		106		mg/Kg	☼	02/19/15 15:35	02/23/15 11:25	5
Manganese	175		0.21		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Nickel	6.9		5.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Potassium	902		31.9		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Selenium	ND		4.3		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Silver	ND		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Sodium	199		149		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Thallium	ND		6.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Vanadium	8.0		0.53		mg/Kg	☼	02/19/15 15:35	02/21/15 17:37	1
Zinc	7.6		2.1		mg/Kg	☼	02/19/15 15:35	02/20/15 14:25	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.044		0.020		mg/Kg	☼	02/19/15 09:55	02/19/15 11:59	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (2-6)

Lab Sample ID: 480-75578-7

Date Collected: 02/17/15 11:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
bis (2-chloroisopropyl) ether	ND		1000	200	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,4,5-Trichlorophenol	ND		1000	270	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,4,6-Trichlorophenol	ND		1000	200	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,4-Dichlorophenol	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,4-Dimethylphenol	ND		1000	240	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,4-Dinitrophenol	ND		1900	600	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,4-Dinitrotoluene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2,6-Dinitrotoluene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2-Chloronaphthalene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2-Chlorophenol	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2-Methylphenol	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2-Methylnaphthalene	ND		1000	200	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2-Nitroaniline	ND		1900	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
2-Nitrophenol	ND		1000	280	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
3,3'-Dichlorobenzidine	ND		1900	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
3-Nitroaniline	ND	*	1900	280	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4,6-Dinitro-2-methylphenol	ND		1900	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Bromophenyl phenyl ether	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Chloro-3-methylphenol	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Chloroaniline	ND	*	1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Chlorophenyl phenyl ether	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Methylphenol	ND		1900	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Nitroaniline	ND		1900	530	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
4-Nitrophenol	ND		1900	700	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Acenaphthene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Acetophenone	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Anthracene	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Atrazine	ND		1000	350	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Benzaldehyde	ND		1000	800	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Benzo[a]anthracene	ND		1000	100	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Benzo[a]pyrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Benzo[b]fluoranthene	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Benzo[g,h,i]perylene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Benzo[k]fluoranthene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Bis(2-chloroethoxy)methane	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Bis(2-chloroethyl)ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Bis(2-ethylhexyl) phthalate	ND		1000	340	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Butyl benzyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Caprolactam	ND		1000	300	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Carbazole	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Chrysene	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Dibenz(a,h)anthracene	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Di-n-butyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Di-n-octyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Dibenzofuran	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Diethyl phthalate	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Dimethyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (2-6)

Lab Sample ID: 480-75578-7

Date Collected: 02/17/15 11:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Fluorene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Hexachlorobenzene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Hexachlorobutadiene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Hexachlorocyclopentadiene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Hexachloroethane	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Indeno[1,2,3-cd]pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Isophorone	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
N-Nitrosodi-n-propylamine	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
N-Nitrosodiphenylamine	ND *		1000	810	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Nitrobenzene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Pentachlorophenol	ND		1900	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Phenanthrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Phenol	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5
Pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 16:55	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		34 - 132	02/19/15 13:56	02/20/15 16:55	5
Phenol-d5 (Surr)	84		11 - 120	02/19/15 13:56	02/20/15 16:55	5
p-Terphenyl-d14 (Surr)	85		65 - 153	02/19/15 13:56	02/20/15 16:55	5
2,4,6-Tribromophenol (Surr)	73		39 - 146	02/19/15 13:56	02/20/15 16:55	5
2-Fluorobiphenyl	81		37 - 120	02/19/15 13:56	02/20/15 16:55	5
2-Fluorophenol (Surr)	82		18 - 120	02/19/15 13:56	02/20/15 16:55	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.22	0.043	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1
PCB-1221	ND		0.22	0.043	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1
PCB-1232	ND		0.22	0.043	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1
PCB-1242	ND		0.22	0.043	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1
PCB-1248	ND		0.22	0.043	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1
PCB-1254	ND		0.22	0.10	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1
PCB-1260	ND		0.22	0.10	mg/Kg	☼	02/19/15 11:01	02/20/15 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	105		46 - 175	02/19/15 11:01	02/20/15 16:45	1
DCB Decachlorobiphenyl	111		47 - 176	02/19/15 11:01	02/20/15 16:45	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8360		11.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Antimony	ND		16.6		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Arsenic	5.5		2.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Barium	583		0.55		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Beryllium	0.47		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Cadmium	0.22		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Calcium	2360		55.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Chromium	12.2		0.55		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Cobalt	8.4		0.55		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-112 (2-6)

Lab Sample ID: 480-75578-7

Date Collected: 02/17/15 11:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.7

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	20.4		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Iron	19000		11.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Lead	451		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Magnesium	3110		22.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Manganese	414		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Nickel	25.1		5.5		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Potassium	834		33.2		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Selenium	ND		4.4		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Silver	ND		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Sodium	ND		155		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Thallium	ND		6.6		mg/Kg	☼	02/19/15 15:35	02/20/15 14:28	1
Vanadium	16.5		0.55		mg/Kg	☼	02/19/15 15:35	02/21/15 17:51	1
Zinc	59.6		2.2		mg/Kg	☼	02/19/15 15:35	02/20/15 14:28	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.066		0.024		mg/Kg	☼	02/19/15 09:55	02/19/15 12:01	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-113 (2-6)

Lab Sample ID: 480-75578-8

Date Collected: 02/17/15 10:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		890	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
bis (2-chloroisopropyl) ether	ND		890	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,4,5-Trichlorophenol	ND		890	240	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,4,6-Trichlorophenol	ND		890	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,4-Dichlorophenol	ND		890	94	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,4-Dimethylphenol	ND		890	210	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,4-Dinitrophenol	ND		1700	530	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,4-Dinitrotoluene	ND		890	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2,6-Dinitrotoluene	ND		890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2-Chloronaphthalene	ND		890	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2-Chlorophenol	ND		890	160	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2-Methylphenol	ND		890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2-Methylnaphthalene	ND		890	180	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2-Nitroaniline	ND		1700	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
2-Nitrophenol	ND		890	250	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
3,3'-Dichlorobenzidine	ND		1700	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
3-Nitroaniline	ND	*	1700	250	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4,6-Dinitro-2-methylphenol	ND		1700	890	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Bromophenyl phenyl ether	ND		890	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Chloro-3-methylphenol	ND		890	220	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Chloroaniline	ND	*	890	220	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Chlorophenyl phenyl ether	ND		890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Methylphenol	ND		1700	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Nitroaniline	ND		1700	470	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
4-Nitrophenol	ND		1700	620	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Acenaphthene	ND		890	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Acenaphthylene	ND		890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Acetophenone	ND		890	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Anthracene	460	J	890	220	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Atrazine	ND		890	310	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Benzaldehyde	ND		890	710	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Benzo[a]anthracene	660	J	890	89	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Benzo[a]pyrene	450	J	890	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Benzo[b]fluoranthene	660	J	890	140	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Benzo[g,h,i]perylene	110	J	890	94	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Benzo[k]fluoranthene	330	J	890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Bis(2-chloroethoxy)methane	ND		890	190	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Bis(2-chloroethyl)ether	ND		890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Bis(2-ethylhexyl) phthalate	ND		890	300	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Butyl benzyl phthalate	ND		890	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Caprolactam	ND		890	270	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Carbazole	310	J	890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Chrysene	620	J	890	200	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Dibenz(a,h)anthracene	ND		890	160	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Di-n-butyl phthalate	ND		890	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Di-n-octyl phthalate	ND		890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Dibenzofuran	ND		890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Diethyl phthalate	ND		890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Dimethyl phthalate	ND		890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-113 (2-6)

Lab Sample ID: 480-75578-8

Date Collected: 02/17/15 10:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	1700		890	94	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Fluorene	120	J	890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Hexachlorobenzene	ND		890	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Hexachlorobutadiene	ND		890	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Hexachlorocyclopentadiene	ND		890	120	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Hexachloroethane	ND		890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Indeno[1,2,3-cd]pyrene	200	J	890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Isophorone	ND		890	190	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
N-Nitrosodi-n-propylamine	ND		890	150	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
N-Nitrosodiphenylamine	ND	*	890	720	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Naphthalene	ND		890	110	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Nitrobenzene	ND		890	99	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Pentachlorophenol	ND		1700	890	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Phenanthrene	1800		890	130	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Phenol	ND		890	140	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5
Pyrene	980		890	100	ug/Kg	☼	02/19/15 13:56	02/20/15 19:40	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	86		34 - 132	02/19/15 13:56	02/20/15 19:40	5
Phenol-d5 (Surr)	89		11 - 120	02/19/15 13:56	02/20/15 19:40	5
p-Terphenyl-d14 (Surr)	89		65 - 153	02/19/15 13:56	02/20/15 19:40	5
2,4,6-Tribromophenol (Surr)	69		39 - 146	02/19/15 13:56	02/20/15 19:40	5
2-Fluorobiphenyl	86		37 - 120	02/19/15 13:56	02/20/15 19:40	5
2-Fluorophenol (Surr)	90		18 - 120	02/19/15 13:56	02/20/15 19:40	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.20	0.040	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1
PCB-1221	ND		0.20	0.040	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1
PCB-1232	ND		0.20	0.040	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1
PCB-1242	ND		0.20	0.040	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1
PCB-1248	ND		0.20	0.040	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1
PCB-1254	ND		0.20	0.096	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1
PCB-1260	ND		0.20	0.096	mg/Kg	☼	02/19/15 11:01	02/20/15 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	104		46 - 175	02/19/15 11:01	02/20/15 18:58	1
DCB Decachlorobiphenyl	123		47 - 176	02/19/15 11:01	02/20/15 18:58	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3360		10.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Antimony	ND		16.2		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Arsenic	4.9		2.2		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Barium	10.1		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Beryllium	ND		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Cadmium	ND		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Calcium	163000		270		mg/Kg	☼	02/19/15 15:35	02/21/15 18:28	5
Chromium	7.0		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Cobalt	3.3		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-113 (2-6)

Lab Sample ID: 480-75578-8

Date Collected: 02/17/15 10:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	8.9		5.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:28	5
Iron	9840		10.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Lead	8.1		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Magnesium	104000		108		mg/Kg	☼	02/19/15 15:35	02/21/15 18:28	5
Manganese	174		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Nickel	11.5		5.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Potassium	1440		32.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Selenium	ND		4.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Silver	ND		0.65		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Sodium	196		151		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Thallium	ND	^	6.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Vanadium	9.4		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1
Zinc	10.2		2.2		mg/Kg	☼	02/19/15 15:35	02/21/15 18:25	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.020		mg/Kg	☼	02/19/15 09:55	02/19/15 12:11	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (4-8)

Lab Sample ID: 480-75578-9

Date Collected: 02/18/15 15:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.7	0.41	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,1,2,2-Tetrachloroethane	ND		5.7	0.92	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.7	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,1,2-Trichloroethane	ND		5.7	0.74	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,1-Dichloroethane	ND		5.7	0.70	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,1-Dichloroethene	ND		5.7	0.70	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2,4-Trichlorobenzene	ND		5.7	0.35	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2,4-Trimethylbenzene	ND		5.7	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2-Dibromo-3-Chloropropane	ND		5.7	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2-Dichlorobenzene	ND		5.7	0.45	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2-Dichloroethane	ND		5.7	0.29	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2-Dichloropropane	ND		5.7	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,3,5-Trimethylbenzene	ND		5.7	0.37	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,3-Dichlorobenzene	ND		5.7	0.29	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,4-Dichlorobenzene	ND		5.7	0.80	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
2-Butanone (MEK)	ND		28	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
2-Hexanone	ND		28	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
4-Isopropyltoluene	ND		5.7	0.46	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
4-Methyl-2-pentanone (MIBK)	ND		28	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Acetone	5.8	J B	28	4.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Benzene	ND		5.7	0.28	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Bromoform	ND		5.7	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Bromomethane	ND		5.7	0.51	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Carbon disulfide	ND		5.7	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Carbon tetrachloride	ND		5.7	0.55	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Chlorobenzene	ND		5.7	0.75	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Dibromochloromethane	ND		5.7	0.73	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Chloroethane	ND		5.7	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Chloroform	ND		5.7	0.35	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Chloromethane	ND		5.7	0.34	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
cis-1,2-Dichloroethene	ND		5.7	0.73	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Cyclohexane	ND	*	5.7	0.80	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Bromodichloromethane	ND		5.7	0.76	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Dichlorodifluoromethane	ND		5.7	0.47	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Ethylbenzene	ND		5.7	0.39	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
1,2-Dibromoethane	ND		5.7	0.73	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Isopropylbenzene	ND		5.7	0.86	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Methyl acetate	ND		5.7	3.4	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Methyl tert-butyl ether	ND		5.7	0.56	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Methylcyclohexane	ND		5.7	0.87	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Methylene Chloride	ND		5.7	2.6	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
m,p-Xylene	ND		11	0.96	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
n-Butylbenzene	ND		5.7	0.50	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
N-Propylbenzene	ND		5.7	0.46	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
o-Xylene	ND		5.7	0.74	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
sec-Butylbenzene	ND		5.7	0.50	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Tetrachloroethene	ND		5.7	0.76	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Toluene	ND		5.7	0.43	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
trans-1,2-Dichloroethene	ND		5.7	0.59	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (4-8)

Lab Sample ID: 480-75578-9

Date Collected: 02/18/15 15:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.7	2.5	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Trichloroethene	ND		5.7	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Trichlorofluoromethane	ND		5.7	0.54	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Vinyl chloride	ND		5.7	0.70	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Xylenes, Total	ND		11	0.96	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
cis-1,3-Dichloropropene	ND		5.7	0.82	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
Styrene	ND		5.7	0.28	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1
tert-Butylbenzene	ND		5.7	0.59	ug/Kg	☼	02/18/15 20:44	02/19/15 03:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 126	02/18/15 20:44	02/19/15 03:23	1
4-Bromofluorobenzene (Surr)	97		72 - 126	02/18/15 20:44	02/19/15 03:23	1
Toluene-d8 (Surr)	101		71 - 125	02/18/15 20:44	02/19/15 03:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
bis (2-chloroisopropyl) ether	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,4,5-Trichlorophenol	ND		1100	290	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,4,6-Trichlorophenol	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,4-Dichlorophenol	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,4-Dimethylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,4-Dinitrophenol	ND		2100	630	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,4-Dinitrotoluene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2,6-Dinitrotoluene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2-Chloronaphthalene	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2-Chlorophenol	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2-Methylphenol	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2-Methylnaphthalene	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2-Nitroaniline	ND		2100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
2-Nitrophenol	ND		1100	300	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
3,3'-Dichlorobenzidine	ND		2100	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
3-Nitroaniline	ND *		2100	290	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4,6-Dinitro-2-methylphenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Bromophenyl phenyl ether	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Chloro-3-methylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Chloroaniline	ND *		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Methylphenol	ND		2100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Nitroaniline	ND		2100	550	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
4-Nitrophenol	ND		2100	740	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Acenaphthene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Acenaphthylene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Acetophenone	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Anthracene	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Atrazine	ND		1100	370	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Benzaldehyde	ND		1100	840	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Benzo[a]anthracene	140 J		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Benzo[a]pyrene	170 J		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Benzo[b]fluoranthene	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (4-8)

Lab Sample ID: 480-75578-9

Date Collected: 02/18/15 15:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Benzo[k]fluoranthene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Bis(2-chloroethoxy)methane	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Bis(2-chloroethyl)ether	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Bis(2-ethylhexyl) phthalate	ND		1100	360	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Butyl benzyl phthalate	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Caprolactam	ND		1100	320	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Carbazole	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Chrysene	ND		1100	240	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Dibenz(a,h)anthracene	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Di-n-butyl phthalate	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Di-n-octyl phthalate	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Dibenzofuran	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Diethyl phthalate	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Dimethyl phthalate	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Fluoranthene	240	J	1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Fluorene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Hexachlorobenzene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Hexachlorobutadiene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Hexachlorocyclopentadiene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Hexachloroethane	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Indeno[1,2,3-cd]pyrene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Isophorone	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
N-Nitrosodi-n-propylamine	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
N-Nitrosodiphenylamine	ND *		1100	860	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Naphthalene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Nitrobenzene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Pentachlorophenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Phenanthrene	310	J	1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Phenol	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5
Pyrene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:04	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		34 - 132	02/19/15 13:56	02/20/15 20:04	5
Phenol-d5 (Surr)	80		11 - 120	02/19/15 13:56	02/20/15 20:04	5
p-Terphenyl-d14 (Surr)	80		65 - 153	02/19/15 13:56	02/20/15 20:04	5
2,4,6-Tribromophenol (Surr)	84		39 - 146	02/19/15 13:56	02/20/15 20:04	5
2-Fluorobiphenyl	74		37 - 120	02/19/15 13:56	02/20/15 20:04	5
2-Fluorophenol (Surr)	81		18 - 120	02/19/15 13:56	02/20/15 20:04	5

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.40	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
4,4'-DDE	ND		2.1	0.43	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
4,4'-DDT	ND		2.1	0.48	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Aldrin	ND		2.1	0.51	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
alpha-BHC	ND		2.1	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
alpha-Chlordane	ND		2.1	1.0	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
beta-BHC	ND		2.1	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
delta-BHC	0.47	J	2.1	0.38	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (4-8)

Lab Sample ID: 480-75578-9

Date Collected: 02/18/15 15:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	ND		2.1	0.49	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Endosulfan I	ND		2.1	0.40	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Endosulfan II	ND		2.1	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Endosulfan sulfate	ND		2.1	0.38	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Endrin	ND		2.1	0.41	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Endrin aldehyde	ND		2.1	0.53	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Endrin ketone	ND		2.1	0.51	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
gamma-BHC (Lindane)	ND		2.1	0.38	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
gamma-Chlordane	ND		2.1	0.66	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Heptachlor	ND		2.1	0.45	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Heptachlor epoxide	ND		2.1	0.53	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Methoxychlor	ND		2.1	0.42	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1
Toxaphene	ND		21	12	ug/Kg	☼	02/19/15 14:14	02/20/15 15:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	92		32 - 136	02/19/15 14:14	02/20/15 15:44	1
Tetrachloro-m-xylene	75		30 - 124	02/19/15 14:14	02/20/15 15:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1
PCB-1221	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1
PCB-1232	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1
PCB-1242	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1
PCB-1248	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1
PCB-1254	ND		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1
PCB-1260	ND		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 19:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	105		46 - 175	02/19/15 11:01	02/20/15 19:13	1
DCB Decachlorobiphenyl	119		47 - 176	02/19/15 11:01	02/20/15 19:13	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		21	6.5	ug/Kg	☼	02/19/15 09:07	02/21/15 00:39	1
Silvex (2,4,5-TP)	ND		21	7.4	ug/Kg	☼	02/19/15 09:07	02/21/15 00:39	1
2,4-D	ND		21	13	ug/Kg	☼	02/19/15 09:07	02/21/15 00:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	67		39 - 120	02/19/15 09:07	02/21/15 00:39	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11800		12.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Antimony	ND		19.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Arsenic	3.4		2.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Barium	72.2		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Beryllium	0.59		0.26		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Cadmium	0.30		0.26		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Calcium	21600		63.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Chromium	15.7		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (4-8)

Lab Sample ID: 480-75578-9

Date Collected: 02/18/15 15:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.1

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	9.8		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Copper	27.6		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Iron	19200		12.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Lead	16.2		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Magnesium	4740		25.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Manganese	337		0.26		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Nickel	29.2		6.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Potassium	1360		38.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Selenium	ND		5.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Silver	ND		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Sodium	431		179		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Thallium	ND	^	7.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Vanadium	20.4		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1
Zinc	82.9		2.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:31	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.030		0.025		mg/Kg	☼	02/19/15 09:55	02/19/15 12:13	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (8-16)

Lab Sample ID: 480-75578-10

Date Collected: 02/18/15 15:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 77.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		14	1.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,1,2,2-Tetrachloroethane	ND		14	2.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		14	3.2	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,1,2-Trichloroethane	ND		14	1.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,1-Dichloroethane	ND		14	1.7	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,1-Dichloroethene	ND		14	1.7	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2,4-Trichlorobenzene	ND		14	0.85	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2,4-Trimethylbenzene	ND		14	2.7	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2-Dibromo-3-Chloropropane	ND		14	7.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2-Dichlorobenzene	ND		14	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2-Dichloroethane	ND		14	0.70	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2-Dichloropropane	ND		14	7.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,3,5-Trimethylbenzene	ND		14	0.90	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,3-Dichlorobenzene	ND		14	0.72	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,4-Dichlorobenzene	ND		14	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
2-Butanone (MEK)	ND		70	5.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
2-Hexanone	ND		70	7.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
4-Isopropyltoluene	ND		14	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
4-Methyl-2-pentanone (MIBK)	ND		70	4.6	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Acetone	39	J B	70	12	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Benzene	ND		14	0.68	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Bromoform	ND		14	7.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Bromomethane	ND		14	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Carbon disulfide	ND		14	7.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Carbon tetrachloride	ND		14	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Chlorobenzene	ND		14	1.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Dibromochloromethane	ND		14	1.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Chloroethane	ND		14	3.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Chloroform	ND		14	0.86	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Chloromethane	ND		14	0.84	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
cis-1,2-Dichloroethene	ND		14	1.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Cyclohexane	ND	*	14	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Bromodichloromethane	ND		14	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Dichlorodifluoromethane	ND		14	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Ethylbenzene	ND		14	0.96	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
1,2-Dibromoethane	ND		14	1.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Isopropylbenzene	ND		14	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Methyl acetate	ND		14	8.4	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Methyl tert-butyl ether	ND		14	1.4	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Methylcyclohexane	ND		14	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Methylene Chloride	ND		14	6.4	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
m,p-Xylene	ND		28	2.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
n-Butylbenzene	ND		14	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
N-Propylbenzene	ND		14	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
o-Xylene	ND		14	1.8	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
sec-Butylbenzene	ND		14	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Tetrachloroethene	ND		14	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Toluene	ND		14	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
trans-1,2-Dichloroethene	ND		14	1.4	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (8-16)

Lab Sample ID: 480-75578-10

Date Collected: 02/18/15 15:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 77.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		14	6.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Trichloroethene	ND		14	3.1	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Trichlorofluoromethane	ND		14	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Vinyl chloride	ND		14	1.7	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Xylenes, Total	ND		28	2.3	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
cis-1,3-Dichloropropene	ND		14	2.0	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
Styrene	ND		14	0.70	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1
tert-Butylbenzene	ND		14	1.4	ug/Kg	☼	02/18/15 20:44	02/19/15 03:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 126	02/18/15 20:44	02/19/15 03:48	1
4-Bromofluorobenzene (Surr)	90		72 - 126	02/18/15 20:44	02/19/15 03:48	1
Toluene-d8 (Surr)	103		71 - 125	02/18/15 20:44	02/19/15 03:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
bis (2-chloroisopropyl) ether	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,4,5-Trichlorophenol	ND		1100	290	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,4,6-Trichlorophenol	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,4-Dichlorophenol	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,4-Dimethylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,4-Dinitrophenol	ND		2100	650	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,4-Dinitrotoluene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2,6-Dinitrotoluene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2-Chloronaphthalene	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2-Chlorophenol	ND		1100	200	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2-Methylphenol	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2-Methylnaphthalene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2-Nitroaniline	ND		2100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
2-Nitrophenol	ND		1100	310	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
3,3'-Dichlorobenzidine	ND		2100	1300	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
3-Nitroaniline	ND *		2100	300	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4,6-Dinitro-2-methylphenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Bromophenyl phenyl ether	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Chloro-3-methylphenol	ND		1100	270	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Chloroaniline	ND *		1100	270	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Methylphenol	ND		2100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Nitroaniline	ND		2100	570	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
4-Nitrophenol	ND		2100	760	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Acenaphthene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Acenaphthylene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Acetophenone	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Anthracene	ND		1100	270	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Atrazine	ND		1100	380	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Benzaldehyde	ND		1100	860	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Benzo[a]anthracene	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Benzo[a]pyrene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Benzo[b]fluoranthene	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (8-16)

Lab Sample ID: 480-75578-10

Date Collected: 02/18/15 15:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Benzo[k]fluoranthene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Bis(2-chloroethoxy)methane	ND		1100	230	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Bis(2-chloroethyl)ether	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Bis(2-ethylhexyl) phthalate	ND		1100	370	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Butyl benzyl phthalate	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Caprolactam	ND		1100	330	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Carbazole	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Chrysene	ND		1100	240	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Dibenz(a,h)anthracene	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Di-n-butyl phthalate	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Di-n-octyl phthalate	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Dibenzofuran	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Diethyl phthalate	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Dimethyl phthalate	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Fluoranthene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Fluorene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Hexachlorobenzene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Hexachlorobutadiene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Hexachlorocyclopentadiene	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Hexachloroethane	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Indeno[1,2,3-cd]pyrene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Isophorone	ND		1100	230	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
N-Nitrosodi-n-propylamine	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
N-Nitrosodiphenylamine	ND *		1100	880	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Naphthalene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Nitrobenzene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Pentachlorophenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Phenanthrene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Phenol	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5
Pyrene	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:28	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		34 - 132	02/19/15 13:56	02/20/15 20:28	5
Phenol-d5 (Surr)	82		11 - 120	02/19/15 13:56	02/20/15 20:28	5
p-Terphenyl-d14 (Surr)	77		65 - 153	02/19/15 13:56	02/20/15 20:28	5
2,4,6-Tribromophenol (Surr)	78		39 - 146	02/19/15 13:56	02/20/15 20:28	5
2-Fluorobiphenyl	77		37 - 120	02/19/15 13:56	02/20/15 20:28	5
2-Fluorophenol (Surr)	92		18 - 120	02/19/15 13:56	02/20/15 20:28	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.31	0.060	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1
PCB-1221	ND		0.31	0.060	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1
PCB-1232	ND		0.31	0.060	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1
PCB-1242	ND		0.31	0.060	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1
PCB-1248	ND		0.31	0.060	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1
PCB-1254	ND		0.31	0.14	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1
PCB-1260	ND		0.31	0.14	mg/Kg	☼	02/19/15 11:01	02/20/15 19:28	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (8-16)

Lab Sample ID: 480-75578-10

Date Collected: 02/18/15 15:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 77.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	103		46 - 175	02/19/15 11:01	02/20/15 19:28	1
DCB Decachlorobiphenyl	117		47 - 176	02/19/15 11:01	02/20/15 19:28	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7390		13.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Antimony	ND		19.9		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Arsenic	ND		2.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Barium	44.5		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Beryllium	0.40		0.27		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Cadmium	0.34		0.27		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Calcium	1520		66.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Chromium	10.6		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Cobalt	9.1		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Copper	19.5		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Iron	11800		13.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Lead	9.6		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Magnesium	2780		26.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Manganese	122		0.27		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Nickel	22.2		6.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Potassium	1040		39.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Selenium	ND		5.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Silver	ND		0.80		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Sodium	ND		186		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Thallium	ND	^	8.0		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Vanadium	14.4		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1
Zinc	56.6		2.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:33	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.2		0.26		mg/Kg	☼	02/19/15 09:55	02/19/15 12:58	10

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (0-4)

Lab Sample ID: 480-75578-11

Date Collected: 02/18/15 15:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
bis (2-chloroisopropyl) ether	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,4,5-Trichlorophenol	ND		1100	290	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,4,6-Trichlorophenol	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,4-Dichlorophenol	ND		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,4-Dimethylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,4-Dinitrophenol	ND		2100	640	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,4-Dinitrotoluene	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2,6-Dinitrotoluene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2-Chloronaphthalene	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2-Chlorophenol	ND		1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2-Methylphenol	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2-Methylnaphthalene	ND		1100	210	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2-Nitroaniline	ND		2100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
2-Nitrophenol	ND		1100	300	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
3,3'-Dichlorobenzidine	ND		2100	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
3-Nitroaniline	ND	*	2100	290	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4,6-Dinitro-2-methylphenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Bromophenyl phenyl ether	ND		1100	150	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Chloro-3-methylphenol	ND		1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Chloroaniline	ND	*	1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Chlorophenyl phenyl ether	ND		1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Methylphenol	ND		2100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Nitroaniline	ND		2100	550	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
4-Nitrophenol	ND		2100	740	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Acenaphthene	190	J	1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Acenaphthylene	220	J	1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Acetophenone	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Anthracene	650	J	1100	260	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Atrazine	ND		1100	370	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Benzaldehyde	ND		1100	840	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Benzo[a]anthracene	2300		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Benzo[a]pyrene	2200		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Benzo[b]fluoranthene	2800		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Benzo[g,h,i]perylene	870	J	1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Benzo[k]fluoranthene	1200		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Bis(2-chloroethoxy)methane	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Bis(2-chloroethyl)ether	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Bis(2-ethylhexyl) phthalate	ND		1100	360	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Butyl benzyl phthalate	ND		1100	170	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Caprolactam	ND		1100	320	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Carbazole	260	J	1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Chrysene	2300		1100	240	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Dibenz(a,h)anthracene	380	J	1100	190	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Di-n-butyl phthalate	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Di-n-octyl phthalate	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Dibenzofuran	200	J	1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Diethyl phthalate	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Dimethyl phthalate	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (0-4)

Lab Sample ID: 480-75578-11

Date Collected: 02/18/15 15:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	4500		1100	110	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Fluorene	270	J	1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Hexachlorobenzene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Hexachlorobutadiene	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Hexachlorocyclopentadiene	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Hexachloroethane	ND		1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Indeno[1,2,3-cd]pyrene	830	J	1100	130	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Isophorone	ND		1100	220	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
N-Nitrosodi-n-propylamine	ND		1100	180	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
N-Nitrosodiphenylamine	ND	*	1100	860	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Naphthalene	190	J	1100	140	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Nitrobenzene	ND		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Pentachlorophenol	ND		2100	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Phenanthrene	2700		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Phenol	ND		1100	160	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5
Pyrene	3400		1100	120	ug/Kg	☼	02/19/15 13:56	02/20/15 20:51	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	79		34 - 132	02/19/15 13:56	02/20/15 20:51	5
Phenol-d5 (Surr)	86		11 - 120	02/19/15 13:56	02/20/15 20:51	5
p-Terphenyl-d14 (Surr)	79		65 - 153	02/19/15 13:56	02/20/15 20:51	5
2,4,6-Tribromophenol (Surr)	77		39 - 146	02/19/15 13:56	02/20/15 20:51	5
2-Fluorobiphenyl	81		37 - 120	02/19/15 13:56	02/20/15 20:51	5
2-Fluorophenol (Surr)	83		18 - 120	02/19/15 13:56	02/20/15 20:51	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1
PCB-1221	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1
PCB-1232	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1
PCB-1242	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1
PCB-1248	ND		0.24	0.046	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1
PCB-1254	ND		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1
PCB-1260	ND		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	103		46 - 175	02/19/15 11:01	02/20/15 19:42	1
DCB Decachlorobiphenyl	110		47 - 176	02/19/15 11:01	02/20/15 19:42	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5250		11.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Antimony	ND		17.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Arsenic	11.5		2.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Barium	751		0.58		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Beryllium	0.41		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Cadmium	1.3		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Calcium	59200		57.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Chromium	10		0.58		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Cobalt	4.8		0.58		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (0-4)

Lab Sample ID: 480-75578-11

Date Collected: 02/18/15 15:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 78.8

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	267		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Iron	15700		11.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Lead	492		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Magnesium	25500		23.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Manganese	455		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Nickel	14.5		5.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Potassium	823		34.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Selenium	ND		4.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Silver	ND		0.69		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Sodium	169		162		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Thallium	ND	^	6.9		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Vanadium	14.7		0.58		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1
Zinc	370		2.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:36	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.37		0.023		mg/Kg	☼	02/19/15 09:55	02/19/15 12:16	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (4-8)

Lab Sample ID: 480-75578-12

Date Collected: 02/18/15 16:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
bis (2-chloroisopropyl) ether	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,4,5-Trichlorophenol	ND		1000	280	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,4,6-Trichlorophenol	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,4-Dichlorophenol	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,4-Dimethylphenol	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,4-Dinitrophenol	ND		2000	620	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,4-Dinitrotoluene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2,6-Dinitrotoluene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2-Chloronaphthalene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2-Chlorophenol	ND		1000	190	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2-Methylphenol	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2-Methylnaphthalene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2-Nitroaniline	ND		2000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
2-Nitrophenol	ND		1000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
3,3'-Dichlorobenzidine	ND		2000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
3-Nitroaniline	ND	*	2000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4,6-Dinitro-2-methylphenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Bromophenyl phenyl ether	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Chloro-3-methylphenol	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Chloroaniline	ND	*	1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Chlorophenyl phenyl ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Methylphenol	ND		2000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Nitroaniline	ND		2000	540	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
4-Nitrophenol	ND		2000	730	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Acenaphthene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Acetophenone	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Anthracene	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Atrazine	ND		1000	360	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Benzaldehyde	ND		1000	830	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Benzo[a]anthracene	ND		1000	100	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Benzo[a]pyrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Benzo[b]fluoranthene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Benzo[g,h,i]perylene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Benzo[k]fluoranthene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Bis(2-chloroethoxy)methane	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Bis(2-chloroethyl)ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Bis(2-ethylhexyl) phthalate	ND		1000	350	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Butyl benzyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Caprolactam	ND		1000	310	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Carbazole	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Chrysene	ND		1000	230	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Dibenz(a,h)anthracene	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Di-n-butyl phthalate	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Di-n-octyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Dibenzofuran	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Diethyl phthalate	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Dimethyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (4-8)

Lab Sample ID: 480-75578-12

Date Collected: 02/18/15 16:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Fluorene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Hexachlorobenzene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Hexachlorobutadiene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Hexachlorocyclopentadiene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Hexachloroethane	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Indeno[1,2,3-cd]pyrene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Isophorone	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
N-Nitrosodi-n-propylamine	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
N-Nitrosodiphenylamine	ND	*	1000	840	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Nitrobenzene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Pentachlorophenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Phenanthrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Phenol	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5
Pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:15	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	72		34 - 132	02/19/15 13:56	02/20/15 21:15	5
Phenol-d5 (Surr)	80		11 - 120	02/19/15 13:56	02/20/15 21:15	5
p-Terphenyl-d14 (Surr)	76		65 - 153	02/19/15 13:56	02/20/15 21:15	5
2,4,6-Tribromophenol (Surr)	76		39 - 146	02/19/15 13:56	02/20/15 21:15	5
2-Fluorobiphenyl	73		37 - 120	02/19/15 13:56	02/20/15 21:15	5
2-Fluorophenol (Surr)	76		18 - 120	02/19/15 13:56	02/20/15 21:15	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1
PCB-1221	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1
PCB-1232	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1
PCB-1242	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1
PCB-1248	ND		0.27	0.053	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1
PCB-1254	ND		0.27	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1
PCB-1260	ND		0.27	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 19:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	104		46 - 175	02/19/15 11:01	02/20/15 19:57	1
DCB Decachlorobiphenyl	118		47 - 176	02/19/15 11:01	02/20/15 19:57	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12300		12.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Antimony	ND		19.0		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Arsenic	5.4		2.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Barium	70.5		0.63		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Beryllium	0.64		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Cadmium	0.32		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Calcium	1870		63.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Chromium	17.0		0.63		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Cobalt	11.4		0.63		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-107 (4-8)

Lab Sample ID: 480-75578-12

Date Collected: 02/18/15 16:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.0

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	24.0		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Iron	24400		12.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Lead	16.2		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Magnesium	3740		25.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Manganese	616		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Nickel	30.6		6.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Potassium	1700		38.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Selenium	ND		5.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Silver	ND		0.76		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Sodium	213		178		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Thallium	ND	^	7.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Vanadium	21.9		0.63		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1
Zinc	83.9		2.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:39	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048		0.023		mg/Kg	☼	02/19/15 09:55	02/19/15 12:18	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-101 (2-7.5)

Lab Sample ID: 480-75578-13

Date Collected: 02/18/15 12:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
bis (2-chloroisopropyl) ether	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,4,5-Trichlorophenol	ND		1000	280	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,4,6-Trichlorophenol	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,4-Dichlorophenol	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,4-Dimethylphenol	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,4-Dinitrophenol	ND		2000	630	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,4-Dinitrotoluene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2,6-Dinitrotoluene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2-Chloronaphthalene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2-Chlorophenol	ND		1000	190	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2-Methylphenol	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2-Methylnaphthalene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2-Nitroaniline	ND		2000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
2-Nitrophenol	ND		1000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
3,3'-Dichlorobenzidine	ND		2000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
3-Nitroaniline	ND	*	2000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4,6-Dinitro-2-methylphenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Bromophenyl phenyl ether	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Chloro-3-methylphenol	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Chloroaniline	ND	*	1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Chlorophenyl phenyl ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Methylphenol	ND		2000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Nitroaniline	ND		2000	550	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
4-Nitrophenol	ND		2000	730	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Acenaphthene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Acetophenone	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Anthracene	ND		1000	260	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Atrazine	ND		1000	360	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Benzaldehyde	ND		1000	830	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Benzo[a]anthracene	580	J	1000	100	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Benzo[a]pyrene	570	J	1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Benzo[b]fluoranthene	600	J	1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Benzo[g,h,i]perylene	120	J	1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Benzo[k]fluoranthene	340	J	1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Bis(2-chloroethoxy)methane	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Bis(2-chloroethyl)ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Bis(2-ethylhexyl) phthalate	370	J	1000	360	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Butyl benzyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Caprolactam	ND		1000	310	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Carbazole	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Chrysene	590	J	1000	230	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Dibenz(a,h)anthracene	190	J	1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Di-n-butyl phthalate	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Di-n-octyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Dibenzofuran	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Diethyl phthalate	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Dimethyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-101 (2-7.5)

Lab Sample ID: 480-75578-13

Date Collected: 02/18/15 12:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	910	J	1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Fluorene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Hexachlorobenzene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Hexachlorobutadiene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Hexachlorocyclopentadiene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Hexachloroethane	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Indeno[1,2,3-cd]pyrene	200	J	1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Isophorone	ND		1000	220	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
N-Nitrosodi-n-propylamine	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
N-Nitrosodiphenylamine	ND	*	1000	850	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Naphthalene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Nitrobenzene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Pentachlorophenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Phenanthrene	350	J	1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Phenol	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5
Pyrene	710	J	1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 21:38	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		34 - 132	02/19/15 13:56	02/20/15 21:38	5
Phenol-d5 (Surr)	85		11 - 120	02/19/15 13:56	02/20/15 21:38	5
p-Terphenyl-d14 (Surr)	86		65 - 153	02/19/15 13:56	02/20/15 21:38	5
2,4,6-Tribromophenol (Surr)	80		39 - 146	02/19/15 13:56	02/20/15 21:38	5
2-Fluorobiphenyl	78		37 - 120	02/19/15 13:56	02/20/15 21:38	5
2-Fluorophenol (Surr)	86		18 - 120	02/19/15 13:56	02/20/15 21:38	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.28	0.055	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1
PCB-1221	ND		0.28	0.055	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1
PCB-1232	ND		0.28	0.055	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1
PCB-1242	ND		0.28	0.055	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1
PCB-1248	ND		0.28	0.055	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1
PCB-1254	ND		0.28	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1
PCB-1260	ND		0.28	0.13	mg/Kg	☼	02/19/15 11:01	02/20/15 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	111		46 - 175	02/19/15 11:01	02/20/15 20:12	1
DCB Decachlorobiphenyl	124		47 - 176	02/19/15 11:01	02/20/15 20:12	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13500		12.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Antimony	ND		19.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Arsenic	5.9		2.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Barium	103		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Beryllium	0.69		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Cadmium	0.33		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Calcium	48900		63.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Chromium	18.6		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Cobalt	9.8		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-101 (2-7.5)

Lab Sample ID: 480-75578-13

Date Collected: 02/18/15 12:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	32.0		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Iron	20900		12.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Lead	78.7		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Magnesium	17400		25.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Manganese	428		0.25		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Nickel	24.6		6.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Potassium	3120		38.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Selenium	ND		5.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Silver	ND		0.76		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Sodium	223		178		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Thallium	ND ^		7.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Vanadium	26.0		0.64		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1
Zinc	92.7		2.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:42	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042		0.023		mg/Kg	☼	02/19/15 09:55	02/19/15 12:24	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (0-2)

Lab Sample ID: 480-75578-14

Date Collected: 02/18/15 12:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		4000	600	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
bis (2-chloroisopropyl) ether	ND		4000	810	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,4,5-Trichlorophenol	ND		4000	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,4,6-Trichlorophenol	ND		4000	810	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,4-Dichlorophenol	ND		4000	430	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,4-Dimethylphenol	ND		4000	980	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,4-Dinitrophenol	ND		7900	2400	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,4-Dinitrotoluene	ND		4000	830	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2,6-Dinitrotoluene	ND		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2-Chloronaphthalene	ND		4000	670	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2-Chlorophenol	ND		4000	740	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2-Methylphenol	ND		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2-Methylnaphthalene	ND		4000	810	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2-Nitroaniline	ND		7900	600	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
2-Nitrophenol	ND		4000	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
3,3'-Dichlorobenzidine	ND		7900	4800	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
3-Nitroaniline	ND	*	7900	1100	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4,6-Dinitro-2-methylphenol	ND		7900	4000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Bromophenyl phenyl ether	ND		4000	570	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Chloro-3-methylphenol	ND		4000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Chloroaniline	ND	*	4000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Chlorophenyl phenyl ether	ND		4000	500	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Methylphenol	ND		7900	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Nitroaniline	ND		7900	2100	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
4-Nitrophenol	ND		7900	2800	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Acenaphthene	930	J	4000	600	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Acenaphthylene	650	J	4000	520	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Acetophenone	ND		4000	550	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Anthracene	2700	J	4000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Atrazine	ND		4000	1400	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Benzaldehyde	ND		4000	3200	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Benzo[a]anthracene	7100		4000	400	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Benzo[a]pyrene	6700		4000	600	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Benzo[b]fluoranthene	9200		4000	640	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Benzo[g,h,i]perylene	1700	J	4000	430	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Benzo[k]fluoranthene	3600	J	4000	520	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Bis(2-chloroethoxy)methane	ND		4000	860	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Bis(2-chloroethyl)ether	ND		4000	520	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Bis(2-ethylhexyl) phthalate	ND		4000	1400	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Butyl benzyl phthalate	ND		4000	670	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Caprolactam	ND		4000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Carbazole	ND		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Chrysene	7100		4000	910	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Dibenz(a,h)anthracene	ND		4000	710	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Di-n-butyl phthalate	ND		4000	690	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Di-n-octyl phthalate	ND		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Dibenzofuran	720	J	4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Diethyl phthalate	ND		4000	520	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Dimethyl phthalate	ND		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (0-2)

Lab Sample ID: 480-75578-14

Date Collected: 02/18/15 12:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	15000		4000	430	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Fluorene	ND		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Hexachlorobenzene	ND		4000	550	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Hexachlorobutadiene	ND		4000	600	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Hexachlorocyclopentadiene	ND		4000	550	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Hexachloroethane	ND		4000	520	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Indeno[1,2,3-cd]pyrene	2000	J	4000	500	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Isophorone	ND		4000	860	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
N-Nitrosodi-n-propylamine	ND		4000	690	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
N-Nitrosodiphenylamine	ND	*	4000	3300	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Naphthalene	ND		4000	520	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Nitrobenzene	ND		4000	450	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Pentachlorophenol	ND		7900	4000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Phenanthrene	9200		4000	600	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Phenol	ND		4000	620	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20
Pyrene	11000		4000	480	ug/Kg	☼	02/19/15 13:56	02/20/15 22:02	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	110		34 - 132	02/19/15 13:56	02/20/15 22:02	20
Phenol-d5 (Surr)	97		11 - 120	02/19/15 13:56	02/20/15 22:02	20
p-Terphenyl-d14 (Surr)	82		65 - 153	02/19/15 13:56	02/20/15 22:02	20
2,4,6-Tribromophenol (Surr)	128		39 - 146	02/19/15 13:56	02/20/15 22:02	20
2-Fluorobiphenyl	83		37 - 120	02/19/15 13:56	02/20/15 22:02	20
2-Fluorophenol (Surr)	104		18 - 120	02/19/15 13:56	02/20/15 22:02	20

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1
PCB-1221	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1
PCB-1232	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1
PCB-1242	4.6		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1
PCB-1248	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1
PCB-1254	1.1		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1
PCB-1260	0.40		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 20:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	107		46 - 175	02/19/15 11:01	02/20/15 20:27	1
DCB Decachlorobiphenyl	123		47 - 176	02/19/15 11:01	02/20/15 20:27	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6240	^	11.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Antimony	ND		17.0		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Arsenic	30.1		2.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Barium	137		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Beryllium	0.54		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Cadmium	1.5		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Calcium	44800	^	56.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Chromium	22.4		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Cobalt	21.4		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (0-2)

Lab Sample ID: 480-75578-14

Date Collected: 02/18/15 12:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.8

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	315		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Iron	42100	^	11.3		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Lead	261		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Magnesium	15200		22.6		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Manganese	605	B ^	0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 15:09	1
Nickel	82.9		5.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Potassium	1170		33.9		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Selenium	ND		4.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Silver	ND		0.68		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Sodium	185		158		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Thallium	ND	^	6.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Vanadium	31.9		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 18:55	1
Zinc	352		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 15:09	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.28		0.022		mg/Kg	☼	02/19/15 09:55	02/19/15 12:29	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Date Collected: 02/18/15 13:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 65.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		16	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,1,2,2-Tetrachloroethane	ND		16	2.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		16	3.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,1,2-Trichloroethane	ND		16	2.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,1-Dichloroethane	ND		16	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,1-Dichloroethene	ND		16	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2,4-Trichlorobenzene	ND		16	0.94	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2,4-Trimethylbenzene	ND		16	3.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2-Dibromo-3-Chloropropane	ND		16	7.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2-Dichlorobenzene	ND		16	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2-Dichloroethane	ND		16	0.78	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2-Dichloropropane	ND		16	7.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,3,5-Trimethylbenzene	ND		16	1.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,3-Dichlorobenzene	ND		16	0.80	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,4-Dichlorobenzene	ND		16	2.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
2-Butanone (MEK)	ND		78	5.7	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
2-Hexanone	ND		78	7.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
4-Isopropyltoluene	ND		16	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
4-Methyl-2-pentanone (MIBK)	ND		78	5.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Acetone	58	J B	78	13	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Benzene	ND		16	0.76	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Bromoform	ND		16	7.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Bromomethane	ND		16	1.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Carbon disulfide	ND		16	7.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Carbon tetrachloride	ND		16	1.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Chlorobenzene	ND		16	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Dibromochloromethane	ND		16	2.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Chloroethane	ND		16	3.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Chloroform	ND		16	0.96	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Chloromethane	ND		16	0.94	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
cis-1,2-Dichloroethene	ND		16	2.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Cyclohexane	ND	*	16	2.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Bromodichloromethane	ND		16	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Dichlorodifluoromethane	ND		16	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Ethylbenzene	ND		16	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
1,2-Dibromoethane	ND		16	2.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Isopropylbenzene	ND		16	2.3	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Methyl acetate	ND		16	9.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Methyl tert-butyl ether	ND		16	1.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Methylcyclohexane	ND		16	2.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Methylene Chloride	ND		16	7.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
m,p-Xylene	ND		31	2.6	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
n-Butylbenzene	ND		16	1.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
N-Propylbenzene	ND		16	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
o-Xylene	ND		16	2.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
sec-Butylbenzene	ND		16	1.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Tetrachloroethene	ND		16	2.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Toluene	ND		16	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
trans-1,2-Dichloroethene	ND		16	1.6	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Date Collected: 02/18/15 13:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 65.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		16	6.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Trichloroethene	ND		16	3.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Trichlorofluoromethane	ND		16	1.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Vinyl chloride	ND		16	1.9	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Xylenes, Total	ND		31	2.6	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
cis-1,3-Dichloropropene	ND		16	2.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
Styrene	ND		16	0.78	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1
tert-Butylbenzene	ND		16	1.6	ug/Kg	☼	02/18/15 20:44	02/19/15 04:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 126	02/18/15 20:44	02/19/15 04:14	1
4-Bromofluorobenzene (Surr)	89		72 - 126	02/18/15 20:44	02/19/15 04:14	1
Toluene-d8 (Surr)	106		71 - 125	02/18/15 20:44	02/19/15 04:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
bis (2-chloroisopropyl) ether	ND		1000	200	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,4,5-Trichlorophenol	ND		1000	270	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,4,6-Trichlorophenol	ND		1000	200	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,4-Dichlorophenol	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,4-Dimethylphenol	ND		1000	240	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,4-Dinitrophenol	ND		2000	610	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,4-Dinitrotoluene	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2,6-Dinitrotoluene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2-Chloronaphthalene	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2-Chlorophenol	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2-Methylphenol	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2-Methylnaphthalene	ND		1000	200	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2-Nitroaniline	ND		2000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
2-Nitrophenol	ND		1000	290	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
3,3'-Dichlorobenzidine	ND		2000	1200	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
3-Nitroaniline	ND *		2000	280	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4,6-Dinitro-2-methylphenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Bromophenyl phenyl ether	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Chloro-3-methylphenol	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Chloroaniline	ND *		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Chlorophenyl phenyl ether	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Methylphenol	ND		2000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Nitroaniline	ND		2000	530	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
4-Nitrophenol	ND		2000	710	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Acenaphthene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Acenaphthylene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Acetophenone	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Anthracene	ND		1000	250	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Atrazine	ND		1000	350	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Benzaldehyde	ND		1000	800	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Benzo[a]anthracene	ND		1000	100	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Benzo[a]pyrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Benzo[b]fluoranthene	ND		1000	160	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Date Collected: 02/18/15 13:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 65.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Benzo[k]fluoranthene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Bis(2-chloroethoxy)methane	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Bis(2-chloroethyl)ether	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Bis(2-ethylhexyl) phthalate	ND		1000	350	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Butyl benzyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Caprolactam	ND		1000	300	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Carbazole	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Chrysene	ND		1000	230	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Dibenz(a,h)anthracene	ND		1000	180	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Di-n-butyl phthalate	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Di-n-octyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Dibenzofuran	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Diethyl phthalate	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Dimethyl phthalate	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Fluoranthene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Fluorene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Hexachlorobenzene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Hexachlorobutadiene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Hexachlorocyclopentadiene	ND		1000	140	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Hexachloroethane	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Indeno[1,2,3-cd]pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Isophorone	ND		1000	210	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
N-Nitrosodi-n-propylamine	ND		1000	170	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
N-Nitrosodiphenylamine	ND *		1000	820	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Naphthalene	ND		1000	130	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Nitrobenzene	ND		1000	110	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Pentachlorophenol	ND		2000	1000	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Phenanthrene	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Phenol	ND		1000	150	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4
Pyrene	ND		1000	120	ug/Kg	☼	02/19/15 13:56	02/20/15 22:26	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	61		34 - 132	02/19/15 13:56	02/20/15 22:26	4
Phenol-d5 (Surr)	66		11 - 120	02/19/15 13:56	02/20/15 22:26	4
p-Terphenyl-d14 (Surr)	59	X	65 - 153	02/19/15 13:56	02/20/15 22:26	4
2,4,6-Tribromophenol (Surr)	65		39 - 146	02/19/15 13:56	02/20/15 22:26	4
2-Fluorobiphenyl	59		37 - 120	02/19/15 13:56	02/20/15 22:26	4
2-Fluorophenol (Surr)	65		18 - 120	02/19/15 13:56	02/20/15 22:26	4

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.31	0.062	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1
PCB-1221	ND		0.31	0.062	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1
PCB-1232	ND		0.31	0.062	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1
PCB-1242	ND		0.31	0.062	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1
PCB-1248	ND		0.31	0.062	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1
PCB-1254	ND		0.31	0.15	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1
PCB-1260	ND		0.31	0.15	mg/Kg	☼	02/19/15 11:01	02/20/15 20:42	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Date Collected: 02/18/15 13:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 65.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	110		46 - 175	02/19/15 11:01	02/20/15 20:42	1
DCB Decachlorobiphenyl	120		47 - 176	02/19/15 11:01	02/20/15 20:42	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8790	^	15.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Antimony	ND		23.0		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Arsenic	7.2		3.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Barium	74.0		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Beryllium	0.54		0.31		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Cadmium	0.35		0.31		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Calcium	4320	^	76.8		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Chromium	13.1		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Cobalt	9.4		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Copper	26.3		1.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Iron	19200	^	15.4		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Lead	93.7		1.5		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Magnesium	3990		30.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Manganese	140	B ^	0.31		mg/Kg	☼	02/19/15 15:35	02/20/15 15:12	1
Nickel	25.4		7.7		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Potassium	1050		46.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Selenium	ND		6.1		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Silver	ND		0.92		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Sodium	ND		215		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Thallium	ND	^	9.2		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Vanadium	16.9		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 18:58	1
Zinc	69.4		3.1		mg/Kg	☼	02/19/15 15:35	02/20/15 15:12	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.028		mg/Kg	☼	02/19/15 09:55	02/19/15 12:31	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (2-8)

Lab Sample ID: 480-75578-16

Date Collected: 02/18/15 13:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 74.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		230	33	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
bis (2-chloroisopropyl) ether	ND		230	45	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,4,5-Trichlorophenol	ND		230	61	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,4,6-Trichlorophenol	ND		230	45	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,4-Dichlorophenol	ND		230	24	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,4-Dimethylphenol	ND		230	55	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,4-Dinitrophenol	ND		440	140	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,4-Dinitrotoluene	ND		230	47	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2,6-Dinitrotoluene	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2-Chloronaphthalene	ND		230	37	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2-Chlorophenol	ND		230	41	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2-Methylphenol	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2-Methylnaphthalene	ND		230	45	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2-Nitroaniline	ND		440	33	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
2-Nitrophenol	ND		230	64	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
3,3'-Dichlorobenzidine	ND		440	270	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
3-Nitroaniline	ND		440	63	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4,6-Dinitro-2-methylphenol	ND		440	230	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Bromophenyl phenyl ether	ND		230	32	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Chloro-3-methylphenol	ND		230	56	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Chloroaniline	ND		230	56	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Chlorophenyl phenyl ether	ND		230	28	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Methylphenol	ND		440	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Nitroaniline	ND		440	120	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
4-Nitrophenol	ND		440	160	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Acenaphthene	ND		230	33	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Acenaphthylene	ND		230	29	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Acetophenone	ND		230	31	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Anthracene	ND		230	56	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Atrazine	ND		230	78	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Benzaldehyde	ND		230	180	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Benzo[a]anthracene	ND		230	23	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Benzo[a]pyrene	ND		230	33	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Benzo[b]fluoranthene	ND		230	36	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Benzo[g,h,i]perylene	ND		230	24	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Benzo[k]fluoranthene	ND		230	29	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Bis(2-chloroethoxy)methane	ND		230	48	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Bis(2-chloroethyl)ether	ND		230	29	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Bis(2-ethylhexyl) phthalate	ND		230	77	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Butyl benzyl phthalate	ND		230	37	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Caprolactam	ND		230	68	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Carbazole	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Chrysene	ND		230	51	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Dibenz(a,h)anthracene	ND		230	40	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Di-n-butyl phthalate	ND		230	39	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Di-n-octyl phthalate	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Dibenzofuran	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Diethyl phthalate	ND		230	29	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Dimethyl phthalate	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (2-8)

Lab Sample ID: 480-75578-16

Date Collected: 02/18/15 13:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 74.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		230	24	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Fluorene	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Hexachlorobenzene	ND		230	31	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Hexachlorobutadiene	ND		230	33	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Hexachlorocyclopentadiene	ND		230	31	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Hexachloroethane	ND		230	29	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Indeno[1,2,3-cd]pyrene	ND		230	28	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Isophorone	ND		230	48	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
N-Nitrosodi-n-propylamine	ND		230	39	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
N-Nitrosodiphenylamine	ND *		230	180	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Naphthalene	ND		230	29	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Nitrobenzene	ND		230	25	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Pentachlorophenol	ND		440	230	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Phenanthrene	ND		230	33	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Phenol	ND		230	35	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1
Pyrene	ND		230	27	ug/Kg	☼	02/20/15 09:11	02/23/15 11:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		34 - 132	02/20/15 09:11	02/23/15 11:54	1
Phenol-d5 (Surr)	88		11 - 120	02/20/15 09:11	02/23/15 11:54	1
p-Terphenyl-d14 (Surr)	91		65 - 153	02/20/15 09:11	02/23/15 11:54	1
2,4,6-Tribromophenol (Surr)	84		39 - 146	02/20/15 09:11	02/23/15 11:54	1
2-Fluorobiphenyl	80		37 - 120	02/20/15 09:11	02/23/15 11:54	1
2-Fluorophenol (Surr)	85		18 - 120	02/20/15 09:11	02/23/15 11:54	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1
PCB-1221	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1
PCB-1232	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1
PCB-1242	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1
PCB-1248	ND		0.24	0.047	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1
PCB-1254	ND		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1
PCB-1260	ND		0.24	0.11	mg/Kg	☼	02/19/15 11:01	02/20/15 20:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	109		46 - 175	02/19/15 11:01	02/20/15 20:56	1
DCB Decachlorobiphenyl	121		47 - 176	02/19/15 11:01	02/20/15 20:56	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	21800	^	13.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Antimony	ND		19.8		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Arsenic	5.5		2.6		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Barium	145		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Beryllium	1.1		0.26		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Cadmium	0.47		0.26		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Calcium	2620	^	65.9		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Chromium	28.0		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Cobalt	17.3		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (2-8)

Lab Sample ID: 480-75578-16

Date Collected: 02/18/15 13:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 74.9

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	24.5		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Iron	29700	^	13.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Lead	20.3		1.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Magnesium	6510		26.4		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Manganese	218	B ^	0.26		mg/Kg	☼	02/19/15 15:35	02/20/15 15:23	1
Nickel	41.5		6.6		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Potassium	2670		39.5		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Selenium	ND		5.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Silver	ND		0.79		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Sodium	459		185		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Thallium	ND	^	7.9		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Vanadium	37.2		0.66		mg/Kg	☼	02/19/15 15:35	02/21/15 19:00	1
Zinc	74.1		2.6		mg/Kg	☼	02/19/15 15:35	02/20/15 15:23	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.028		0.026		mg/Kg	☼	02/19/15 09:55	02/19/15 12:33	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (8-16)

Lab Sample ID: 480-75578-17

Date Collected: 02/18/15 13:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		220	32	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
bis (2-chloroisopropyl) ether	ND		220	44	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,4,5-Trichlorophenol	ND		220	59	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,4,6-Trichlorophenol	ND		220	44	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,4-Dichlorophenol	ND		220	23	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,4-Dimethylphenol	ND		220	53	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,4-Dinitrophenol	ND		420	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,4-Dinitrotoluene	ND		220	45	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2,6-Dinitrotoluene	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2-Chloronaphthalene	ND		220	36	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2-Chlorophenol	ND		220	40	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2-Methylphenol	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2-Methylnaphthalene	ND		220	44	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2-Nitroaniline	ND		420	32	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
2-Nitrophenol	ND		220	62	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
3,3'-Dichlorobenzidine	ND		420	260	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
3-Nitroaniline	ND		420	60	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4,6-Dinitro-2-methylphenol	ND		420	220	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Bromophenyl phenyl ether	ND		220	31	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Chloro-3-methylphenol	ND		220	54	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Chloroaniline	ND		220	54	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Chlorophenyl phenyl ether	ND		220	27	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Methylphenol	ND		420	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Nitroaniline	ND		420	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
4-Nitrophenol	ND		420	150	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Acenaphthene	ND		220	32	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Acenaphthylene	ND		220	28	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Acetophenone	ND		220	30	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Anthracene	ND		220	54	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Atrazine	ND		220	76	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Benzaldehyde	ND		220	170	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Benzo[a]anthracene	ND		220	22	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Benzo[a]pyrene	ND		220	32	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Benzo[b]fluoranthene	ND		220	35	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Benzo[g,h,i]perylene	ND		220	23	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Benzo[k]fluoranthene	ND		220	28	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Bis(2-chloroethoxy)methane	ND		220	46	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Bis(2-chloroethyl)ether	ND		220	28	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Bis(2-ethylhexyl) phthalate	94 J		220	75	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Butyl benzyl phthalate	ND		220	36	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Caprolactam	ND		220	66	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Carbazole	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Chrysene	ND		220	49	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Dibenz(a,h)anthracene	ND		220	39	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Di-n-butyl phthalate	ND		220	37	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Di-n-octyl phthalate	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Dibenzofuran	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Diethyl phthalate	ND		220	28	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Dimethyl phthalate	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (8-16)

Lab Sample ID: 480-75578-17

Date Collected: 02/18/15 13:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		220	23	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Fluorene	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Hexachlorobenzene	ND		220	30	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Hexachlorobutadiene	ND		220	32	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Hexachlorocyclopentadiene	ND		220	30	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Hexachloroethane	ND		220	28	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Indeno[1,2,3-cd]pyrene	ND		220	27	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Isophorone	ND		220	46	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
N-Nitrosodi-n-propylamine	ND		220	37	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
N-Nitrosodiphenylamine	ND	*	220	180	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Naphthalene	ND		220	28	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Nitrobenzene	ND		220	24	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Pentachlorophenol	ND		420	220	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Phenanthrene	ND		220	32	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Phenol	ND		220	33	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1
Pyrene	ND		220	26	ug/Kg	☼	02/20/15 09:11	02/23/15 12:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		34 - 132	02/20/15 09:11	02/23/15 12:17	1
Phenol-d5 (Surr)	83		11 - 120	02/20/15 09:11	02/23/15 12:17	1
p-Terphenyl-d14 (Surr)	82		65 - 153	02/20/15 09:11	02/23/15 12:17	1
2,4,6-Tribromophenol (Surr)	79		39 - 146	02/20/15 09:11	02/23/15 12:17	1
2-Fluorobiphenyl	78		37 - 120	02/20/15 09:11	02/23/15 12:17	1
2-Fluorophenol (Surr)	82		18 - 120	02/20/15 09:11	02/23/15 12:17	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.28	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1
PCB-1221	ND		0.28	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1
PCB-1232	ND		0.28	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1
PCB-1242	ND		0.28	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1
PCB-1248	ND		0.28	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1
PCB-1254	ND		0.28	0.13	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1
PCB-1260	ND		0.28	0.13	mg/Kg	☼	02/19/15 12:08	02/20/15 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		46 - 175	02/19/15 12:08	02/20/15 12:30	1
DCB Decachlorobiphenyl	103		47 - 176	02/19/15 12:08	02/20/15 12:30	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9090	^	12.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Antimony	ND		18.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Arsenic	5.6		2.4		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Barium	58.1		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Beryllium	0.48		0.24		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Cadmium	ND		0.24		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Calcium	1260		60.6		mg/Kg	☼	02/19/15 15:35	02/20/15 15:26	1
Chromium	13.1		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Cobalt	9.5		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-103 (8-16)

Lab Sample ID: 480-75578-17

Date Collected: 02/18/15 13:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.6

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	22.2		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Iron	20000	^	12.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Lead	11.9		1.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Magnesium	3290		24.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Manganese	156	B ^	0.24		mg/Kg	☼	02/19/15 15:35	02/20/15 15:26	1
Nickel	26.6		6.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Potassium	939		36.4		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Selenium	ND		4.9		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Silver	ND		0.73		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Sodium	211		170		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Thallium	ND	^	7.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Vanadium	17.0		0.61		mg/Kg	☼	02/19/15 15:35	02/21/15 19:03	1
Zinc	62.5		2.4		mg/Kg	☼	02/19/15 15:35	02/20/15 15:26	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.027		mg/Kg	☼	02/19/15 09:55	02/19/15 12:35	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		7.6	0.55	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,1,2,2-Tetrachloroethane	ND		7.6	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.6	1.7	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,1,2-Trichloroethane	ND		7.6	0.99	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,1-Dichloroethane	ND		7.6	0.93	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,1-Dichloroethene	ND		7.6	0.93	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2,4-Trichlorobenzene	ND		7.6	0.46	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2,4-Trimethylbenzene	4.0	J	7.6	1.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2-Dibromo-3-Chloropropane	ND		7.6	3.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2-Dichlorobenzene	ND		7.6	0.59	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2-Dichloroethane	ND		7.6	0.38	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2-Dichloropropane	ND		7.6	3.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,3,5-Trimethylbenzene	2.5	J	7.6	0.49	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,3-Dichlorobenzene	ND		7.6	0.39	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,4-Dichlorobenzene	ND		7.6	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
2-Butanone (MEK)	ND		38	2.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
2-Hexanone	ND		38	3.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
4-Isopropyltoluene	ND		7.6	0.61	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
4-Methyl-2-pentanone (MIBK)	ND		38	2.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Acetone	ND		38	6.4	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Benzene	0.94	J	7.6	0.37	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Bromoform	ND		7.6	3.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Bromomethane	ND		7.6	0.68	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Carbon disulfide	4.0	J	7.6	3.8	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Carbon tetrachloride	ND		7.6	0.74	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Chlorobenzene	ND		7.6	1.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Dibromochloromethane	ND		7.6	0.97	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Chloroethane	ND		7.6	1.7	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Chloroform	ND		7.6	0.47	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Chloromethane	ND		7.6	0.46	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
cis-1,2-Dichloroethene	ND		7.6	0.97	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Cyclohexane	17	*	7.6	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Bromodichloromethane	ND		7.6	1.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Dichlorodifluoromethane	ND		7.6	0.63	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Ethylbenzene	0.90	J	7.6	0.52	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
1,2-Dibromoethane	ND		7.6	0.98	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Isopropylbenzene	ND		7.6	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Methyl acetate	ND		7.6	4.6	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Methyl tert-butyl ether	ND		7.6	0.75	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Methylcyclohexane	26		7.6	1.2	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Methylene Chloride	ND		7.6	3.5	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
m,p-Xylene	3.6	J	15	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
n-Butylbenzene	ND		7.6	0.66	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
N-Propylbenzene	ND		7.6	0.61	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
o-Xylene	1.4	J	7.6	0.99	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
sec-Butylbenzene	ND		7.6	0.66	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Tetrachloroethene	ND		7.6	1.0	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Toluene	1.6	J	7.6	0.57	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
trans-1,2-Dichloroethene	ND		7.6	0.78	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		7.6	3.3	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Trichloroethene	ND		7.6	1.7	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Trichlorofluoromethane	ND		7.6	0.72	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Vinyl chloride	ND		7.6	0.93	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Xylenes, Total	5.0	J	15	1.3	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
cis-1,3-Dichloropropene	ND		7.6	1.1	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
Styrene	ND		7.6	0.38	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1
tert-Butylbenzene	ND		7.6	0.79	ug/Kg	☼	02/18/15 20:44	02/19/15 04:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 126	02/18/15 20:44	02/19/15 04:40	1
4-Bromofluorobenzene (Surr)	87		72 - 126	02/18/15 20:44	02/19/15 04:40	1
Toluene-d8 (Surr)	106		71 - 125	02/18/15 20:44	02/19/15 04:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		910	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
bis (2-chloroisopropyl) ether	ND		910	180	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,4,5-Trichlorophenol	ND		910	250	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,4,6-Trichlorophenol	ND		910	180	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,4-Dichlorophenol	ND		910	97	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,4-Dimethylphenol	ND		910	220	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,4-Dinitrophenol	ND		1800	550	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,4-Dinitrotoluene	ND		910	190	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2,6-Dinitrotoluene	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2-Chloronaphthalene	ND		910	150	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2-Chlorophenol	ND		910	170	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2-Methylphenol	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2-Methylnaphthalene	ND		910	180	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2-Nitroaniline	ND		1800	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
2-Nitrophenol	ND		910	260	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
3,3'-Dichlorobenzidine	ND		1800	1100	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
3-Nitroaniline	ND		1800	250	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4,6-Dinitro-2-methylphenol	ND		1800	910	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Bromophenyl phenyl ether	ND		910	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Chloro-3-methylphenol	ND		910	230	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Chloroaniline	ND		910	230	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Chlorophenyl phenyl ether	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Methylphenol	ND		1800	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Nitroaniline	ND		1800	480	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
4-Nitrophenol	ND		1800	640	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Acenaphthene	ND		910	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Acenaphthylene	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Acetophenone	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Anthracene	230	J	910	230	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Atrazine	ND		910	320	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Benzaldehyde	ND		910	720	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Benzo[a]anthracene	890	J	910	91	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Benzo[a]pyrene	920		910	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Benzo[b]fluoranthene	1300		910	140	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	430	J	910	97	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Benzo[k]fluoranthene	580	J	910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Bis(2-chloroethoxy)methane	ND		910	190	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Bis(2-chloroethyl)ether	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Bis(2-ethylhexyl) phthalate	570	J	910	310	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Butyl benzyl phthalate	ND		910	150	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Caprolactam	ND		910	270	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Carbazole	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Chrysene	1000		910	200	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Dibenz(a,h)anthracene	ND		910	160	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Di-n-butyl phthalate	ND		910	160	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Di-n-octyl phthalate	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Dibenzofuran	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Diethyl phthalate	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Dimethyl phthalate	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Fluoranthene	1700		910	97	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Fluorene	ND		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Hexachlorobenzene	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Hexachlorobutadiene	ND		910	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Hexachlorocyclopentadiene	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Hexachloroethane	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Indeno[1,2,3-cd]pyrene	450	J	910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Isophorone	ND		910	190	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
N-Nitrosodi-n-propylamine	ND		910	160	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
N-Nitrosodiphenylamine	ND *		910	740	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Naphthalene	ND		910	120	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Nitrobenzene	ND		910	100	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Pentachlorophenol	ND		1800	910	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Phenanthrene	950		910	130	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Phenol	ND		910	140	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5
Pyrene	1300		910	110	ug/Kg	☼	02/20/15 09:11	02/23/15 12:41	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	85		34 - 132	02/20/15 09:11	02/23/15 12:41	5
Phenol-d5 (Surr)	89		11 - 120	02/20/15 09:11	02/23/15 12:41	5
p-Terphenyl-d14 (Surr)	90		65 - 153	02/20/15 09:11	02/23/15 12:41	5
2,4,6-Tribromophenol (Surr)	42		39 - 146	02/20/15 09:11	02/23/15 12:41	5
2-Fluorobiphenyl	87		37 - 120	02/20/15 09:11	02/23/15 12:41	5
2-Fluorophenol (Surr)	86		18 - 120	02/20/15 09:11	02/23/15 12:41	5

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		90	17	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
4,4'-DDE	ND		90	19	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
4,4'-DDT	ND		90	21	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Aldrin	ND		90	22	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
alpha-BHC	20	J	90	16	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
alpha-Chlordane	ND		90	45	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
beta-BHC	ND		90	16	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
delta-BHC	ND		90	17	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	ND		90	22	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Endosulfan I	ND		90	17	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Endosulfan II	ND		90	16	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Endosulfan sulfate	26	J	90	17	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Endrin	ND		90	18	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Endrin aldehyde	ND		90	23	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Endrin ketone	40	J	90	22	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
gamma-BHC (Lindane)	ND		90	16	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
gamma-Chlordane	ND		90	29	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Heptachlor	ND		90	19	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Heptachlor epoxide	ND		90	23	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Methoxychlor	ND		90	18	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50
Toxaphene	ND		900	520	ug/Kg	☼	02/19/15 14:14	02/20/15 16:55	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	X	32 - 136	02/19/15 14:14	02/20/15 16:55	50
Tetrachloro-m-xylene	303	X	30 - 124	02/19/15 14:14	02/20/15 16:55	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.046	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1
PCB-1221	ND		0.24	0.046	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1
PCB-1232	ND		0.24	0.046	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1
PCB-1242	ND		0.24	0.046	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1
PCB-1248	ND		0.24	0.046	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1
PCB-1254	ND		0.24	0.11	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1
PCB-1260	ND		0.24	0.11	mg/Kg	☼	02/19/15 12:08	02/20/15 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	104		46 - 175	02/19/15 12:08	02/20/15 12:45	1
DCB Decachlorobiphenyl	120		47 - 176	02/19/15 12:08	02/20/15 12:45	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		18	5.7	ug/Kg	☼	02/19/15 09:07	02/21/15 01:08	1
Silvex (2,4,5-TP)	ND		18	6.4	ug/Kg	☼	02/19/15 09:07	02/21/15 01:08	1
2,4-D	ND		18	11	ug/Kg	☼	02/19/15 09:07	02/21/15 01:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	43		39 - 120	02/19/15 09:07	02/21/15 01:08	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12400	^	11.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Antimony	ND		17.0		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Arsenic	8.9		2.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Barium	135		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Beryllium	2.0		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Cadmium	0.47		0.23		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Calcium	87700	^	56.6		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Chromium	13.6		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	3.9		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Copper	56.7		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Iron	15700	^	11.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Lead	248		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Magnesium	16400		22.6		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Manganese	869	B ^	0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 15:29	1
Nickel	12.0		5.7		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Potassium	1240		34.0		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Selenium	ND		4.5		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Silver	ND		0.68		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Sodium	391		158		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Thallium	ND	^	6.8		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Vanadium	14.3		0.57		mg/Kg	☼	02/19/15 15:35	02/21/15 19:05	1
Zinc	125		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 15:29	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17		0.022		mg/Kg	☼	02/19/15 09:55	02/19/15 12:36	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Date Collected: 02/18/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 90.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		9.1	0.66	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,1,2,2-Tetrachloroethane	ND		9.1	1.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		9.1	2.1	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,1,2-Trichloroethane	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,1-Dichloroethane	ND		9.1	1.1	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,1-Dichloroethene	ND		9.1	1.1	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2,4-Trichlorobenzene	ND		9.1	0.55	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2,4-Trimethylbenzene	ND		9.1	1.7	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2-Dibromo-3-Chloropropane	ND		9.1	4.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2-Dichlorobenzene	ND		9.1	0.71	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2-Dichloroethane	ND		9.1	0.46	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2-Dichloropropane	ND		9.1	4.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,3,5-Trimethylbenzene	ND		9.1	0.58	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,3-Dichlorobenzene	ND		9.1	0.47	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,4-Dichlorobenzene	ND		9.1	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
2-Butanone (MEK)	ND		45	3.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
2-Hexanone	ND		45	4.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
4-Isopropyltoluene	ND		9.1	0.73	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
4-Methyl-2-pentanone (MIBK)	ND		45	3.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Acetone	ND		45	7.6	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Benzene	ND		9.1	0.44	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Bromoform	ND		9.1	4.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Bromomethane	ND		9.1	0.82	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Carbon disulfide	ND		9.1	4.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Carbon tetrachloride	ND		9.1	0.88	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Chlorobenzene	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Dibromochloromethane	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Chloroethane	ND		9.1	2.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Chloroform	ND		9.1	0.56	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Chloromethane	ND		9.1	0.55	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
cis-1,2-Dichloroethene	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Cyclohexane	3.5	J *	9.1	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Bromodichloromethane	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Dichlorodifluoromethane	ND		9.1	0.75	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Ethylbenzene	ND		9.1	0.63	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
1,2-Dibromoethane	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Isopropylbenzene	ND		9.1	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Methyl acetate	ND		9.1	5.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Methyl tert-butyl ether	ND		9.1	0.89	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Methylcyclohexane	5.6	J	9.1	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Methylene Chloride	ND		9.1	4.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
m,p-Xylene	ND		18	1.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
n-Butylbenzene	ND		9.1	0.79	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
N-Propylbenzene	ND		9.1	0.73	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
o-Xylene	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
sec-Butylbenzene	ND		9.1	0.79	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Tetrachloroethene	ND		9.1	1.2	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Toluene	ND		9.1	0.69	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
trans-1,2-Dichloroethene	ND		9.1	0.94	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Date Collected: 02/18/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 90.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		9.1	4.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Trichloroethene	ND		9.1	2.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Trichlorofluoromethane	ND		9.1	0.86	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Vinyl chloride	ND		9.1	1.1	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Xylenes, Total	ND		18	1.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
cis-1,3-Dichloropropene	ND		9.1	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Styrene	ND		9.1	0.45	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
tert-Butylbenzene	ND		9.1	0.94	ug/Kg	☼	02/18/15 20:45	02/19/15 05:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 126				02/18/15 20:45	02/19/15 05:06	1
4-Bromofluorobenzene (Surr)	79		72 - 126				02/18/15 20:45	02/19/15 05:06	1
Toluene-d8 (Surr)	111		71 - 125				02/18/15 20:45	02/19/15 05:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		930	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
bis (2-chloroisopropyl) ether	ND		930	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,4,5-Trichlorophenol	ND		930	250	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,4,6-Trichlorophenol	ND		930	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,4-Dichlorophenol	ND		930	98	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,4-Dimethylphenol	ND		930	220	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,4-Dinitrophenol	ND		1800	560	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,4-Dinitrotoluene	ND		930	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2,6-Dinitrotoluene	ND		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2-Chloronaphthalene	ND		930	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2-Chlorophenol	ND		930	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2-Methylphenol	ND		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2-Methylnaphthalene	ND		930	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2-Nitroaniline	ND		1800	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
2-Nitrophenol	ND		930	260	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
3,3'-Dichlorobenzidine	ND		1800	1100	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
3-Nitroaniline	ND		1800	260	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4,6-Dinitro-2-methylphenol	ND		1800	930	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Bromophenyl phenyl ether	ND		930	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Chloro-3-methylphenol	ND		930	230	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Chloroaniline	ND		930	230	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Chlorophenyl phenyl ether	ND		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Methylphenol	ND		1800	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Nitroaniline	ND		1800	490	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
4-Nitrophenol	ND		1800	650	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Acenaphthene	150	J	930	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Acenaphthylene	ND		930	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Acetophenone	ND		930	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Anthracene	430	J	930	230	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Atrazine	ND		930	320	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Benzaldehyde	ND		930	740	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Benzo[a]anthracene	1400		930	93	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Benzo[a]pyrene	1400		930	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Benzo[b]fluoranthene	1800		930	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Date Collected: 02/18/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 90.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	720	J	930	98	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Benzo[k]fluoranthene	760	J	930	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Bis(2-chloroethoxy)methane	ND		930	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Bis(2-chloroethyl)ether	ND		930	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Bis(2-ethylhexyl) phthalate	570	J	930	320	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Butyl benzyl phthalate	ND		930	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Caprolactam	ND		930	280	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Carbazole	210	J	930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Chrysene	1500		930	210	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Dibenz(a,h)anthracene	ND		930	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Di-n-butyl phthalate	ND		930	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Di-n-octyl phthalate	ND		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Dibenzofuran	ND		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Diethyl phthalate	ND		930	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Dimethyl phthalate	ND		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Fluoranthene	3100		930	98	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Fluorene	150	J	930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Hexachlorobenzene	ND		930	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Hexachlorobutadiene	ND		930	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Hexachlorocyclopentadiene	ND		930	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Hexachloroethane	ND		930	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Indeno[1,2,3-cd]pyrene	670	J	930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Isophorone	ND		930	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
N-Nitrosodi-n-propylamine	ND		930	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
N-Nitrosodiphenylamine	ND *		930	750	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Naphthalene	ND		930	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Nitrobenzene	ND		930	100	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Pentachlorophenol	ND		1800	930	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Phenanthrene	2100		930	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Phenol	ND		930	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5
Pyrene	2500		930	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:05	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		34 - 132	02/20/15 09:11	02/23/15 13:05	5
Phenol-d5 (Surr)	87		11 - 120	02/20/15 09:11	02/23/15 13:05	5
p-Terphenyl-d14 (Surr)	91		65 - 153	02/20/15 09:11	02/23/15 13:05	5
2,4,6-Tribromophenol (Surr)	65		39 - 146	02/20/15 09:11	02/23/15 13:05	5
2-Fluorobiphenyl	85		37 - 120	02/20/15 09:11	02/23/15 13:05	5
2-Fluorophenol (Surr)	86		18 - 120	02/20/15 09:11	02/23/15 13:05	5

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		36	7.0	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
4,4'-DDE	ND		36	7.6	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
4,4'-DDT	18	J	36	8.5	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Aldrin	ND		36	8.9	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
alpha-BHC	ND		36	6.5	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
alpha-Chlordane	ND		36	18	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
beta-BHC	ND		36	6.5	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
delta-BHC	ND		36	6.7	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Date Collected: 02/18/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 90.7

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	ND		36	8.7	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Endosulfan I	ND		36	7.0	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Endosulfan II	ND		36	6.5	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Endosulfan sulfate	11	J	36	6.8	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Endrin	ND		36	7.2	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Endrin aldehyde	ND		36	9.3	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Endrin ketone	14	J	36	8.9	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
gamma-BHC (Lindane)	ND		36	6.6	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
gamma-Chlordane	ND		36	12	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Heptachlor	ND		36	7.8	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Heptachlor epoxide	ND		36	9.3	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Methoxychlor	ND		36	7.4	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20
Toxaphene	ND		360	210	ug/Kg	☼	02/19/15 14:14	02/20/15 17:12	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	367	X	32 - 136	02/19/15 14:14	02/20/15 17:12	20
Tetrachloro-m-xylene	0	X	30 - 124	02/19/15 14:14	02/20/15 17:12	20

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1
PCB-1221	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1
PCB-1232	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1
PCB-1242	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1
PCB-1248	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 12:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	104		46 - 175	02/19/15 12:08	02/20/15 12:59	1
DCB Decachlorobiphenyl	126		47 - 176	02/19/15 12:08	02/20/15 12:59	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		18	5.8	ug/Kg	☼	02/19/15 09:07	02/23/15 11:08	1
Silvex (2,4,5-TP)	ND		18	6.6	ug/Kg	☼	02/19/15 09:07	02/23/15 11:08	1
2,4-D	ND		18	12	ug/Kg	☼	02/19/15 09:07	02/23/15 11:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	28	X	39 - 120	02/19/15 09:07	02/23/15 11:08	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	26500	^	10.8		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Antimony	ND		16.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Arsenic	3.6		2.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Barium	191		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Beryllium	4.5		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Cadmium	ND		0.22		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Calcium	185000	^	270		mg/Kg	☼	02/19/15 15:35	02/21/15 19:11	5
Chromium	11.9		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Date Collected: 02/18/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 90.7

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.9		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Copper	52.0		5.4		mg/Kg	☼	02/19/15 15:35	02/21/15 19:11	5
Iron	6400	^	10.8		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Lead	64.4		1.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Magnesium	33100		21.6		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Manganese	1870	B ^	0.22		mg/Kg	☼	02/19/15 15:35	02/20/15 15:32	1
Nickel	ND		5.4		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Potassium	1440		32.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Selenium	ND		4.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Silver	ND		0.65		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Sodium	715		151		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Thallium	ND	^	6.5		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Vanadium	8.2		0.54		mg/Kg	☼	02/19/15 15:35	02/21/15 19:08	1
Zinc	32.8		2.2		mg/Kg	☼	02/19/15 15:35	02/20/15 15:32	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.030		0.022		mg/Kg	☼	02/19/15 09:55	02/19/15 12:38	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (4-8)

Lab Sample ID: 480-75578-20

Date Collected: 02/18/15 14:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 67.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1200	180	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
bis (2-chloroisopropyl) ether	ND		1200	240	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,4,5-Trichlorophenol	ND		1200	330	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,4,6-Trichlorophenol	ND		1200	240	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,4-Dichlorophenol	ND		1200	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,4-Dimethylphenol	ND		1200	300	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,4-Dinitrophenol	ND		2400	730	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,4-Dinitrotoluene	ND		1200	250	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2,6-Dinitrotoluene	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2-Chloronaphthalene	ND		1200	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2-Chlorophenol	ND		1200	220	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2-Methylphenol	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2-Methylnaphthalene	ND		1200	240	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2-Nitroaniline	ND		2400	180	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
2-Nitrophenol	ND		1200	350	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
3,3'-Dichlorobenzidine	ND		2400	1400	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
3-Nitroaniline	ND		2400	340	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4,6-Dinitro-2-methylphenol	ND		2400	1200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Bromophenyl phenyl ether	ND		1200	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Chloro-3-methylphenol	ND		1200	300	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Chloroaniline	ND		1200	300	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Chlorophenyl phenyl ether	ND		1200	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Methylphenol	ND		2400	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Nitroaniline	ND		2400	640	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
4-Nitrophenol	ND		2400	860	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Acenaphthene	ND		1200	180	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Acenaphthylene	ND		1200	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Acetophenone	ND		1200	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Anthracene	ND		1200	300	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Atrazine	ND		1200	430	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Benzaldehyde	ND		1200	970	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Benzo[a]anthracene	250	J	1200	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Benzo[a]pyrene	310	J	1200	180	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Benzo[b]fluoranthene	260	J	1200	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Benzo[g,h,i]perylene	ND		1200	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Benzo[k]fluoranthene	ND		1200	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Bis(2-chloroethoxy)methane	ND		1200	260	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Bis(2-chloroethyl)ether	ND		1200	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Bis(2-ethylhexyl) phthalate	550	J	1200	420	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Butyl benzyl phthalate	ND		1200	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Caprolactam	ND		1200	370	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Carbazole	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Chrysene	280	J	1200	270	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Dibenz(a,h)anthracene	ND		1200	220	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Di-n-butyl phthalate	ND		1200	210	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Di-n-octyl phthalate	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Dibenzofuran	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Diethyl phthalate	ND		1200	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Dimethyl phthalate	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (4-8)

Lab Sample ID: 480-75578-20

Date Collected: 02/18/15 14:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 67.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	470	J	1200	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Fluorene	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Hexachlorobenzene	ND		1200	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Hexachlorobutadiene	ND		1200	180	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Hexachlorocyclopentadiene	ND		1200	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Hexachloroethane	ND		1200	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Indeno[1,2,3-cd]pyrene	ND		1200	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Isophorone	ND		1200	260	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
N-Nitrosodi-n-propylamine	ND		1200	210	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
N-Nitrosodiphenylamine	ND *		1200	990	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Naphthalene	ND		1200	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Nitrobenzene	ND		1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Pentachlorophenol	ND		2400	1200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Phenanthrene	390	J	1200	180	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Phenol	ND		1200	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5
Pyrene	250	J	1200	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:28	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		34 - 132	02/20/15 09:11	02/23/15 13:28	5
Phenol-d5 (Surr)	88		11 - 120	02/20/15 09:11	02/23/15 13:28	5
p-Terphenyl-d14 (Surr)	80		65 - 153	02/20/15 09:11	02/23/15 13:28	5
2,4,6-Tribromophenol (Surr)	73		39 - 146	02/20/15 09:11	02/23/15 13:28	5
2-Fluorobiphenyl	80		37 - 120	02/20/15 09:11	02/23/15 13:28	5
2-Fluorophenol (Surr)	89		18 - 120	02/20/15 09:11	02/23/15 13:28	5

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		49	9.5	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
4,4'-DDE	ND		49	10	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
4,4'-DDT	ND		49	11	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Aldrin	ND		49	12	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
alpha-BHC	ND		49	8.8	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
alpha-Chlordane	ND		49	24	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
beta-BHC	ND		49	8.8	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
delta-BHC	ND		49	9.1	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Dieldrin	ND		49	12	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Endosulfan I	ND		49	9.4	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Endosulfan II	ND		49	8.8	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Endosulfan sulfate	ND		49	9.1	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Endrin	ND		49	9.7	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Endrin aldehyde	ND		49	13	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Endrin ketone	ND		49	12	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
gamma-BHC (Lindane)	ND		49	9.0	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
gamma-Chlordane	ND		49	16	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Heptachlor	ND		49	11	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Heptachlor epoxide	ND		49	13	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Methoxychlor	15	J	49	10	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20
Toxaphene	ND		490	290	ug/Kg	☼	02/19/15 14:14	02/20/15 17:30	20

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (4-8)

Lab Sample ID: 480-75578-20

Date Collected: 02/18/15 14:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 67.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	X	32 - 136	02/19/15 14:14	02/20/15 17:30	20
Tetrachloro-m-xylene	0	X	30 - 124	02/19/15 14:14	02/20/15 17:30	20

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.29	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1
PCB-1221	ND		0.29	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1
PCB-1232	ND		0.29	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1
PCB-1242	ND		0.29	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1
PCB-1248	ND		0.29	0.056	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1
PCB-1254	ND		0.29	0.13	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1
PCB-1260	ND		0.29	0.13	mg/Kg	☼	02/19/15 12:08	02/20/15 13:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		46 - 175	02/19/15 12:08	02/20/15 13:15	1
DCB Decachlorobiphenyl	101		47 - 176	02/19/15 12:08	02/20/15 13:15	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		24	7.8	ug/Kg	☼	02/19/15 09:07	02/21/15 02:07	1
Silvex (2,4,5-TP)	ND		24	8.8	ug/Kg	☼	02/19/15 09:07	02/21/15 02:07	1
2,4-D	ND		24	15	ug/Kg	☼	02/19/15 09:07	02/21/15 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	60		39 - 120	02/19/15 09:07	02/21/15 02:07	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7500	^	15.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Antimony	ND		23.0		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Arsenic	6.0		3.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Barium	58.8		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Beryllium	0.44		0.31		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Cadmium	ND		0.31		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Calcium	5810	^	76.7		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Chromium	10.8		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Cobalt	7.5		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Copper	32.4		1.5		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Iron	14500	^	15.3		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Lead	146		1.5		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Magnesium	3950		30.7		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Manganese	207	B ^	0.31		mg/Kg	☼	02/19/15 15:35	02/20/15 15:35	1
Nickel	20.8		7.7		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Potassium	969		46.0		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Selenium	ND		6.1		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Silver	ND		0.92		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Sodium	ND		215		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Thallium	ND	^	9.2		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Vanadium	14.7		0.77		mg/Kg	☼	02/19/15 15:35	02/21/15 19:14	1
Zinc	62.7		3.1		mg/Kg	☼	02/19/15 15:35	02/20/15 15:35	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (4-8)

Lab Sample ID: 480-75578-20

Date Collected: 02/18/15 14:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 67.5

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060		0.029		mg/Kg	☼	02/19/15 09:55	02/19/15 12:40	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (0-2)

Lab Sample ID: 480-75578-21

Date Collected: 02/18/15 12:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		950	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
bis (2-chloroisopropyl) ether	ND		950	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,4,5-Trichlorophenol	ND		950	260	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,4,6-Trichlorophenol	ND		950	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,4-Dichlorophenol	ND		950	100	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,4-Dimethylphenol	ND		950	230	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,4-Dinitrophenol	ND		1900	570	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,4-Dinitrotoluene	ND		950	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2,6-Dinitrotoluene	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2-Chloronaphthalene	ND		950	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2-Chlorophenol	ND		950	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2-Methylphenol	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2-Methylnaphthalene	ND		950	190	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2-Nitroaniline	ND		1900	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
2-Nitrophenol	ND		950	270	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
3,3'-Dichlorobenzidine	ND		1900	1100	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
3-Nitroaniline	ND		1900	260	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4,6-Dinitro-2-methylphenol	ND		1900	950	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Bromophenyl phenyl ether	ND		950	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Chloro-3-methylphenol	ND		950	240	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Chloroaniline	ND		950	240	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Chlorophenyl phenyl ether	ND		950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Methylphenol	ND		1900	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Nitroaniline	ND		1900	500	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
4-Nitrophenol	ND		1900	670	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Acenaphthene	ND		950	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Acenaphthylene	180	J	950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Acetophenone	ND		950	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Anthracene	ND		950	240	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Atrazine	ND		950	330	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Benzaldehyde	ND		950	760	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Benzo[a]anthracene	1300		950	95	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Benzo[a]pyrene	1300		950	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Benzo[b]fluoranthene	1600		950	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Benzo[g,h,i]perylene	530	J	950	100	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Benzo[k]fluoranthene	760	J	950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Bis(2-chloroethoxy)methane	ND		950	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Bis(2-chloroethyl)ether	ND		950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Bis(2-ethylhexyl) phthalate	ND		950	330	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Butyl benzyl phthalate	ND		950	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Caprolactam	ND		950	290	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Carbazole	120	J	950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Chrysene	1500		950	210	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Dibenz(a,h)anthracene	ND		950	170	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Di-n-butyl phthalate	ND		950	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Di-n-octyl phthalate	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Dibenzofuran	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Diethyl phthalate	ND		950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Dimethyl phthalate	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (0-2)

Lab Sample ID: 480-75578-21

Date Collected: 02/18/15 12:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	1800		950	100	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Fluorene	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Hexachlorobenzene	ND		950	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Hexachlorobutadiene	ND		950	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Hexachlorocyclopentadiene	ND		950	130	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Hexachloroethane	ND		950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Indeno[1,2,3-cd]pyrene	560 J		950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Isophorone	ND		950	200	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
N-Nitrosodi-n-propylamine	ND		950	160	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
N-Nitrosodiphenylamine	ND *		950	770	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Naphthalene	ND		950	120	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Nitrobenzene	ND		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Pentachlorophenol	ND		1900	950	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Phenanthrene	610 J		950	140	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Phenol	ND		950	150	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5
Pyrene	1500		950	110	ug/Kg	☼	02/20/15 09:11	02/23/15 13:52	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	82		34 - 132	02/20/15 09:11	02/23/15 13:52	5
Phenol-d5 (Surr)	85		11 - 120	02/20/15 09:11	02/23/15 13:52	5
p-Terphenyl-d14 (Surr)	79		65 - 153	02/20/15 09:11	02/23/15 13:52	5
2,4,6-Tribromophenol (Surr)	79		39 - 146	02/20/15 09:11	02/23/15 13:52	5
2-Fluorobiphenyl	80		37 - 120	02/20/15 09:11	02/23/15 13:52	5
2-Fluorophenol (Surr)	83		18 - 120	02/20/15 09:11	02/23/15 13:52	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.26	0.051	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1
PCB-1221	ND		0.26	0.051	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1
PCB-1232	ND		0.26	0.051	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1
PCB-1242	ND		0.26	0.051	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1
PCB-1248	ND		0.26	0.051	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 13:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	113		46 - 175	02/19/15 12:08	02/20/15 13:29	1
DCB Decachlorobiphenyl	126		47 - 176	02/19/15 12:08	02/20/15 13:29	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5190		11.6		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Antimony	ND		17.4		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Arsenic	15.2		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Barium	60.8		0.58		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Beryllium	0.68		0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Cadmium	0.81		0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Calcium	7400		58.0		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Chromium	10.5		0.58		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Cobalt	8.0		0.58		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (0-2)

Lab Sample ID: 480-75578-21

Date Collected: 02/18/15 12:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 87.7

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	139		1.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Iron	20000	^	11.6		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Lead	288		1.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Magnesium	2440		23.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Manganese	254	^	0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Nickel	20.5		5.8		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Potassium	653		34.8		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Selenium	ND		4.6		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Silver	ND		0.70		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Sodium	ND		162		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Thallium	ND		7.0		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Vanadium	15.8		0.58		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1
Zinc	307		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:14	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20		0.021		mg/Kg	☼	02/19/15 09:55	02/19/15 12:41	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (2-8)

Lab Sample ID: 480-75578-22

Date Collected: 02/18/15 12:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		210	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
bis (2-chloroisopropyl) ether	ND		210	42	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,4,5-Trichlorophenol	ND		210	56	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,4,6-Trichlorophenol	ND		210	42	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,4-Dichlorophenol	ND		210	22	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,4-Dimethylphenol	ND		210	50	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,4-Dinitrophenol	ND		400	120	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,4-Dinitrotoluene	ND		210	43	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2,6-Dinitrotoluene	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2-Chloronaphthalene	ND		210	34	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2-Chlorophenol	ND		210	38	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2-Methylphenol	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2-Methylnaphthalene	ND		210	42	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2-Nitroaniline	ND		400	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
2-Nitrophenol	ND		210	59	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
3,3'-Dichlorobenzidine	ND		400	240	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
3-Nitroaniline	ND		400	57	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4,6-Dinitro-2-methylphenol	ND		400	210	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Bromophenyl phenyl ether	ND		210	29	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Chloro-3-methylphenol	ND		210	51	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Chloroaniline	ND		210	51	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Chlorophenyl phenyl ether	ND		210	26	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Methylphenol	ND		400	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Nitroaniline	ND		400	110	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
4-Nitrophenol	ND		400	150	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Acenaphthene	ND		210	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Acenaphthylene	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Acetophenone	ND		210	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Anthracene	ND		210	51	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Atrazine	ND		210	72	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Benzaldehyde	ND		210	170	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Benzo[a]anthracene	ND		210	21	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Benzo[a]pyrene	ND		210	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Benzo[b]fluoranthene	ND		210	33	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Benzo[g,h,i]perylene	ND		210	22	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Benzo[k]fluoranthene	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Bis(2-chloroethoxy)methane	ND		210	44	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Bis(2-chloroethyl)ether	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Bis(2-ethylhexyl) phthalate	ND		210	71	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Butyl benzyl phthalate	ND		210	34	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Caprolactam	ND		210	62	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Carbazole	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Chrysene	ND		210	46	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Dibenz(a,h)anthracene	ND		210	37	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Di-n-butyl phthalate	ND		210	35	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Di-n-octyl phthalate	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Dibenzofuran	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Diethyl phthalate	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Dimethyl phthalate	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (2-8)

Lab Sample ID: 480-75578-22

Date Collected: 02/18/15 12:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		210	22	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Fluorene	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Hexachlorobenzene	ND		210	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Hexachlorobutadiene	ND		210	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Hexachlorocyclopentadiene	ND		210	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Hexachloroethane	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Indeno[1,2,3-cd]pyrene	ND		210	26	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Isophorone	ND		210	44	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
N-Nitrosodi-n-propylamine	ND		210	35	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
N-Nitrosodiphenylamine	ND *		210	170	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Naphthalene	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Nitrobenzene	ND		210	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Pentachlorophenol	ND		400	210	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Phenanthrene	ND		210	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Phenol	ND		210	32	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1
Pyrene	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	83		34 - 132	02/20/15 09:11	02/23/15 14:16	1
Phenol-d5 (Surr)	93		11 - 120	02/20/15 09:11	02/23/15 14:16	1
p-Terphenyl-d14 (Surr)	84		65 - 153	02/20/15 09:11	02/23/15 14:16	1
2,4,6-Tribromophenol (Surr)	87		39 - 146	02/20/15 09:11	02/23/15 14:16	1
2-Fluorobiphenyl	85		37 - 120	02/20/15 09:11	02/23/15 14:16	1
2-Fluorophenol (Surr)	88		18 - 120	02/20/15 09:11	02/23/15 14:16	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.050	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1
PCB-1221	ND		0.25	0.050	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1
PCB-1232	ND		0.25	0.050	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1
PCB-1242	ND		0.25	0.050	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1
PCB-1248	ND		0.25	0.050	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 13:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	104		46 - 175	02/19/15 12:08	02/20/15 13:44	1
DCB Decachlorobiphenyl	116		47 - 176	02/19/15 12:08	02/20/15 13:44	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17900		11.4		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Antimony	ND		17.1		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Arsenic	4.5		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Barium	104		0.57		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Beryllium	0.60		0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Cadmium	ND		0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Calcium	15800		57.0		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Chromium	20.6		0.57		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Cobalt	9.3		0.57		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (2-8)

Lab Sample ID: 480-75578-22

Date Collected: 02/18/15 12:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	11.5		1.1		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Iron	21300	^	11.4		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Lead	10.6		1.1		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Magnesium	7790		22.8		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Manganese	361	^	0.23		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Nickel	21.7		5.7		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Potassium	1640		34.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Selenium	ND		4.6		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Silver	ND		0.68		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Sodium	440		160		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Thallium	ND		6.8		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Vanadium	28.1		0.57		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1
Zinc	60.9		2.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:20	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.025		mg/Kg	☼	02/19/15 09:55	02/19/15 12:43	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Date Collected: 02/17/15 15:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 86.2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		11	0.77	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,1,2,2-Tetrachloroethane	ND		11	1.7	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	2.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,1,2-Trichloroethane	ND		11	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,1-Dichloroethane	ND		11	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,1-Dichloroethene	ND		11	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2,4-Trichlorobenzene	ND		11	0.64	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2,4-Trimethylbenzene	ND		11	2.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2-Dibromo-3-Chloropropane	ND		11	5.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2-Dichlorobenzene	ND		11	0.82	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2-Dichloroethane	ND		11	0.53	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2-Dichloropropane	ND		11	5.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,3,5-Trimethylbenzene	ND		11	0.68	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,3-Dichlorobenzene	ND		11	0.54	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,4-Dichlorobenzene	ND		11	1.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
2-Butanone (MEK)	ND		53	3.9	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
2-Hexanone	ND		53	5.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
4-Isopropyltoluene	ND		11	0.85	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
4-Methyl-2-pentanone (MIBK)	ND		53	3.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Acetone	ND		53	8.9	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Benzene	ND		11	0.52	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Bromoform	ND		11	5.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Bromomethane	ND		11	0.95	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Carbon disulfide	ND		11	5.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Carbon tetrachloride	ND		11	1.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Chlorobenzene	ND		11	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Dibromochloromethane	ND		11	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Chloroethane	ND		11	2.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Chloroform	ND		11	0.65	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Chloromethane	ND		11	0.64	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
cis-1,2-Dichloroethene	ND		11	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Cyclohexane	ND *		11	1.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Bromodichloromethane	ND		11	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Dichlorodifluoromethane	ND		11	0.87	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Ethylbenzene	ND		11	0.73	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
1,2-Dibromoethane	ND		11	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Isopropylbenzene	ND		11	1.6	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Methyl acetate	ND		11	6.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Methyl tert-butyl ether	ND		11	1.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Methylcyclohexane	ND		11	1.6	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Methylene Chloride	ND		11	4.8	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
m,p-Xylene	ND		21	1.8	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
n-Butylbenzene	ND		11	0.92	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
N-Propylbenzene	ND		11	0.84	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
o-Xylene	ND		11	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
sec-Butylbenzene	ND		11	0.92	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Tetrachloroethene	ND		11	1.4	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Toluene	ND		11	0.80	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
trans-1,2-Dichloroethene	ND		11	1.1	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Date Collected: 02/17/15 15:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 86.2

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		11	4.6	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Trichloroethene	ND		11	2.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Trichlorofluoromethane	ND		11	1.0	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Vinyl chloride	ND		11	1.3	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Xylenes, Total	ND		21	1.8	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
cis-1,3-Dichloropropene	ND		11	1.5	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
Styrene	ND		11	0.53	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1
tert-Butylbenzene	ND		11	1.1	ug/Kg	☼	02/18/15 20:45	02/19/15 05:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 126	02/18/15 20:45	02/19/15 05:31	1
4-Bromofluorobenzene (Surr)	91		72 - 126	02/18/15 20:45	02/19/15 05:31	1
Toluene-d8 (Surr)	104		71 - 125	02/18/15 20:45	02/19/15 05:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		190	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
bis (2-chloroisopropyl) ether	ND		190	39	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,4,5-Trichlorophenol	ND		190	52	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,4,6-Trichlorophenol	ND		190	39	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,4-Dimethylphenol	ND		190	47	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,4-Dinitrophenol	ND		380	120	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,4-Dinitrotoluene	ND		190	40	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2,6-Dinitrotoluene	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2-Chloronaphthalene	ND		190	32	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2-Methylphenol	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2-Methylnaphthalene	ND		190	39	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2-Nitroaniline	ND		380	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
2-Nitrophenol	ND		190	55	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
3,3'-Dichlorobenzidine	ND		380	230	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
3-Nitroaniline	ND		380	53	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4,6-Dinitro-2-methylphenol	ND		380	190	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Chloro-3-methylphenol	ND		190	48	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Chloroaniline	ND		190	48	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Methylphenol	ND		380	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Nitroaniline	ND		380	100	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
4-Nitrophenol	ND		380	140	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Acenaphthene	ND		190	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Acenaphthylene	ND		190	25	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Acetophenone	ND		190	26	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Anthracene	ND		190	48	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Atrazine	ND		190	67	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Benzaldehyde	ND		190	150	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Benzo[b]fluoranthene	ND		190	31	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Date Collected: 02/17/15 15:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 86.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Bis(2-chloroethoxy)methane	ND		190	41	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Bis(2-ethylhexyl) phthalate	ND		190	66	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Butyl benzyl phthalate	ND		190	32	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Caprolactam	ND		190	58	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Carbazole	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Chrysene	ND		190	43	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Di-n-octyl phthalate	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Dibenzofuran	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Dimethyl phthalate	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Fluoranthene	ND		190	20	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Fluorene	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Hexachloroethane	ND		190	25	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Indeno[1,2,3-cd]pyrene	ND		190	24	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Isophorone	ND		190	41	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
N-Nitrosodiphenylamine	ND *		190	160	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Naphthalene	ND		190	25	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Nitrobenzene	ND		190	22	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Pentachlorophenol	ND		380	190	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Phenanthrene	ND		190	28	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Phenol	ND		190	30	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1
Pyrene	ND		190	23	ug/Kg	☼	02/20/15 09:11	02/23/15 14:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		34 - 132	02/20/15 09:11	02/23/15 14:39	1
Phenol-d5 (Surr)	86		11 - 120	02/20/15 09:11	02/23/15 14:39	1
p-Terphenyl-d14 (Surr)	81		65 - 153	02/20/15 09:11	02/23/15 14:39	1
2,4,6-Tribromophenol (Surr)	78		39 - 146	02/20/15 09:11	02/23/15 14:39	1
2-Fluorobiphenyl	79		37 - 120	02/20/15 09:11	02/23/15 14:39	1
2-Fluorophenol (Surr)	82		18 - 120	02/20/15 09:11	02/23/15 14:39	1

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.9	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
4,4'-DDE	ND		1.9	0.39	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
4,4'-DDT	ND		1.9	0.44	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Aldrin	ND		1.9	0.46	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
alpha-BHC	0.61	J	1.9	0.34	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
alpha-Chlordane	ND		1.9	0.94	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
beta-BHC	ND		1.9	0.34	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
delta-BHC	ND		1.9	0.35	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Date Collected: 02/17/15 15:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 86.2

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	ND		1.9	0.45	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Endosulfan I	ND		1.9	0.36	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Endosulfan II	ND		1.9	0.34	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Endosulfan sulfate	ND		1.9	0.35	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Endrin	ND		1.9	0.37	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Endrin aldehyde	ND		1.9	0.48	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Endrin ketone	ND		1.9	0.46	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
gamma-BHC (Lindane)	ND		1.9	0.35	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
gamma-Chlordane	ND		1.9	0.60	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Heptachlor	ND		1.9	0.41	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Heptachlor epoxide	ND		1.9	0.48	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Methoxychlor	ND		1.9	0.38	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1
Toxaphene	ND		19	11	ug/Kg	☼	02/19/15 14:14	02/20/15 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	90		32 - 136	02/19/15 14:14	02/20/15 16:02	1
Tetrachloro-m-xylene	79		30 - 124	02/19/15 14:14	02/20/15 16:02	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1
PCB-1221	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1
PCB-1232	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1
PCB-1242	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1
PCB-1248	ND		0.25	0.049	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	02/19/15 12:08	02/20/15 14:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	106		46 - 175	02/19/15 12:08	02/20/15 14:28	1
DCB Decachlorobiphenyl	120		47 - 176	02/19/15 12:08	02/20/15 14:28	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		19	6.0	ug/Kg	☼	02/19/15 09:07	02/20/15 22:41	1
Silvex (2,4,5-TP)	ND		19	6.8	ug/Kg	☼	02/19/15 09:07	02/20/15 22:41	1
2,4-D	ND		19	12	ug/Kg	☼	02/19/15 09:07	02/20/15 22:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	51		39 - 120	02/19/15 09:07	02/20/15 22:41	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6320		11.9		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Antimony	ND		17.8		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Arsenic	3.7		2.4		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Barium	84.0		0.59		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Beryllium	0.37		0.24		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Cadmium	ND		0.24		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Calcium	24700		59.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Chromium	8.1		0.59		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Date Collected: 02/17/15 15:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 86.2

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	4.6		0.59		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Copper	66.0		1.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Iron	9040	^	11.9		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Lead	122		1.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Magnesium	4250		23.7		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Manganese	341	^	0.24		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Nickel	12.0		5.9		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Potassium	786		35.6		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Selenium	ND		4.7		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Silver	ND		0.71		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Sodium	661		166		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Thallium	ND		7.1		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Vanadium	10.2		0.59		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1
Zinc	41.2		2.4		mg/Kg	☼	02/19/15 15:35	02/20/15 13:23	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.038		0.022		mg/Kg	☼	02/19/15 09:55	02/19/15 12:45	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (4-16)

Lab Sample ID: 480-75578-24

Date Collected: 02/17/15 15:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		210	30	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
bis (2-chloroisopropyl) ether	ND		210	41	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,4,5-Trichlorophenol	ND		210	56	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,4,6-Trichlorophenol	ND		210	41	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,4-Dichlorophenol	ND		210	22	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,4-Dimethylphenol	ND		210	50	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,4-Dinitrophenol	ND		400	120	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,4-Dinitrotoluene	ND		210	43	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2,6-Dinitrotoluene	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2-Chloronaphthalene	ND		210	34	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2-Chlorophenol	ND		210	38	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2-Methylphenol	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2-Methylnaphthalene	ND		210	41	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2-Nitroaniline	ND		400	30	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
2-Nitrophenol	ND		210	58	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
3,3'-Dichlorobenzidine	ND		400	240	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
3-Nitroaniline	ND		400	57	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4,6-Dinitro-2-methylphenol	ND		400	210	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Bromophenyl phenyl ether	ND		210	29	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Chloro-3-methylphenol	ND		210	51	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Chloroaniline	ND		210	51	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Chlorophenyl phenyl ether	ND		210	26	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Methylphenol	ND		400	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Nitroaniline	ND		400	110	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
4-Nitrophenol	ND		400	140	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Acenaphthene	ND		210	30	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Acenaphthylene	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Acetophenone	ND		210	28	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Anthracene	ND		210	51	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Atrazine	ND		210	72	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Benzaldehyde	ND		210	160	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Benzo[a]anthracene	ND		210	21	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Benzo[a]pyrene	ND		210	30	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Benzo[b]fluoranthene	ND		210	33	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Benzo[g,h,i]perylene	ND		210	22	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Benzo[k]fluoranthene	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Bis(2-chloroethoxy)methane	ND		210	44	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Bis(2-chloroethyl)ether	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Bis(2-ethylhexyl) phthalate	ND		210	71	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Butyl benzyl phthalate	ND		210	34	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Caprolactam	ND		210	62	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Carbazole	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Chrysene	ND		210	46	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Dibenz(a,h)anthracene	ND		210	36	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Di-n-butyl phthalate	ND		210	35	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Di-n-octyl phthalate	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Dibenzofuran	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Diethyl phthalate	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Dimethyl phthalate	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (4-16)

Lab Sample ID: 480-75578-24

Date Collected: 02/17/15 15:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		210	22	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Fluorene	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Hexachlorobenzene	ND		210	28	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Hexachlorobutadiene	ND		210	30	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Hexachlorocyclopentadiene	ND		210	28	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Hexachloroethane	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Indeno[1,2,3-cd]pyrene	ND		210	26	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Isophorone	ND		210	44	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
N-Nitrosodi-n-propylamine	ND		210	35	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
N-Nitrosodiphenylamine	ND *		210	170	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Naphthalene	ND		210	27	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Nitrobenzene	ND		210	23	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Pentachlorophenol	ND		400	210	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Phenanthrene	ND		210	30	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Phenol	ND		210	32	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1
Pyrene	ND		210	24	ug/Kg	☼	02/20/15 09:11	02/23/15 15:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	84		34 - 132	02/20/15 09:11	02/23/15 15:03	1
Phenol-d5 (Surr)	94		11 - 120	02/20/15 09:11	02/23/15 15:03	1
p-Terphenyl-d14 (Surr)	85		65 - 153	02/20/15 09:11	02/23/15 15:03	1
2,4,6-Tribromophenol (Surr)	85		39 - 146	02/20/15 09:11	02/23/15 15:03	1
2-Fluorobiphenyl	84		37 - 120	02/20/15 09:11	02/23/15 15:03	1
2-Fluorophenol (Surr)	92		18 - 120	02/20/15 09:11	02/23/15 15:03	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.22	0.043	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1
PCB-1221	ND		0.22	0.043	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1
PCB-1232	ND		0.22	0.043	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1
PCB-1242	ND		0.22	0.043	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1
PCB-1248	ND		0.22	0.043	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1
PCB-1254	ND		0.22	0.10	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1
PCB-1260	ND		0.22	0.10	mg/Kg	☼	02/19/15 12:08	02/20/15 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	103		46 - 175	02/19/15 12:08	02/20/15 14:43	1
DCB Decachlorobiphenyl	116		47 - 176	02/19/15 12:08	02/20/15 14:43	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8520		12.7		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Antimony	ND		19.1		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Arsenic	3.4		2.5		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Barium	54.7	^	0.64		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Beryllium	0.48		0.25		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Cadmium	ND		0.25		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Calcium	1350		63.7		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Chromium	13.1		0.64		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Cobalt	7.3		0.64		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-108 (4-16)

Lab Sample ID: 480-75578-24

Date Collected: 02/17/15 15:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	28.4		1.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Iron	18400	^	12.7		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Lead	11.6		1.3		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Magnesium	2690		25.5		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Manganese	154	^	0.25		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Nickel	23.1		6.4		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Potassium	1120		38.2		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Selenium	ND		5.1		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Silver	ND		0.76		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Sodium	510		178		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Thallium	ND		7.6		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Vanadium	19.6		0.64		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1
Zinc	53.8		2.5		mg/Kg	☼	02/19/15 15:35	02/20/15 13:45	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.024		0.024		mg/Kg	☼	02/19/15 09:55	02/19/15 12:56	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (64-126)	BFB (72-126)	TOL (71-125)
480-75578-3	SB-110 (10-16)	105	99	102
480-75578-9	SB-106 (4-8)	105	97	101
480-75578-10	SB-106 (8-16)	102	90	103
480-75578-15	SB-102 (2-8)	103	89	106
480-75578-18	SB-104 (0-4)	102	87	106
480-75578-19	BLIND DUP	100	79	111
480-75578-23	SB-108 (1-4)	101	91	104
480-75578-23 MS	SB-108 (1-4)	89	96	104
480-75578-23 MSD	SB-108 (1-4)	88	93	104
LCS 480-227392/1-A	Lab Control Sample	101	102	102
MB 480-227392/2-A	Method Blank	105	99	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (34-132)	PHL (11-120)	TPH (65-153)	TBP (39-146)	FBP (37-120)	2FP (18-120)
480-75578-1	SB-109 (4-10)	66	69	73	61	68	71
480-75578-2	SB-110 (4-10)	71	80	73	71	67	80
480-75578-3	SB-110 (10-16)	74	77	80	68	71	74
480-75578-4	BLIND DUP 2	72	80	72	70	68	78
480-75578-5	SB-111 (6-9)	74	75	67	70	69	78
480-75578-6	SB-112 (0-2)	87	94	90	87	88	92
480-75578-7	SB-112 (2-6)	78	84	85	73	81	82
480-75578-7 MS	SB-112 (2-6)	78	81	87	89	78	78
480-75578-7 MSD	SB-112 (2-6)	80	84	89	93	83	90
480-75578-8	SB-113 (2-6)	86	89	89	69	86	90
480-75578-9	SB-106 (4-8)	76	80	80	84	74	81
480-75578-10	SB-106 (8-16)	80	82	77	78	77	92
480-75578-11	SB-107 (0-4)	79	86	79	77	81	83
480-75578-12	SB-107 (4-8)	72	80	76	76	73	76
480-75578-13	SB-101 (2-7.5)	78	85	86	80	78	86
480-75578-14	SB-102 (0-2)	110	97	82	128	83	104
480-75578-15	SB-102 (2-8)	61	66	59 X	65	59	65
480-75578-16	SB-103 (2-8)	80	88	91	84	80	85
480-75578-17	SB-103 (8-16)	76	83	82	79	78	82
480-75578-18	SB-104 (0-4)	85	89	90	42	87	86
480-75578-19	BLIND DUP	81	87	91	65	85	86
480-75578-20	SB-104 (4-8)	81	88	80	73	80	89
480-75578-21	SB-105 (0-2)	82	85	79	79	80	83
480-75578-22	SB-105 (2-8)	83	93	84	87	85	88
480-75578-23	SB-108 (1-4)	76	86	81	78	79	82
480-75578-23 MS	SB-108 (1-4)	78	86	92	89	81	84

TestAmerica Buffalo

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (34-132)	PHL (11-120)	TPH (65-153)	TBP (39-146)	FBP (37-120)	2FP (18-120)
480-75578-23 MSD	SB-108 (1-4)	76	83	78	84	76	77
480-75578-24	SB-108 (4-16)	84	94	85	85	84	92
LCS 480-227544/2-A	Lab Control Sample	72	78	84	82	77	75
LCS 480-227550/2-A	Lab Control Sample	79	91	99	89	83	89
MB 480-227544/1-A	Method Blank	79	86	94	82	86	83
MB 480-227550/1-A	Method Blank	87	97	97	80	91	97

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = p-Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (32-136)	TCX2 (30-124)
480-75578-2	SB-110 (4-10)	119	87
480-75578-3	SB-110 (10-16)	90	90
480-75578-9	SB-106 (4-8)	92	75
480-75578-18	SB-104 (0-4)	0 X	303 X
480-75578-19	BLIND DUP	367 X	0 X
480-75578-20	SB-104 (4-8)	0 X	0 X
480-75578-23	SB-108 (1-4)	90	79
480-75578-23 MS	SB-108 (1-4)	89	76
480-75578-23 MSD	SB-108 (1-4)	94	78
LCS 480-227551/2-A	Lab Control Sample	94	81
MB 480-227551/1-A	Method Blank	93	83

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (46-175)	DCB2 (47-176)
480-75578-1	SB-109 (4-10)	105	116
480-75578-2	SB-110 (4-10)	100	103
480-75578-3	SB-110 (10-16)	103	113
480-75578-4	BLIND DUP 2	104	118
480-75578-5	SB-111 (6-9)	105	120
480-75578-6	SB-112 (0-2)	111	127
480-75578-7	SB-112 (2-6)	105	111

TestAmerica Buffalo

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX2 (46-175)	DCB2 (47-176)
480-75578-7 MS	SB-112 (2-6)	117	133
480-75578-7 MSD	SB-112 (2-6)	109	126
480-75578-8	SB-113 (2-6)	104	123
480-75578-9	SB-106 (4-8)	105	119
480-75578-10	SB-106 (8-16)	103	117
480-75578-11	SB-107 (0-4)	103	110
480-75578-12	SB-107 (4-8)	104	118
480-75578-13	SB-101 (2-7.5)	111	124
480-75578-14	SB-102 (0-2)	107	123
480-75578-15	SB-102 (2-8)	110	120
480-75578-16	SB-103 (2-8)	109	121
480-75578-17	SB-103 (8-16)	89	103
480-75578-18	SB-104 (0-4)	104	120
480-75578-19	BLIND DUP	104	126
480-75578-20	SB-104 (4-8)	96	101
480-75578-21	SB-105 (0-2)	113	126
480-75578-22	SB-105 (2-8)	104	116
480-75578-23	SB-108 (1-4)	106	120
480-75578-23 MS	SB-108 (1-4)	118	136
480-75578-23 MSD	SB-108 (1-4)	119	134
480-75578-24	SB-108 (4-16)	103	116
LCS 480-227500/2-A	Lab Control Sample	117	133
LCS 480-227507/2-A	Lab Control Sample	119	133
MB 480-227500/1-A	Method Blank	108	120
MB 480-227507/1-A	Method Blank	106	120

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (39-120)	
480-75578-2	SB-110 (4-10)	46	
480-75578-3	SB-110 (10-16)	71	
480-75578-9	SB-106 (4-8)	67	
480-75578-18	SB-104 (0-4)	43	
480-75578-19	BLIND DUP	28 X	
480-75578-20	SB-104 (4-8)	60	
480-75578-23	SB-108 (1-4)	51	
480-75578-23 MS	SB-108 (1-4)	56	
480-75578-23 MSD	SB-108 (1-4)	74	
LCS 480-227459/2-A	Lab Control Sample	70	
MB 480-227459/1-A	Method Blank	79	

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-227392/2-A

Matrix: Solid

Analysis Batch: 227386

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9	0.35	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,1,2,2-Tetrachloroethane	ND		4.9	0.79	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9	1.1	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,1,2-Trichloroethane	ND		4.9	0.63	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,1-Dichloroethane	ND		4.9	0.60	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,1-Dichloroethene	ND		4.9	0.60	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2,4-Trichlorobenzene	ND		4.9	0.30	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2,4-Trimethylbenzene	ND		4.9	0.94	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2-Dibromo-3-Chloropropane	ND		4.9	2.4	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2-Dichlorobenzene	ND		4.9	0.38	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2-Dichloroethane	ND		4.9	0.25	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2-Dichloropropane	ND		4.9	2.4	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,3,5-Trimethylbenzene	ND		4.9	0.31	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,3-Dichlorobenzene	ND		4.9	0.25	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,4-Dichlorobenzene	ND		4.9	0.68	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
2-Butanone (MEK)	ND		24	1.8	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
2-Hexanone	2.85	J	24	2.4	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
4-Isopropyltoluene	ND		4.9	0.39	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
4-Methyl-2-pentanone (MIBK)	ND		24	1.6	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Acetone	6.47	J	24	4.1	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Benzene	ND		4.9	0.24	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Bromoform	ND		4.9	2.4	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Bromomethane	ND		4.9	0.44	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Carbon disulfide	ND		4.9	2.4	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Carbon tetrachloride	ND		4.9	0.47	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Chlorobenzene	ND		4.9	0.64	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Dibromochloromethane	ND		4.9	0.63	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Chloroethane	ND		4.9	1.1	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Chloroform	ND		4.9	0.30	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Chloromethane	ND		4.9	0.29	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
cis-1,2-Dichloroethene	ND		4.9	0.63	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Cyclohexane	ND		4.9	0.68	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Bromodichloromethane	ND		4.9	0.65	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Dichlorodifluoromethane	ND		4.9	0.40	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Ethylbenzene	ND		4.9	0.34	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
1,2-Dibromoethane	ND		4.9	0.63	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Isopropylbenzene	ND		4.9	0.74	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Methyl acetate	ND		4.9	2.9	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Methyl tert-butyl ether	ND		4.9	0.48	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Methylcyclohexane	ND		4.9	0.74	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Methylene Chloride	ND		4.9	2.2	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
m,p-Xylene	ND		9.8	0.82	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
n-Butylbenzene	ND		4.9	0.42	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
N-Propylbenzene	ND		4.9	0.39	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
o-Xylene	ND		4.9	0.64	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
sec-Butylbenzene	ND		4.9	0.42	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Tetrachloroethene	ND		4.9	0.66	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Toluene	ND		4.9	0.37	ug/Kg		02/18/15 20:44	02/19/15 01:24	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-227392/2-A

Matrix: Solid

Analysis Batch: 227386

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		4.9	0.50	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
trans-1,3-Dichloropropene	ND		4.9	2.1	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Trichloroethene	ND		4.9	1.1	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Trichlorofluoromethane	ND		4.9	0.46	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Vinyl chloride	ND		4.9	0.60	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Xylenes, Total	ND		9.8	0.82	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
cis-1,3-Dichloropropene	ND		4.9	0.70	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
Styrene	ND		4.9	0.24	ug/Kg		02/18/15 20:44	02/19/15 01:24	1
tert-Butylbenzene	ND		4.9	0.51	ug/Kg		02/18/15 20:44	02/19/15 01:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 126	02/18/15 20:44	02/19/15 01:24	1
4-Bromofluorobenzene (Surr)	99		72 - 126	02/18/15 20:44	02/19/15 01:24	1
Toluene-d8 (Surr)	101		71 - 125	02/18/15 20:44	02/19/15 01:24	1

Lab Sample ID: LCS 480-227392/1-A

Matrix: Solid

Analysis Batch: 227386

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	49.5	50.8		ug/Kg		103	73 - 126
1,1-Dichloroethene	49.5	52.6		ug/Kg		106	59 - 125
1,2,4-Trimethylbenzene	49.5	51.8		ug/Kg		105	74 - 120
1,2-Dichlorobenzene	49.5	49.7		ug/Kg		100	75 - 120
1,2-Dichloroethane	49.5	46.5		ug/Kg		94	77 - 122
Benzene	49.5	50.9		ug/Kg		103	79 - 127
Chlorobenzene	49.5	48.2		ug/Kg		97	76 - 124
cis-1,2-Dichloroethene	49.5	51.4		ug/Kg		104	81 - 117
Ethylbenzene	49.5	50.3		ug/Kg		102	80 - 120
Methyl tert-butyl ether	49.5	53.2		ug/Kg		107	63 - 125
m,p-Xylene	49.5	50.0		ug/Kg		101	70 - 130
o-Xylene	49.5	52.3		ug/Kg		106	70 - 130
Tetrachloroethene	49.5	47.4		ug/Kg		96	74 - 122
Toluene	49.5	48.8		ug/Kg		98	74 - 128
trans-1,2-Dichloroethene	49.5	51.4		ug/Kg		104	78 - 126
Trichloroethene	49.5	48.6		ug/Kg		98	77 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		64 - 126
4-Bromofluorobenzene (Surr)	102		72 - 126
Toluene-d8 (Surr)	102		71 - 125

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227386

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	ND		87.1	75.7		ug/Kg	☼	87	73 - 126

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227386

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		87.1	67.7		ug/Kg	✱	78	59 - 125
1,2,4-Trimethylbenzene	ND		87.1	70.8		ug/Kg	✱	81	74 - 120
1,2-Dichlorobenzene	ND		87.1	63.3	F1	ug/Kg	✱	73	75 - 120
1,2-Dichloroethane	ND		87.1	68.6		ug/Kg	✱	79	77 - 122
Benzene	ND		87.1	76.3		ug/Kg	✱	88	79 - 127
Chlorobenzene	ND		87.1	69.5		ug/Kg	✱	80	76 - 124
cis-1,2-Dichloroethene	ND		87.1	75.0		ug/Kg	✱	86	81 - 117
Ethylbenzene	ND		87.1	70.7		ug/Kg	✱	81	80 - 120
Methyl tert-butyl ether	ND		87.1	69.4		ug/Kg	✱	80	63 - 125
m,p-Xylene	ND		87.1	69.3		ug/Kg	✱	80	70 - 130
o-Xylene	ND		87.1	71.3		ug/Kg	✱	82	70 - 130
Tetrachloroethene	ND		87.1	63.7	F1	ug/Kg	✱	73	74 - 122
Toluene	ND		87.1	73.5		ug/Kg	✱	84	74 - 128
trans-1,2-Dichloroethene	ND		87.1	70.8		ug/Kg	✱	81	78 - 126
Trichloroethene	ND		87.1	90.0		ug/Kg	✱	103	77 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		64 - 126
4-Bromofluorobenzene (Surr)	96		72 - 126
Toluene-d8 (Surr)	104		71 - 125

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227386

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	ND		75.3	69.6		ug/Kg	✱	92	73 - 126	8	30
1,1-Dichloroethene	ND		75.3	62.9		ug/Kg	✱	84	59 - 125	7	30
1,2,4-Trimethylbenzene	ND		75.3	68.8		ug/Kg	✱	91	74 - 120	3	30
1,2-Dichlorobenzene	ND		75.3	59.8		ug/Kg	✱	79	75 - 120	6	30
1,2-Dichloroethane	ND		75.3	61.1		ug/Kg	✱	81	77 - 122	12	30
Benzene	ND		75.3	69.4		ug/Kg	✱	92	79 - 127	9	30
Chlorobenzene	ND		75.3	64.2		ug/Kg	✱	85	76 - 124	8	30
cis-1,2-Dichloroethene	ND		75.3	67.1		ug/Kg	✱	89	81 - 117	11	30
Ethylbenzene	ND		75.3	66.2		ug/Kg	✱	88	80 - 120	7	30
Methyl tert-butyl ether	ND		75.3	62.7		ug/Kg	✱	83	63 - 125	10	30
m,p-Xylene	ND		75.3	65.1		ug/Kg	✱	87	70 - 130	6	30
o-Xylene	ND		75.3	66.6		ug/Kg	✱	88	70 - 130	7	30
Tetrachloroethene	ND		75.3	60.8		ug/Kg	✱	81	74 - 122	5	30
Toluene	ND		75.3	68.2		ug/Kg	✱	91	74 - 128	7	30
trans-1,2-Dichloroethene	ND		75.3	62.7		ug/Kg	✱	83	78 - 126	12	30
Trichloroethene	ND		75.3	64.4	F2	ug/Kg	✱	86	77 - 129	33	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		64 - 126
4-Bromofluorobenzene (Surr)	93		72 - 126
Toluene-d8 (Surr)	104		71 - 125

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: MB 480-227544/1-A

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227544

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		170	25	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,4,5-Trichlorophenol	ND		170	46	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,4-Dimethylphenol	ND		170	41	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,4-Dinitrophenol	ND		330	100	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2-Chloronaphthalene	ND		170	28	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2-Chlorophenol	ND		170	31	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2-Methylphenol	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2-Methylnaphthalene	ND		170	34	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2-Nitroaniline	ND		330	25	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
2-Nitrophenol	ND		170	48	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
3-Nitroaniline	ND		330	47	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Chloro-3-methylphenol	ND		170	42	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Chloroaniline	ND		170	42	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Methylphenol	ND		330	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Nitroaniline	ND		330	89	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
4-Nitrophenol	ND		330	120	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Acenaphthene	ND		170	25	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Acenaphthylene	ND		170	22	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Acetophenone	ND		170	23	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Anthracene	ND		170	42	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Atrazine	ND		170	59	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Benzaldehyde	ND		170	130	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Benzo[a]anthracene	ND		170	17	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Benzo[a]pyrene	ND		170	25	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Bis(2-ethylhexyl) phthalate	ND		170	58	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Caprolactam	ND		170	51	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Carbazole	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Chrysene	ND		170	38	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Dibenzofuran	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Diethyl phthalate	ND		170	22	ug/Kg		02/19/15 13:56	02/20/15 15:21	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: MB 480-227544/1-A

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227544

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Fluoranthene	ND		170	18	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Fluorene	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Hexachlorobenzene	ND		170	23	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Hexachlorobutadiene	ND		170	25	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Hexachloroethane	ND		170	22	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Isophorone	ND		170	36	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Naphthalene	ND		170	22	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Nitrobenzene	ND		170	19	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Pentachlorophenol	ND		330	170	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Phenanthrene	ND		170	25	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Phenol	ND		170	26	ug/Kg		02/19/15 13:56	02/20/15 15:21	1
Pyrene	ND		170	20	ug/Kg		02/19/15 13:56	02/20/15 15:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	79		34 - 132	02/19/15 13:56	02/20/15 15:21	1
Phenol-d5 (Surr)	86		11 - 120	02/19/15 13:56	02/20/15 15:21	1
p-Terphenyl-d14 (Surr)	94		65 - 153	02/19/15 13:56	02/20/15 15:21	1
2,4,6-Tribromophenol (Surr)	82		39 - 146	02/19/15 13:56	02/20/15 15:21	1
2-Fluorobiphenyl	86		37 - 120	02/19/15 13:56	02/20/15 15:21	1
2-Fluorophenol (Surr)	83		18 - 120	02/19/15 13:56	02/20/15 15:21	1

Lab Sample ID: LCS 480-227544/2-A

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227544

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	1640	1380		ug/Kg		84	55 - 125
2-Chlorophenol	1640	1220		ug/Kg		74	38 - 120
4-Chloro-3-methylphenol	1640	1340		ug/Kg		82	49 - 125
4-Nitrophenol	3290	2690		ug/Kg		82	43 - 137
Acenaphthene	1640	1290		ug/Kg		78	53 - 120
Atrazine	3290	2900		ug/Kg		88	60 - 164
Bis(2-ethylhexyl) phthalate	1640	1370		ug/Kg		83	61 - 133
Fluorene	1640	1380		ug/Kg		84	63 - 126
Hexachloroethane	1640	1080		ug/Kg		66	41 - 120
N-Nitrosodi-n-propylamine	1640	1200		ug/Kg		73	46 - 120
Pentachlorophenol	3290	2200		ug/Kg		67	33 - 136
Phenol	1640	1280		ug/Kg		78	36 - 120
Pyrene	1640	1390		ug/Kg		85	51 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	72		34 - 132

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: LCS 480-227544/2-A

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227544

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d5 (Surr)	78		11 - 120
p-Terphenyl-d14 (Surr)	84		65 - 153
2,4,6-Tribromophenol (Surr)	82		39 - 146
2-Fluorobiphenyl	77		37 - 120
2-Fluorophenol (Surr)	75		18 - 120

Lab Sample ID: 480-75578-7 MS

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227544

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	ND		1930	1770		ug/Kg	☼	92	55 - 125
2-Chlorophenol	ND		1930	1430		ug/Kg	☼	74	38 - 120
4-Chloro-3-methylphenol	ND		1930	1660		ug/Kg	☼	86	49 - 125
4-Nitrophenol	ND		3860	3310		ug/Kg	☼	86	43 - 137
Acenaphthene	ND		1930	1530		ug/Kg	☼	79	53 - 120
Atrazine	ND		3860	3600		ug/Kg	☼	93	60 - 164
Bis(2-ethylhexyl) phthalate	ND		1930	1840		ug/Kg	☼	95	61 - 133
Fluorene	ND		1930	1680		ug/Kg	☼	87	63 - 126
Hexachloroethane	ND		1930	1270		ug/Kg	☼	66	41 - 120
N-Nitrosodi-n-propylamine	ND		1930	1530		ug/Kg	☼	79	46 - 120
Pentachlorophenol	ND		3860	2970		ug/Kg	☼	77	33 - 136
Phenol	ND		1930	1510		ug/Kg	☼	78	36 - 120
Pyrene	ND		1930	1590		ug/Kg	☼	82	51 - 133

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5 (Surr)	78		34 - 132
Phenol-d5 (Surr)	81		11 - 120
p-Terphenyl-d14 (Surr)	87		65 - 153
2,4,6-Tribromophenol (Surr)	89		39 - 146
2-Fluorobiphenyl	78		37 - 120
2-Fluorophenol (Surr)	78		18 - 120

Lab Sample ID: 480-75578-7 MSD

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227544

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene	ND		1980	1930		ug/Kg	☼	97	55 - 125	9	20
2-Chlorophenol	ND		1980	1530		ug/Kg	☼	77	38 - 120	7	25
4-Chloro-3-methylphenol	ND		1980	1820		ug/Kg	☼	92	49 - 125	9	27
4-Nitrophenol	ND		3970	3830		ug/Kg	☼	96	43 - 137	15	25
Acenaphthene	ND		1980	1650		ug/Kg	☼	83	53 - 120	7	35
Atrazine	ND		3970	3880		ug/Kg	☼	98	60 - 164	8	20
Bis(2-ethylhexyl) phthalate	ND		1980	1890		ug/Kg	☼	95	61 - 133	3	15
Fluorene	ND		1980	1820		ug/Kg	☼	92	63 - 126	8	15
Hexachloroethane	ND		1980	1470		ug/Kg	☼	74	41 - 120	15	46
N-Nitrosodi-n-propylamine	ND		1980	1680		ug/Kg	☼	85	46 - 120	9	31

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: 480-75578-7 MSD

Matrix: Solid

Analysis Batch: 227725

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227544

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	ND		3970	3140		ug/Kg	☼	79	33 - 136	5	35
Phenol	ND		1980	1580		ug/Kg	☼	80	36 - 120	5	35
Pyrene	ND		1980	1760		ug/Kg	☼	89	51 - 133	10	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	80		34 - 132
Phenol-d5 (Surr)	84		11 - 120
p-Terphenyl-d14 (Surr)	89		65 - 153
2,4,6-Tribromophenol (Surr)	93		39 - 146
2-Fluorobiphenyl	83		37 - 120
2-Fluorophenol (Surr)	90		18 - 120

Lab Sample ID: MB 480-227550/1-A

Matrix: Solid

Analysis Batch: 227849

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		160	24	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
bis (2-chloroisopropyl) ether	ND		160	33	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,4,5-Trichlorophenol	ND		160	45	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,4,6-Trichlorophenol	ND		160	33	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,4-Dichlorophenol	ND		160	17	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,4-Dimethylphenol	ND		160	40	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,4-Dinitrophenol	ND		320	99	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,4-Dinitrotoluene	ND		160	34	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2,6-Dinitrotoluene	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2-Chloronaphthalene	ND		160	27	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2-Chlorophenol	ND		160	30	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2-Methylphenol	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2-Methylnaphthalene	ND		160	33	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2-Nitroaniline	ND		320	24	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
2-Nitrophenol	ND		160	47	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
3,3'-Dichlorobenzidine	ND		320	190	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
3-Nitroaniline	ND		320	46	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4,6-Dinitro-2-methylphenol	ND		320	160	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Bromophenyl phenyl ether	ND		160	23	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Chloro-3-methylphenol	ND		160	41	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Chloroaniline	ND		160	41	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Chlorophenyl phenyl ether	ND		160	20	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Methylphenol	ND		320	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Nitroaniline	ND		320	86	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
4-Nitrophenol	ND		320	120	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Acenaphthene	ND		160	24	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Acenaphthylene	ND		160	21	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Acetophenone	ND		160	22	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Anthracene	ND		160	41	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Atrazine	ND		160	57	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Benzaldehyde	ND		160	130	ug/Kg		02/20/15 09:11	02/23/15 10:19	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: MB 480-227550/1-A

Matrix: Solid

Analysis Batch: 227849

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		160	16	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Benzo[a]pyrene	ND		160	24	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Benzo[b]fluoranthene	ND		160	26	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Benzo[g,h,i]perylene	ND		160	17	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Benzo[k]fluoranthene	ND		160	21	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Bis(2-chloroethoxy)methane	ND		160	35	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Bis(2-chloroethyl)ether	ND		160	21	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Bis(2-ethylhexyl) phthalate	ND		160	56	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Butyl benzyl phthalate	ND		160	27	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Caprolactam	ND		160	49	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Carbazole	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Chrysene	ND		160	37	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Dibenz(a,h)anthracene	ND		160	29	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Di-n-butyl phthalate	ND		160	28	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Di-n-octyl phthalate	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Dibenzofuran	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Diethyl phthalate	ND		160	21	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Dimethyl phthalate	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Fluoranthene	ND		160	17	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Fluorene	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Hexachlorobenzene	ND		160	22	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Hexachlorobutadiene	ND		160	24	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Hexachlorocyclopentadiene	ND		160	22	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Hexachloroethane	ND		160	21	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Indeno[1,2,3-cd]pyrene	ND		160	20	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Isophorone	ND		160	35	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
N-Nitrosodi-n-propylamine	ND		160	28	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
N-Nitrosodiphenylamine	ND		160	130	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Naphthalene	ND		160	21	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Nitrobenzene	ND		160	18	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Pentachlorophenol	ND		320	160	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Phenanthrene	ND		160	24	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Phenol	ND		160	25	ug/Kg		02/20/15 09:11	02/23/15 10:19	1
Pyrene	ND		160	19	ug/Kg		02/20/15 09:11	02/23/15 10:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	87		34 - 132	02/20/15 09:11	02/23/15 10:19	1
Phenol-d5 (Surr)	97		11 - 120	02/20/15 09:11	02/23/15 10:19	1
p-Terphenyl-d14 (Surr)	97		65 - 153	02/20/15 09:11	02/23/15 10:19	1
2,4,6-Tribromophenol (Surr)	80		39 - 146	02/20/15 09:11	02/23/15 10:19	1
2-Fluorobiphenyl	91		37 - 120	02/20/15 09:11	02/23/15 10:19	1
2-Fluorophenol (Surr)	97		18 - 120	02/20/15 09:11	02/23/15 10:19	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: LCS 480-227550/2-A

Matrix: Solid

Analysis Batch: 227849

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	1660	1520		ug/Kg		92	55 - 125
2-Chlorophenol	1660	1430		ug/Kg		86	38 - 120
4-Chloro-3-methylphenol	1660	1500		ug/Kg		90	49 - 125
4-Nitrophenol	3310	2920		ug/Kg		88	43 - 137
Acenaphthene	1660	1420		ug/Kg		86	53 - 120
Atrazine	3310	3070		ug/Kg		93	60 - 164
Bis(2-ethylhexyl) phthalate	1660	1560		ug/Kg		94	61 - 133
Fluorene	1660	1520		ug/Kg		92	63 - 126
Hexachloroethane	1660	1230		ug/Kg		74	41 - 120
N-Nitrosodi-n-propylamine	1660	1410		ug/Kg		85	46 - 120
Pentachlorophenol	3310	2620		ug/Kg		79	33 - 136
Phenol	1660	1500		ug/Kg		91	36 - 120
Pyrene	1660	1660		ug/Kg		100	51 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	79		34 - 132
Phenol-d5 (Surr)	91		11 - 120
p-Terphenyl-d14 (Surr)	99		65 - 153
2,4,6-Tribromophenol (Surr)	89		39 - 146
2-Fluorobiphenyl	83		37 - 120
2-Fluorophenol (Surr)	89		18 - 120

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227849

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227550

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	ND		1910	1680		ug/Kg	✱	88	55 - 125
2-Chlorophenol	ND		1910	1570		ug/Kg	✱	82	38 - 120
4-Chloro-3-methylphenol	ND		1910	1690		ug/Kg	✱	88	49 - 125
4-Nitrophenol	ND		3820	3280		ug/Kg	✱	86	43 - 137
Acenaphthene	ND		1910	1590		ug/Kg	✱	83	53 - 120
Atrazine	ND		3820	3580		ug/Kg	✱	94	60 - 164
Bis(2-ethylhexyl) phthalate	ND		1910	1730		ug/Kg	✱	90	61 - 133
Fluorene	ND		1910	1720		ug/Kg	✱	90	63 - 126
Hexachloroethane	ND		1910	1330		ug/Kg	✱	69	41 - 120
N-Nitrosodi-n-propylamine	ND		1910	1550		ug/Kg	✱	81	46 - 120
Pentachlorophenol	ND		3820	2840		ug/Kg	✱	74	33 - 136
Phenol	ND		1910	1630		ug/Kg	✱	85	36 - 120
Pyrene	ND		1910	1780		ug/Kg	✱	93	51 - 133

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5 (Surr)	78		34 - 132
Phenol-d5 (Surr)	86		11 - 120
p-Terphenyl-d14 (Surr)	92		65 - 153
2,4,6-Tribromophenol (Surr)	89		39 - 146
2-Fluorobiphenyl	81		37 - 120

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

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

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227849

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227550

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorophenol (Surr)	84		18 - 120

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227849

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227550

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene	ND		1900	1580		ug/Kg	☼	83	55 - 125	6	20
2-Chlorophenol	ND		1900	1500		ug/Kg	☼	79	38 - 120	4	25
4-Chloro-3-methylphenol	ND		1900	1580		ug/Kg	☼	83	49 - 125	6	27
4-Nitrophenol	ND		3810	2950		ug/Kg	☼	78	43 - 137	11	25
Acenaphthene	ND		1900	1480		ug/Kg	☼	78	53 - 120	7	35
Atrazine	ND		3810	3260		ug/Kg	☼	85	60 - 164	10	20
Bis(2-ethylhexyl) phthalate	ND		1900	1550		ug/Kg	☼	82	61 - 133	10	15
Fluorene	ND		1900	1600		ug/Kg	☼	84	63 - 126	7	15
Hexachloroethane	ND		1900	1270		ug/Kg	☼	67	41 - 120	4	46
N-Nitrosodi-n-propylamine	ND		1900	1500		ug/Kg	☼	79	46 - 120	3	31
Pentachlorophenol	ND		3810	2750		ug/Kg	☼	72	33 - 136	3	35
Phenol	ND		1900	1570		ug/Kg	☼	82	36 - 120	4	35
Pyrene	ND		1900	1530		ug/Kg	☼	80	51 - 133	15	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	76		34 - 132
Phenol-d5 (Surr)	83		11 - 120
p-Terphenyl-d14 (Surr)	78		65 - 153
2,4,6-Tribromophenol (Surr)	84		39 - 146
2-Fluorobiphenyl	76		37 - 120
2-Fluorophenol (Surr)	77		18 - 120

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-227551/1-A

Matrix: Solid

Analysis Batch: 227614

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227551

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.32	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
4,4'-DDE	ND		1.7	0.35	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
4,4'-DDT	ND		1.7	0.39	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Aldrin	ND		1.7	0.41	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
alpha-BHC	ND		1.7	0.30	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
alpha-Chlordane	ND		1.7	0.83	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
beta-BHC	ND		1.7	0.30	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
delta-BHC	ND		1.7	0.31	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Dieldrin	ND		1.7	0.40	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Endosulfan I	ND		1.7	0.32	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Endosulfan II	ND		1.7	0.30	ug/Kg		02/19/15 14:14	02/20/15 14:17	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-227551/1-A

Matrix: Solid

Analysis Batch: 227614

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227551

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan sulfate	ND		1.7	0.31	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Endrin	ND		1.7	0.33	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Endrin aldehyde	ND		1.7	0.43	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Endrin ketone	ND		1.7	0.41	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
gamma-BHC (Lindane)	ND		1.7	0.31	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
gamma-Chlordane	ND		1.7	0.53	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Heptachlor	ND		1.7	0.36	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Heptachlor epoxide	ND		1.7	0.43	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Methoxychlor	ND		1.7	0.34	ug/Kg		02/19/15 14:14	02/20/15 14:17	1
Toxaphene	ND		17	9.7	ug/Kg		02/19/15 14:14	02/20/15 14:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93		32 - 136	02/19/15 14:14	02/20/15 14:17	1
Tetrachloro-m-xylene	83		30 - 124	02/19/15 14:14	02/20/15 14:17	1

Lab Sample ID: LCS 480-227551/2-A

Matrix: Solid

Analysis Batch: 227614

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227551

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	16.4	15.9		ug/Kg		97	52 - 138
4,4'-DDE	16.4	15.1		ug/Kg		92	52 - 131
4,4'-DDT	16.4	14.2		ug/Kg		87	50 - 131
Aldrin	16.4	13.9		ug/Kg		85	35 - 120
alpha-BHC	16.4	13.6		ug/Kg		83	49 - 120
alpha-Chlordane	16.4	14.9		ug/Kg		91	40 - 133
beta-BHC	16.4	13.4		ug/Kg		82	52 - 127
delta-BHC	16.4	15.9		ug/Kg		97	45 - 123
Dieldrin	16.4	15.0		ug/Kg		92	50 - 131
Endosulfan I	16.4	14.2		ug/Kg		87	43 - 121
Endosulfan II	16.4	15.3		ug/Kg		93	48 - 134
Endosulfan sulfate	16.4	16.3		ug/Kg		100	46 - 144
Endrin	16.4	15.1		ug/Kg		93	46 - 134
Endrin aldehyde	16.4	15.5		ug/Kg		95	31 - 137
Endrin ketone	16.4	16.0		ug/Kg		98	44 - 140
gamma-BHC (Lindane)	16.4	14.0		ug/Kg		86	50 - 120
gamma-Chlordane	16.4	14.5		ug/Kg		88	52 - 129
Heptachlor	16.4	14.0		ug/Kg		86	51 - 121
Heptachlor epoxide	16.4	15.0		ug/Kg		92	52 - 129
Methoxychlor	16.4	16.9		ug/Kg		103	50 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	94		32 - 136
Tetrachloro-m-xylene	81		30 - 124

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227614

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227551

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		18.9	17.3		ug/Kg	☼	91	26 - 162
4,4'-DDE	ND		18.9	15.8		ug/Kg	☼	84	34 - 138
4,4'-DDT	ND		18.9	16.6		ug/Kg	☼	88	43 - 131
Aldrin	ND		18.9	16.6		ug/Kg	☼	88	37 - 125
alpha-BHC	0.61	J	18.9	15.1		ug/Kg	☼	77	39 - 117
alpha-Chlordane	ND		18.9	16.0		ug/Kg	☼	85	29 - 141
beta-BHC	ND		18.9	14.1		ug/Kg	☼	74	36 - 139
delta-BHC	ND		18.9	15.7		ug/Kg	☼	83	23 - 132
Dieldrin	ND		18.9	16.6		ug/Kg	☼	87	38 - 135
Endosulfan I	ND		18.9	15.7		ug/Kg	☼	83	39 - 128
Endosulfan II	ND		18.9	16.6		ug/Kg	☼	88	24 - 134
Endosulfan sulfate	ND		18.9	17.3		ug/Kg	☼	91	19 - 137
Endrin	ND		18.9	16.9		ug/Kg	☼	89	41 - 147
Endrin aldehyde	ND		18.9	16.4		ug/Kg	☼	86	20 - 120
Endrin ketone	ND		18.9	18.2		ug/Kg	☼	96	31 - 139
gamma-BHC (Lindane)	ND		18.9	15.9		ug/Kg	☼	84	50 - 120
gamma-Chlordane	ND		18.9	16.0		ug/Kg	☼	85	31 - 140
Heptachlor	ND		18.9	15.5		ug/Kg	☼	82	42 - 128
Heptachlor epoxide	ND		18.9	16.3		ug/Kg	☼	86	26 - 141
Methoxychlor	ND		18.9	20.1		ug/Kg	☼	106	44 - 157
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
DCB Decachlorobiphenyl	89		32 - 136						
Tetrachloro-m-xylene	76		30 - 124						

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227614

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227551

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		19.1	17.8		ug/Kg	☼	93	26 - 162	3	21
4,4'-DDE	ND		19.1	16.6		ug/Kg	☼	87	34 - 138	5	18
4,4'-DDT	ND		19.1	16.3		ug/Kg	☼	85	43 - 131	2	25
Aldrin	ND		19.1	16.7		ug/Kg	☼	87	37 - 125	0	12
alpha-BHC	0.61	J	19.1	15.8		ug/Kg	☼	79	39 - 117	4	15
alpha-Chlordane	ND		19.1	16.7		ug/Kg	☼	87	29 - 141	4	23
beta-BHC	ND		19.1	14.8		ug/Kg	☼	77	36 - 139	5	19
delta-BHC	ND		19.1	16.4		ug/Kg	☼	86	23 - 132	4	14
Dieldrin	ND		19.1	17.1		ug/Kg	☼	89	38 - 135	3	12
Endosulfan I	ND		19.1	16.2		ug/Kg	☼	85	39 - 128	3	18
Endosulfan II	ND		19.1	16.9		ug/Kg	☼	89	24 - 134	2	26
Endosulfan sulfate	ND		19.1	17.6		ug/Kg	☼	92	19 - 137	2	35
Endrin	ND		19.1	17.4		ug/Kg	☼	91	41 - 147	3	20
Endrin aldehyde	ND		19.1	16.0		ug/Kg	☼	84	20 - 120	2	47
Endrin ketone	ND		19.1	18.6		ug/Kg	☼	97	31 - 139	2	37
gamma-BHC (Lindane)	ND		19.1	16.4		ug/Kg	☼	86	50 - 120	3	12
gamma-Chlordane	ND		19.1	16.5		ug/Kg	☼	86	31 - 140	3	15
Heptachlor	ND		19.1	16.2		ug/Kg	☼	85	42 - 128	5	22

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227614

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227551

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	ND		19.1	17.2		ug/Kg	✱	90	26 - 141	6	15
Methoxychlor	ND		19.1	20.7		ug/Kg	✱	108	44 - 157	3	24
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
DCB Decachlorobiphenyl	94		32 - 136								
Tetrachloro-m-xylene	78		30 - 124								

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-227500/1-A

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.20	0.040	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
PCB-1221	ND		0.20	0.040	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
PCB-1232	ND		0.20	0.040	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
PCB-1242	ND		0.20	0.040	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
PCB-1248	ND		0.20	0.040	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
PCB-1254	ND		0.20	0.095	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
PCB-1260	ND		0.20	0.095	mg/Kg		02/19/15 11:01	02/20/15 15:42	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	108		46 - 175				02/19/15 11:01	02/20/15 15:42	1
DCB Decachlorobiphenyl	120		47 - 176				02/19/15 11:01	02/20/15 15:42	1

Lab Sample ID: LCS 480-227500/2-A

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.12	2.71		mg/Kg		128	51 - 185
PCB-1260	2.12	2.98		mg/Kg		141	61 - 184
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Tetrachloro-m-xylene	117		46 - 175				
DCB Decachlorobiphenyl	133		47 - 176				

Lab Sample ID: 480-75578-7 MS

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		2.42	2.97		mg/Kg	✱	123	42 - 159
PCB-1260	ND		2.42	3.29		mg/Kg	✱	136	47 - 153

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 480-75578-7 MS

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227500

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	117		46 - 175
DCB Decachlorobiphenyl	133		47 - 176

Lab Sample ID: 480-75578-7 MSD

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		2.68	2.97		mg/Kg	☼	111	42 - 159	0	50
PCB-1260	ND		2.68	3.19		mg/Kg	☼	119	47 - 153	3	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	109		46 - 175
DCB Decachlorobiphenyl	126		47 - 176

Lab Sample ID: MB 480-227507/1-A

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.047	mg/Kg		02/19/15 12:08	02/20/15 11:31	1
PCB-1221	ND		0.24	0.047	mg/Kg		02/19/15 12:08	02/20/15 11:31	1
PCB-1232	ND		0.24	0.047	mg/Kg		02/19/15 12:08	02/20/15 11:31	1
PCB-1242	ND		0.24	0.047	mg/Kg		02/19/15 12:08	02/20/15 11:31	1
PCB-1248	ND		0.24	0.047	mg/Kg		02/19/15 12:08	02/20/15 11:31	1
PCB-1254	ND		0.24	0.11	mg/Kg		02/19/15 12:08	02/20/15 11:31	1
PCB-1260	ND		0.24	0.11	mg/Kg		02/19/15 12:08	02/20/15 11:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	106		46 - 175	02/19/15 12:08	02/20/15 11:31	1
DCB Decachlorobiphenyl	120		47 - 176	02/19/15 12:08	02/20/15 11:31	1

Lab Sample ID: LCS 480-227507/2-A

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.13	2.75		mg/Kg		129	51 - 185
PCB-1260	2.13	3.03		mg/Kg		142	61 - 184

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	119		46 - 175
DCB Decachlorobiphenyl	133		47 - 176

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227507

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		2.35	2.96		mg/Kg	☼	126	42 - 159
PCB-1260	ND		2.35	3.31		mg/Kg	☼	141	47 - 153
Surrogate	MS %Recovery	MS Qualifier	Limits						
Tetrachloro-m-xylene	118		46 - 175						
DCB Decachlorobiphenyl	136		47 - 176						

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227665

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227507

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		2.77	3.54		mg/Kg	☼	128	42 - 159	18	50
PCB-1260	ND		2.77	3.87		mg/Kg	☼	139	47 - 153	16	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Tetrachloro-m-xylene	119		46 - 175								
DCB Decachlorobiphenyl	134		47 - 176								

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-227459/1-A

Matrix: Solid

Analysis Batch: 227739

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227459

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		17	5.3	ug/Kg		02/19/15 09:07	02/20/15 20:43	1
Silvex (2,4,5-TP)	ND		17	5.9	ug/Kg		02/19/15 09:07	02/20/15 20:43	1
2,4-D	ND		17	10	ug/Kg		02/19/15 09:07	02/20/15 20:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	79		39 - 120				02/19/15 09:07	02/20/15 20:43	1

Lab Sample ID: LCS 480-227459/2-A

Matrix: Solid

Analysis Batch: 227739

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	65.1	63.5		ug/Kg		98	42 - 127
Silvex (2,4,5-TP)	65.1	52.2		ug/Kg		80	42 - 149
2,4-D	65.1	63.3		ug/Kg		97	47 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4-Dichlorophenylacetic acid	70		39 - 120				

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227739

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227459

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		75.8	63.3		ug/Kg	✱	84	16 - 135
Silvex (2,4,5-TP)	ND		75.8	56.4		ug/Kg	✱	74	32 - 125
2,4-D	ND		75.8	71.9		ug/Kg	✱	95	46 - 120
Surrogate	MS %Recovery	MS Qualifier	Limits						
2,4-Dichlorophenylacetic acid	56		39 - 120						

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227739

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227459

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		76.3	79.5		ug/Kg	✱	104	16 - 135	23	50
Silvex (2,4,5-TP)	ND		76.3	75.9		ug/Kg	✱	100	32 - 125	30	50
2,4-D	ND		76.3	76.1		ug/Kg	✱	100	46 - 120	6	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
2,4-Dichlorophenylacetic acid	74		39 - 120								

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-227493/1-A

Matrix: Solid

Analysis Batch: 227907

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227493

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		1.9		mg/Kg		02/19/15 15:35	02/20/15 13:57	1

Lab Sample ID: MB 480-227493/1-A

Matrix: Solid

Analysis Batch: 227840

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227493

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		9.4		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Antimony	ND		14.1		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Arsenic	ND		1.9		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Barium	ND		0.47		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Beryllium	ND		0.19		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Cadmium	ND		0.19		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Calcium	ND		46.8		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Chromium	ND		0.47		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Cobalt	ND		0.47		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Copper	ND		0.94		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Iron	ND		9.4		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Lead	ND		0.94		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Magnesium	ND		18.7		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Manganese	ND		0.19		mg/Kg		02/19/15 15:35	02/21/15 17:19	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-227493/1-A

Matrix: Solid

Analysis Batch: 227840

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227493

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		4.7		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Potassium	ND		28.1		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Selenium	ND		3.7		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Silver	ND		0.56		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Sodium	ND		131		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Thallium	ND		5.6		mg/Kg		02/19/15 15:35	02/21/15 17:19	1
Vanadium	ND		0.47		mg/Kg		02/19/15 15:35	02/21/15 17:19	1

Lab Sample ID: LCSSRM 480-227493/2-A

Matrix: Solid

Analysis Batch: 227907

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	309	291.2		mg/Kg		94.3	71.9 - 128.4

Lab Sample ID: LCSSRM 480-227493/2-A

Matrix: Solid

Analysis Batch: 227840

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8820	8325		mg/Kg		94.3	41.6 - 157.9
Antimony	109	109.9		mg/Kg		100.8	23.0 - 254.6
Arsenic	152	140.5		mg/Kg		92.1	70.9 - 129.8
Barium	265	258.4		mg/Kg		97.7	73.7 - 126.3
Beryllium	150	129.3		mg/Kg		85.9	67.0 - 111.4
Cadmium	153	139.1		mg/Kg		90.6	73.0 - 126.3
Calcium	6460	6202		mg/Kg		96.0	73.9 - 125.9
Chromium	118	109.1		mg/Kg		92.4	69.7 - 129.9
Cobalt	69.4	74.24		mg/Kg		107.0	74.4 - 125.8
Copper	69.3	65.88		mg/Kg		95.1	73.2 - 129.2
Iron	12400	11800		mg/Kg		95.0	30.5 - 169.9
Lead	256	261.6		mg/Kg		102.0	75.6 - 124.8
Magnesium	3630	3337		mg/Kg		91.8	68.3 - 131.7
Manganese	568	538.7		mg/Kg		94.8	77.4 - 122.6
Nickel	318	331.7		mg/Kg		104.3	74.3 - 126.7
Potassium	3070	2981		mg/Kg		97.1	62.5 - 137.2

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 480-227493/2-A

Matrix: Solid

Analysis Batch: 227840

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	164	155.1		mg/Kg		94.8	67.3 - 132.1
Silver	44.7	42.59		mg/Kg		95.2	66.4 - 133.9
Sodium	753	711.1		mg/Kg		94.4	56.8 - 143.4
Thallium	262	279.8		mg/Kg		107.0	69.5 - 130.5
Vanadium	117	111.8		mg/Kg		95.4	67.5 - 131.9

Lab Sample ID: 480-75578-7 MS

Matrix: Solid

Analysis Batch: 227907

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	ND		48.2	43.82		mg/Kg	⚠	91	75 - 125
Zinc	59.6		48.2	101.7		mg/Kg	⚠	87	75 - 125

Lab Sample ID: 480-75578-7 MS

Matrix: Solid

Analysis Batch: 227840

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8360		2410	14770	F1	mg/Kg	⚠	266	75 - 125
Antimony	ND		48.2	34.87	F1	mg/Kg	⚠	72	75 - 125
Arsenic	5.5		48.2	49.30		mg/Kg	⚠	91	75 - 125
Barium	583		48.2	93.77	4	mg/Kg	⚠	-1016	75 - 125
Beryllium	0.47		48.2	43.72		mg/Kg	⚠	90	75 - 125
Cadmium	0.22		48.2	43.69		mg/Kg	⚠	90	75 - 125
Calcium	2360		2410	44580	F1	mg/Kg	⚠	1752	75 - 125
Chromium	12.2		48.2	56.94		mg/Kg	⚠	93	75 - 125
Cobalt	8.4		48.2	54.98		mg/Kg	⚠	97	75 - 125
Copper	20.4		48.2	94.42	F1	mg/Kg	⚠	154	75 - 125
Iron	19000		2410	15930	4	mg/Kg	⚠	-129	75 - 125
Lead	451		48.2	61.17	4	mg/Kg	⚠	-809	75 - 125
Magnesium	3110		2410	5210		mg/Kg	⚠	87	75 - 125
Manganese	414		48.2	270.3	4	mg/Kg	⚠	-297	75 - 125
Nickel	25.1		48.2	65.70		mg/Kg	⚠	84	75 - 125
Potassium	834		2410	4305	F1	mg/Kg	⚠	144	75 - 125
Selenium	ND		48.2	44.15		mg/Kg	⚠	92	75 - 125
Silver	ND		12.0	11.36		mg/Kg	⚠	94	75 - 125
Sodium	ND		2410	2311		mg/Kg	⚠	92	75 - 125
Vanadium	16.5		48.2	71.95		mg/Kg	⚠	115	75 - 125

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-75578-7 MSD

Matrix: Solid

Analysis Batch: 227907

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thallium	ND		47.4	42.81		mg/Kg	☼	90	75 - 125	2	20
Zinc	59.6		47.4	96.02		mg/Kg	☼	77	75 - 125	6	20

Lab Sample ID: 480-75578-7 MSD

Matrix: Solid

Analysis Batch: 227840

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227493

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	8360		2370	18360	F1 F2	mg/Kg	☼	422	75 - 125	22	20
Antimony	ND		47.4	28.05	F1 F2	mg/Kg	☼	59	75 - 125	22	20
Arsenic	5.5		47.4	49.03		mg/Kg	☼	92	75 - 125	1	20
Barium	583		47.4	116.5	4 F2	mg/Kg	☼	-984	75 - 125	22	20
Beryllium	0.47		47.4	41.27		mg/Kg	☼	86	75 - 125	6	20
Cadmium	0.22		47.4	41.06		mg/Kg	☼	86	75 - 125	6	20
Calcium	2360		2370	30600	F1 F2	mg/Kg	☼	1191	75 - 125	37	20
Chromium	12.2		47.4	58.82		mg/Kg	☼	98	75 - 125	3	20
Cobalt	8.4		47.4	60.61		mg/Kg	☼	110	75 - 125	10	20
Copper	20.4		47.4	121.7	F1 F2	mg/Kg	☼	214	75 - 125	25	20
Iron	19000		2370	25880	4 F2	mg/Kg	☼	288	75 - 125	48	20
Lead	451		47.4	68.27	4	mg/Kg	☼	-808	75 - 125	11	20
Magnesium	3110		2370	6863	F1 F2	mg/Kg	☼	158	75 - 125	27	20
Manganese	414		47.4	616.5	4 F2	mg/Kg	☼	428	75 - 125	78	20
Nickel	25.1		47.4	71.52		mg/Kg	☼	98	75 - 125	8	20
Potassium	834		2370	4919	F1	mg/Kg	☼	172	75 - 125	13	20
Selenium	ND		47.4	40.78		mg/Kg	☼	86	75 - 125	8	20
Silver	ND		11.9	10.53		mg/Kg	☼	89	75 - 125	8	20
Sodium	ND		2370	2215		mg/Kg	☼	90	75 - 125	4	20
Vanadium	16.5		47.4	73.59		mg/Kg	☼	120	75 - 125	2	20

Lab Sample ID: MB 480-227499/1-A

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227499

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10.1		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Antimony	ND		15.1		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Arsenic	ND		2.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Barium	ND		0.50		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Beryllium	ND		0.20		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Cadmium	ND		0.20		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Calcium	ND		50.4		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Chromium	ND		0.50		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Cobalt	ND		0.50		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Copper	ND		1.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Iron	ND ^		10.1		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Lead	ND		1.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Magnesium	ND		20.1		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Manganese	ND ^		0.20		mg/Kg		02/19/15 15:35	02/20/15 13:06	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-227499/1-A

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227499

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		5.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Potassium	ND		30.2		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Selenium	ND		4.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Silver	ND		0.60		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Sodium	ND		141		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Thallium	ND		6.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Vanadium	ND		0.50		mg/Kg		02/19/15 15:35	02/20/15 13:06	1
Zinc	ND		2.0		mg/Kg		02/19/15 15:35	02/20/15 13:06	1

Lab Sample ID: LCSSRM 480-227499/2-A

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227499

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8850	7392		mg/Kg		83.6	41.6 - 157.9
Antimony	109	108.5		mg/Kg		99.3	23.0 - 254.6
Arsenic	153	142.4		mg/Kg		93.1	70.9 - 129.8
Barium	265	255.3		mg/Kg		96.3	73.7 - 126.3
Beryllium	151	121.9		mg/Kg		80.8	67.0 - 111.4
Cadmium	154	136.8		mg/Kg		88.9	73.0 - 126.3
Calcium	6480	5777		mg/Kg		89.2	73.9 - 125.9
Chromium	118	114.1		mg/Kg		96.4	69.7 - 129.9
Cobalt	69.5	69.46		mg/Kg		99.9	74.4 - 125.8
Copper	69.4	67.81		mg/Kg		97.6	73.2 - 129.2
Iron	12500	10340	^	mg/Kg		83.0	30.5 - 169.9
Lead	257	244.0		mg/Kg		94.9	75.6 - 124.8
Magnesium	3640	3164		mg/Kg		86.8	68.3 - 131.7
Manganese	570	538.6	^	mg/Kg		94.5	77.4 - 122.6
Nickel	319	332.8		mg/Kg		104.4	74.3 - 126.7
Potassium	3080	2746		mg/Kg		89.2	62.5 - 137.2
Selenium	164	150.6		mg/Kg		91.9	67.3 - 132.1
Silver	44.8	42.80		mg/Kg		95.4	66.4 - 133.9
Sodium	755	757.6		mg/Kg		100.3	56.8 - 143.4

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 480-227499/2-A

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227499

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	262	257.9		mg/Kg		98.4	69.5 - 130.5
Vanadium	117	109.1		mg/Kg		92.9	67.5 - 131.9
Zinc	310	281.6		mg/Kg		90.9	71.9 - 128.4

Lab Sample ID: 480-75578-23 MS

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	6320		2350	7276	F1	mg/Kg	☼	41	75 - 125
Antimony	ND		46.9	40.08		mg/Kg	☼	85	75 - 125
Arsenic	3.7		46.9	46.98		mg/Kg	☼	92	75 - 125
Barium	84.0		46.9	61.60	F1 ^	mg/Kg	☼	-48	75 - 125
Beryllium	0.37		46.9	41.22		mg/Kg	☼	87	75 - 125
Cadmium	ND		46.9	41.46		mg/Kg	☼	88	75 - 125
Calcium	24700		2350	24680	4	mg/Kg	☼	-2	75 - 125
Chromium	8.1		46.9	50.92		mg/Kg	☼	91	75 - 125
Cobalt	4.6		46.9	48.47		mg/Kg	☼	93	75 - 125
Copper	66.0		46.9	54.19	F1	mg/Kg	☼	-25	75 - 125
Iron	9040 ^		2350	9891	^ F1	mg/Kg	☼	36	75 - 125
Lead	122		46.9	52.17	F1	mg/Kg	☼	-149	75 - 125
Magnesium	4250		2350	6409		mg/Kg	☼	92	75 - 125
Manganese	341 ^		46.9	279.6	^ 4	mg/Kg	☼	-132	75 - 125
Nickel	12.0		46.9	54.37		mg/Kg	☼	90	75 - 125
Potassium	786		2350	3102		mg/Kg	☼	99	75 - 125
Selenium	ND		46.9	43.45		mg/Kg	☼	93	75 - 125
Silver	ND		11.7	11.08		mg/Kg	☼	94	75 - 125
Sodium	661		2350	2740		mg/Kg	☼	88	75 - 125
Thallium	ND		46.9	43.83		mg/Kg	☼	93	75 - 125
Vanadium	10.2		46.9	54.48		mg/Kg	☼	94	75 - 125
Zinc	41.2		46.9	66.90	F1	mg/Kg	☼	55	75 - 125

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227499

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	6320		2300	8190		mg/Kg	☼	81	75 - 125	12	20
Antimony	ND		45.9	37.20		mg/Kg	☼	81	75 - 125	7	20
Arsenic	3.7		45.9	46.07		mg/Kg	☼	92	75 - 125	2	20
Barium	84.0		45.9	104.8	F1 F2 ^	mg/Kg	☼	45	75 - 125	52	20
Beryllium	0.37		45.9	39.66		mg/Kg	☼	86	75 - 125	4	20
Cadmium	ND		45.9	39.78		mg/Kg	☼	86	75 - 125	4	20
Calcium	24700		2300	21920	4	mg/Kg	☼	-123	75 - 125	12	20
Chromium	8.1		45.9	49.78		mg/Kg	☼	91	75 - 125	2	20
Cobalt	4.6		45.9	47.66		mg/Kg	☼	94	75 - 125	2	20

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-75578-23 MSD

Matrix: Solid

Analysis Batch: 227796

Client Sample ID: SB-108 (1-4)

Prep Type: Total/NA

Prep Batch: 227499

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	66.0		45.9	56.54	F1	mg/Kg	✱	-21	75 - 125	4	20
Iron	9040	^	2300	11920	^	mg/Kg	✱	125	75 - 125	19	20
Lead	122		45.9	75.62	F1 F2	mg/Kg	✱	-101	75 - 125	37	20
Magnesium	4250		2300	5466	F1	mg/Kg	✱	53	75 - 125	16	20
Manganese	341	^	45.9	361.6	^ 4 F2	mg/Kg	✱	44	75 - 125	26	20
Nickel	12.0		45.9	54.84		mg/Kg	✱	93	75 - 125	1	20
Potassium	786		2300	3241		mg/Kg	✱	107	75 - 125	4	20
Selenium	ND		45.9	41.21		mg/Kg	✱	90	75 - 125	5	20
Silver	ND		11.5	10.47		mg/Kg	✱	91	75 - 125	6	20
Sodium	661		2300	3241		mg/Kg	✱	112	75 - 125	17	20
Thallium	ND		45.9	42.18		mg/Kg	✱	92	75 - 125	4	20
Vanadium	10.2		45.9	52.80		mg/Kg	✱	93	75 - 125	3	20
Zinc	41.2		45.9	90.16	F2	mg/Kg	✱	107	75 - 125	30	20

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 480-227449/1-A

Matrix: Solid

Analysis Batch: 227524

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227449

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021		mg/Kg		02/19/15 09:55	02/19/15 11:46	1

Lab Sample ID: LCSSRM 480-227449/2-A

Matrix: Solid

Analysis Batch: 227524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 227449

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.76	5.64		mg/Kg		97.9	51.0 - 148.8

Lab Sample ID: 480-75578-7 MS

Matrix: Solid

Analysis Batch: 227524

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227449

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.066		0.379	0.387		mg/Kg	✱	85	80 - 120

Lab Sample ID: 480-75578-7 MSD

Matrix: Solid

Analysis Batch: 227524

Client Sample ID: SB-112 (2-6)

Prep Type: Total/NA

Prep Batch: 227449

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.066		0.382	0.392		mg/Kg	✱	86	80 - 120	1	20

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique) (Continued)

Lab Sample ID: MB 480-227450/1-A
Matrix: Solid
Analysis Batch: 227524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.018		mg/Kg		02/19/15 09:55	02/19/15 12:20	1

Lab Sample ID: LCSSRM 480-227450/2-A
Matrix: Solid
Analysis Batch: 227524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227450

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.76	5.24		mg/Kg		91.0	51.0 - 148. 8

Lab Sample ID: 480-75578-23 MS
Matrix: Solid
Analysis Batch: 227524

Client Sample ID: SB-108 (1-4)
Prep Type: Total/NA
Prep Batch: 227450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.038		0.356	0.355		mg/Kg	✱	89	80 - 120

Lab Sample ID: 480-75578-23 MSD
Matrix: Solid
Analysis Batch: 227524

Client Sample ID: SB-108 (1-4)
Prep Type: Total/NA
Prep Batch: 227450

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.038		0.385	0.400		mg/Kg	✱	94	80 - 120	12	20

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

GC/MS VOA

Analysis Batch: 227386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-3	SB-110 (10-16)	Total/NA	Solid	8260C	227392
480-75578-9	SB-106 (4-8)	Total/NA	Solid	8260C	227392
480-75578-10	SB-106 (8-16)	Total/NA	Solid	8260C	227392
480-75578-15	SB-102 (2-8)	Total/NA	Solid	8260C	227392
480-75578-18	SB-104 (0-4)	Total/NA	Solid	8260C	227392
480-75578-19	BLIND DUP	Total/NA	Solid	8260C	227392
480-75578-23	SB-108 (1-4)	Total/NA	Solid	8260C	227392
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	8260C	227392
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	8260C	227392
LCS 480-227392/1-A	Lab Control Sample	Total/NA	Solid	8260C	227392
MB 480-227392/2-A	Method Blank	Total/NA	Solid	8260C	227392

Prep Batch: 227392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-3	SB-110 (10-16)	Total/NA	Solid	5035A	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	5035A	
480-75578-10	SB-106 (8-16)	Total/NA	Solid	5035A	
480-75578-15	SB-102 (2-8)	Total/NA	Solid	5035A	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	5035A	
480-75578-19	BLIND DUP	Total/NA	Solid	5035A	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	5035A	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	5035A	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	5035A	
LCS 480-227392/1-A	Lab Control Sample	Total/NA	Solid	5035A	
MB 480-227392/2-A	Method Blank	Total/NA	Solid	5035A	

GC/MS Semi VOA

Prep Batch: 227544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	3550C	
480-75578-2	SB-110 (4-10)	Total/NA	Solid	3550C	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	3550C	
480-75578-4	BLIND DUP 2	Total/NA	Solid	3550C	
480-75578-5	SB-111 (6-9)	Total/NA	Solid	3550C	
480-75578-6	SB-112 (0-2)	Total/NA	Solid	3550C	
480-75578-7	SB-112 (2-6)	Total/NA	Solid	3550C	
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	3550C	
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	3550C	
480-75578-8	SB-113 (2-6)	Total/NA	Solid	3550C	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	3550C	
480-75578-10	SB-106 (8-16)	Total/NA	Solid	3550C	
480-75578-11	SB-107 (0-4)	Total/NA	Solid	3550C	
480-75578-12	SB-107 (4-8)	Total/NA	Solid	3550C	
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	3550C	
480-75578-14	SB-102 (0-2)	Total/NA	Solid	3550C	
480-75578-15	SB-102 (2-8)	Total/NA	Solid	3550C	
LCS 480-227544/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-227544/1-A	Method Blank	Total/NA	Solid	3550C	

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

GC/MS Semi VOA (Continued)

Prep Batch: 227550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-16	SB-103 (2-8)	Total/NA	Solid	3550C	
480-75578-17	SB-103 (8-16)	Total/NA	Solid	3550C	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	3550C	
480-75578-19	BLIND DUP	Total/NA	Solid	3550C	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	3550C	
480-75578-21	SB-105 (0-2)	Total/NA	Solid	3550C	
480-75578-22	SB-105 (2-8)	Total/NA	Solid	3550C	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-24	SB-108 (4-16)	Total/NA	Solid	3550C	
LCS 480-227550/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-227550/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 227725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	8270D	227544
480-75578-2	SB-110 (4-10)	Total/NA	Solid	8270D	227544
480-75578-3	SB-110 (10-16)	Total/NA	Solid	8270D	227544
480-75578-4	BLIND DUP 2	Total/NA	Solid	8270D	227544
480-75578-5	SB-111 (6-9)	Total/NA	Solid	8270D	227544
480-75578-6	SB-112 (0-2)	Total/NA	Solid	8270D	227544
480-75578-7	SB-112 (2-6)	Total/NA	Solid	8270D	227544
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	8270D	227544
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	8270D	227544
480-75578-8	SB-113 (2-6)	Total/NA	Solid	8270D	227544
480-75578-9	SB-106 (4-8)	Total/NA	Solid	8270D	227544
480-75578-10	SB-106 (8-16)	Total/NA	Solid	8270D	227544
480-75578-11	SB-107 (0-4)	Total/NA	Solid	8270D	227544
480-75578-12	SB-107 (4-8)	Total/NA	Solid	8270D	227544
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	8270D	227544
480-75578-14	SB-102 (0-2)	Total/NA	Solid	8270D	227544
480-75578-15	SB-102 (2-8)	Total/NA	Solid	8270D	227544
LCS 480-227544/2-A	Lab Control Sample	Total/NA	Solid	8270D	227544
MB 480-227544/1-A	Method Blank	Total/NA	Solid	8270D	227544

Analysis Batch: 227849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-16	SB-103 (2-8)	Total/NA	Solid	8270D	227550
480-75578-17	SB-103 (8-16)	Total/NA	Solid	8270D	227550
480-75578-18	SB-104 (0-4)	Total/NA	Solid	8270D	227550
480-75578-19	BLIND DUP	Total/NA	Solid	8270D	227550
480-75578-20	SB-104 (4-8)	Total/NA	Solid	8270D	227550
480-75578-21	SB-105 (0-2)	Total/NA	Solid	8270D	227550
480-75578-22	SB-105 (2-8)	Total/NA	Solid	8270D	227550
480-75578-23	SB-108 (1-4)	Total/NA	Solid	8270D	227550
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	8270D	227550
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	8270D	227550
480-75578-24	SB-108 (4-16)	Total/NA	Solid	8270D	227550
LCS 480-227550/2-A	Lab Control Sample	Total/NA	Solid	8270D	227550
MB 480-227550/1-A	Method Blank	Total/NA	Solid	8270D	227550

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

GC Semi VOA

Prep Batch: 227459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-2	SB-110 (4-10)	Total/NA	Solid	8151A	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	8151A	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	8151A	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	8151A	
480-75578-19	BLIND DUP	Total/NA	Solid	8151A	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	8151A	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	8151A	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	8151A	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	8151A	
LCS 480-227459/2-A	Lab Control Sample	Total/NA	Solid	8151A	
MB 480-227459/1-A	Method Blank	Total/NA	Solid	8151A	

Prep Batch: 227500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	3550C	
480-75578-2	SB-110 (4-10)	Total/NA	Solid	3550C	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	3550C	
480-75578-4	BLIND DUP 2	Total/NA	Solid	3550C	
480-75578-5	SB-111 (6-9)	Total/NA	Solid	3550C	
480-75578-6	SB-112 (0-2)	Total/NA	Solid	3550C	
480-75578-7	SB-112 (2-6)	Total/NA	Solid	3550C	
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	3550C	
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	3550C	
480-75578-8	SB-113 (2-6)	Total/NA	Solid	3550C	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	3550C	
480-75578-10	SB-106 (8-16)	Total/NA	Solid	3550C	
480-75578-11	SB-107 (0-4)	Total/NA	Solid	3550C	
480-75578-12	SB-107 (4-8)	Total/NA	Solid	3550C	
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	3550C	
480-75578-14	SB-102 (0-2)	Total/NA	Solid	3550C	
480-75578-15	SB-102 (2-8)	Total/NA	Solid	3550C	
480-75578-16	SB-103 (2-8)	Total/NA	Solid	3550C	
LCS 480-227500/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-227500/1-A	Method Blank	Total/NA	Solid	3550C	

Prep Batch: 227507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-17	SB-103 (8-16)	Total/NA	Solid	3550C	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	3550C	
480-75578-19	BLIND DUP	Total/NA	Solid	3550C	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	3550C	
480-75578-21	SB-105 (0-2)	Total/NA	Solid	3550C	
480-75578-22	SB-105 (2-8)	Total/NA	Solid	3550C	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-24	SB-108 (4-16)	Total/NA	Solid	3550C	
LCS 480-227507/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-227507/1-A	Method Blank	Total/NA	Solid	3550C	

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

GC Semi VOA (Continued)

Prep Batch: 227551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-2	SB-110 (4-10)	Total/NA	Solid	3550C	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	3550C	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	3550C	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	3550C	
480-75578-19	BLIND DUP	Total/NA	Solid	3550C	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	3550C	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	3550C	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	3550C	
LCS 480-227551/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-227551/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 227614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-2	SB-110 (4-10)	Total/NA	Solid	8081B	227551
480-75578-3	SB-110 (10-16)	Total/NA	Solid	8081B	227551
480-75578-9	SB-106 (4-8)	Total/NA	Solid	8081B	227551
480-75578-18	SB-104 (0-4)	Total/NA	Solid	8081B	227551
480-75578-19	BLIND DUP	Total/NA	Solid	8081B	227551
480-75578-20	SB-104 (4-8)	Total/NA	Solid	8081B	227551
480-75578-23	SB-108 (1-4)	Total/NA	Solid	8081B	227551
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	8081B	227551
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	8081B	227551
LCS 480-227551/2-A	Lab Control Sample	Total/NA	Solid	8081B	227551
MB 480-227551/1-A	Method Blank	Total/NA	Solid	8081B	227551

Analysis Batch: 227665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	8082A	227500
480-75578-2	SB-110 (4-10)	Total/NA	Solid	8082A	227500
480-75578-3	SB-110 (10-16)	Total/NA	Solid	8082A	227500
480-75578-4	BLIND DUP 2	Total/NA	Solid	8082A	227500
480-75578-5	SB-111 (6-9)	Total/NA	Solid	8082A	227500
480-75578-6	SB-112 (0-2)	Total/NA	Solid	8082A	227500
480-75578-7	SB-112 (2-6)	Total/NA	Solid	8082A	227500
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	8082A	227500
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	8082A	227500
480-75578-8	SB-113 (2-6)	Total/NA	Solid	8082A	227500
480-75578-9	SB-106 (4-8)	Total/NA	Solid	8082A	227500
480-75578-10	SB-106 (8-16)	Total/NA	Solid	8082A	227500
480-75578-11	SB-107 (0-4)	Total/NA	Solid	8082A	227500
480-75578-12	SB-107 (4-8)	Total/NA	Solid	8082A	227500
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	8082A	227500
480-75578-14	SB-102 (0-2)	Total/NA	Solid	8082A	227500
480-75578-15	SB-102 (2-8)	Total/NA	Solid	8082A	227500
480-75578-16	SB-103 (2-8)	Total/NA	Solid	8082A	227500
480-75578-17	SB-103 (8-16)	Total/NA	Solid	8082A	227507
480-75578-18	SB-104 (0-4)	Total/NA	Solid	8082A	227507
480-75578-19	BLIND DUP	Total/NA	Solid	8082A	227507
480-75578-20	SB-104 (4-8)	Total/NA	Solid	8082A	227507
480-75578-21	SB-105 (0-2)	Total/NA	Solid	8082A	227507

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

GC Semi VOA (Continued)

Analysis Batch: 227665 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-22	SB-105 (2-8)	Total/NA	Solid	8082A	227507
480-75578-23	SB-108 (1-4)	Total/NA	Solid	8082A	227507
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	8082A	227507
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	8082A	227507
480-75578-24	SB-108 (4-16)	Total/NA	Solid	8082A	227507
LCS 480-227500/2-A	Lab Control Sample	Total/NA	Solid	8082A	227500
LCS 480-227507/2-A	Lab Control Sample	Total/NA	Solid	8082A	227507
MB 480-227500/1-A	Method Blank	Total/NA	Solid	8082A	227500
MB 480-227507/1-A	Method Blank	Total/NA	Solid	8082A	227507

Analysis Batch: 227739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-3	SB-110 (10-16)	Total/NA	Solid	8151A	227459
480-75578-9	SB-106 (4-8)	Total/NA	Solid	8151A	227459
480-75578-18	SB-104 (0-4)	Total/NA	Solid	8151A	227459
480-75578-20	SB-104 (4-8)	Total/NA	Solid	8151A	227459
480-75578-23	SB-108 (1-4)	Total/NA	Solid	8151A	227459
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	8151A	227459
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	8151A	227459
LCS 480-227459/2-A	Lab Control Sample	Total/NA	Solid	8151A	227459
MB 480-227459/1-A	Method Blank	Total/NA	Solid	8151A	227459

Analysis Batch: 227869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-2	SB-110 (4-10)	Total/NA	Solid	8151A	227459
480-75578-19	BLIND DUP	Total/NA	Solid	8151A	227459

Metals

Prep Batch: 227449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	7471B	
480-75578-2	SB-110 (4-10)	Total/NA	Solid	7471B	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	7471B	
480-75578-4	BLIND DUP 2	Total/NA	Solid	7471B	
480-75578-5	SB-111 (6-9)	Total/NA	Solid	7471B	
480-75578-6	SB-112 (0-2)	Total/NA	Solid	7471B	
480-75578-7	SB-112 (2-6)	Total/NA	Solid	7471B	
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	7471B	
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	7471B	
480-75578-8	SB-113 (2-6)	Total/NA	Solid	7471B	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	7471B	
480-75578-10	SB-106 (8-16)	Total/NA	Solid	7471B	
480-75578-11	SB-107 (0-4)	Total/NA	Solid	7471B	
480-75578-12	SB-107 (4-8)	Total/NA	Solid	7471B	
LCSSRM 480-227449/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 480-227449/1-A	Method Blank	Total/NA	Solid	7471B	

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Metals (Continued)

Prep Batch: 227450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	7471B	
480-75578-14	SB-102 (0-2)	Total/NA	Solid	7471B	
480-75578-15	SB-102 (2-8)	Total/NA	Solid	7471B	
480-75578-16	SB-103 (2-8)	Total/NA	Solid	7471B	
480-75578-17	SB-103 (8-16)	Total/NA	Solid	7471B	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	7471B	
480-75578-19	BLIND DUP	Total/NA	Solid	7471B	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	7471B	
480-75578-21	SB-105 (0-2)	Total/NA	Solid	7471B	
480-75578-22	SB-105 (2-8)	Total/NA	Solid	7471B	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	7471B	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	7471B	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	7471B	
480-75578-24	SB-108 (4-16)	Total/NA	Solid	7471B	
LCSSRM 480-227450/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 480-227450/1-A	Method Blank	Total/NA	Solid	7471B	

Prep Batch: 227493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	3050B	
480-75578-2	SB-110 (4-10)	Total/NA	Solid	3050B	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	3050B	
480-75578-4	BLIND DUP 2	Total/NA	Solid	3050B	
480-75578-5	SB-111 (6-9)	Total/NA	Solid	3050B	
480-75578-6	SB-112 (0-2)	Total/NA	Solid	3050B	
480-75578-7	SB-112 (2-6)	Total/NA	Solid	3050B	
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	3050B	
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	3050B	
480-75578-8	SB-113 (2-6)	Total/NA	Solid	3050B	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	3050B	
480-75578-10	SB-106 (8-16)	Total/NA	Solid	3050B	
480-75578-11	SB-107 (0-4)	Total/NA	Solid	3050B	
480-75578-12	SB-107 (4-8)	Total/NA	Solid	3050B	
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	3050B	
480-75578-14	SB-102 (0-2)	Total/NA	Solid	3050B	
480-75578-15	SB-102 (2-8)	Total/NA	Solid	3050B	
480-75578-16	SB-103 (2-8)	Total/NA	Solid	3050B	
480-75578-17	SB-103 (8-16)	Total/NA	Solid	3050B	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	3050B	
480-75578-19	BLIND DUP	Total/NA	Solid	3050B	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	3050B	
LCSSRM 480-227493/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 480-227493/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 227499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-21	SB-105 (0-2)	Total/NA	Solid	3050B	
480-75578-22	SB-105 (2-8)	Total/NA	Solid	3050B	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	3050B	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	3050B	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	3050B	

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Metals (Continued)

Prep Batch: 227499 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-24	SB-108 (4-16)	Total/NA	Solid	3050B	
LCSSRM 480-227499/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 480-227499/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 227524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	7471B	227449
480-75578-2	SB-110 (4-10)	Total/NA	Solid	7471B	227449
480-75578-3	SB-110 (10-16)	Total/NA	Solid	7471B	227449
480-75578-4	BLIND DUP 2	Total/NA	Solid	7471B	227449
480-75578-5	SB-111 (6-9)	Total/NA	Solid	7471B	227449
480-75578-6	SB-112 (0-2)	Total/NA	Solid	7471B	227449
480-75578-7	SB-112 (2-6)	Total/NA	Solid	7471B	227449
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	7471B	227449
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	7471B	227449
480-75578-8	SB-113 (2-6)	Total/NA	Solid	7471B	227449
480-75578-9	SB-106 (4-8)	Total/NA	Solid	7471B	227449
480-75578-10	SB-106 (8-16)	Total/NA	Solid	7471B	227449
480-75578-11	SB-107 (0-4)	Total/NA	Solid	7471B	227449
480-75578-12	SB-107 (4-8)	Total/NA	Solid	7471B	227449
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	7471B	227450
480-75578-14	SB-102 (0-2)	Total/NA	Solid	7471B	227450
480-75578-15	SB-102 (2-8)	Total/NA	Solid	7471B	227450
480-75578-16	SB-103 (2-8)	Total/NA	Solid	7471B	227450
480-75578-17	SB-103 (8-16)	Total/NA	Solid	7471B	227450
480-75578-18	SB-104 (0-4)	Total/NA	Solid	7471B	227450
480-75578-19	BLIND DUP	Total/NA	Solid	7471B	227450
480-75578-20	SB-104 (4-8)	Total/NA	Solid	7471B	227450
480-75578-21	SB-105 (0-2)	Total/NA	Solid	7471B	227450
480-75578-22	SB-105 (2-8)	Total/NA	Solid	7471B	227450
480-75578-23	SB-108 (1-4)	Total/NA	Solid	7471B	227450
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	7471B	227450
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	7471B	227450
480-75578-24	SB-108 (4-16)	Total/NA	Solid	7471B	227450
LCSSRM 480-227449/2-A	Lab Control Sample	Total/NA	Solid	7471B	227449
LCSSRM 480-227450/2-A	Lab Control Sample	Total/NA	Solid	7471B	227450
MB 480-227449/1-A	Method Blank	Total/NA	Solid	7471B	227449
MB 480-227450/1-A	Method Blank	Total/NA	Solid	7471B	227450

Analysis Batch: 227796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-21	SB-105 (0-2)	Total/NA	Solid	6010C	227499
480-75578-22	SB-105 (2-8)	Total/NA	Solid	6010C	227499
480-75578-23	SB-108 (1-4)	Total/NA	Solid	6010C	227499
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	6010C	227499
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	6010C	227499
480-75578-24	SB-108 (4-16)	Total/NA	Solid	6010C	227499
LCSSRM 480-227499/2-A	Lab Control Sample	Total/NA	Solid	6010C	227499
MB 480-227499/1-A	Method Blank	Total/NA	Solid	6010C	227499

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Metals (Continued)

Analysis Batch: 227840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	6010C	227493
480-75578-2	SB-110 (4-10)	Total/NA	Solid	6010C	227493
480-75578-3	SB-110 (10-16)	Total/NA	Solid	6010C	227493
480-75578-4	BLIND DUP 2	Total/NA	Solid	6010C	227493
480-75578-5	SB-111 (6-9)	Total/NA	Solid	6010C	227493
480-75578-6	SB-112 (0-2)	Total/NA	Solid	6010C	227493
480-75578-7	SB-112 (2-6)	Total/NA	Solid	6010C	227493
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	6010C	227493
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	6010C	227493
480-75578-8	SB-113 (2-6)	Total/NA	Solid	6010C	227493
480-75578-8	SB-113 (2-6)	Total/NA	Solid	6010C	227493
480-75578-9	SB-106 (4-8)	Total/NA	Solid	6010C	227493
480-75578-10	SB-106 (8-16)	Total/NA	Solid	6010C	227493
480-75578-11	SB-107 (0-4)	Total/NA	Solid	6010C	227493
480-75578-12	SB-107 (4-8)	Total/NA	Solid	6010C	227493
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	6010C	227493
480-75578-14	SB-102 (0-2)	Total/NA	Solid	6010C	227493
480-75578-15	SB-102 (2-8)	Total/NA	Solid	6010C	227493
480-75578-16	SB-103 (2-8)	Total/NA	Solid	6010C	227493
480-75578-17	SB-103 (8-16)	Total/NA	Solid	6010C	227493
480-75578-18	SB-104 (0-4)	Total/NA	Solid	6010C	227493
480-75578-19	BLIND DUP	Total/NA	Solid	6010C	227493
480-75578-19	BLIND DUP	Total/NA	Solid	6010C	227493
480-75578-20	SB-104 (4-8)	Total/NA	Solid	6010C	227493
LCSSRM 480-227493/2-A	Lab Control Sample	Total/NA	Solid	6010C	227493
MB 480-227493/1-A	Method Blank	Total/NA	Solid	6010C	227493

Analysis Batch: 227907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	6010C	227493
480-75578-2	SB-110 (4-10)	Total/NA	Solid	6010C	227493
480-75578-3	SB-110 (10-16)	Total/NA	Solid	6010C	227493
480-75578-4	BLIND DUP 2	Total/NA	Solid	6010C	227493
480-75578-5	SB-111 (6-9)	Total/NA	Solid	6010C	227493
480-75578-6	SB-112 (0-2)	Total/NA	Solid	6010C	227493
480-75578-7	SB-112 (2-6)	Total/NA	Solid	6010C	227493
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	6010C	227493
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	6010C	227493
480-75578-14	SB-102 (0-2)	Total/NA	Solid	6010C	227493
480-75578-15	SB-102 (2-8)	Total/NA	Solid	6010C	227493
480-75578-16	SB-103 (2-8)	Total/NA	Solid	6010C	227493
480-75578-17	SB-103 (8-16)	Total/NA	Solid	6010C	227493
480-75578-18	SB-104 (0-4)	Total/NA	Solid	6010C	227493
480-75578-19	BLIND DUP	Total/NA	Solid	6010C	227493
480-75578-20	SB-104 (4-8)	Total/NA	Solid	6010C	227493
LCSSRM 480-227493/2-A	Lab Control Sample	Total/NA	Solid	6010C	227493
MB 480-227493/1-A	Method Blank	Total/NA	Solid	6010C	227493

Analysis Batch: 227957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-6	SB-112 (0-2)	Total/NA	Solid	6010C	227493

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

General Chemistry

Analysis Batch: 227393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-1	SB-109 (4-10)	Total/NA	Solid	Moisture	
480-75578-2	SB-110 (4-10)	Total/NA	Solid	Moisture	
480-75578-3	SB-110 (10-16)	Total/NA	Solid	Moisture	
480-75578-4	BLIND DUP 2	Total/NA	Solid	Moisture	
480-75578-5	SB-111 (6-9)	Total/NA	Solid	Moisture	
480-75578-6	SB-112 (0-2)	Total/NA	Solid	Moisture	
480-75578-7	SB-112 (2-6)	Total/NA	Solid	Moisture	
480-75578-7 MS	SB-112 (2-6)	Total/NA	Solid	Moisture	
480-75578-7 MSD	SB-112 (2-6)	Total/NA	Solid	Moisture	
480-75578-8	SB-113 (2-6)	Total/NA	Solid	Moisture	
480-75578-9	SB-106 (4-8)	Total/NA	Solid	Moisture	
480-75578-10	SB-106 (8-16)	Total/NA	Solid	Moisture	
480-75578-11	SB-107 (0-4)	Total/NA	Solid	Moisture	
480-75578-12	SB-107 (4-8)	Total/NA	Solid	Moisture	
480-75578-13	SB-101 (2-7.5)	Total/NA	Solid	Moisture	
480-75578-14	SB-102 (0-2)	Total/NA	Solid	Moisture	
480-75578-15	SB-102 (2-8)	Total/NA	Solid	Moisture	
480-75578-16	SB-103 (2-8)	Total/NA	Solid	Moisture	
480-75578-17	SB-103 (8-16)	Total/NA	Solid	Moisture	
480-75578-18	SB-104 (0-4)	Total/NA	Solid	Moisture	
480-75578-19	BLIND DUP	Total/NA	Solid	Moisture	
480-75578-20	SB-104 (4-8)	Total/NA	Solid	Moisture	
480-75578-21	SB-105 (0-2)	Total/NA	Solid	Moisture	
480-75578-22	SB-105 (2-8)	Total/NA	Solid	Moisture	
480-75578-23	SB-108 (1-4)	Total/NA	Solid	Moisture	
480-75578-23 MS	SB-108 (1-4)	Total/NA	Solid	Moisture	
480-75578-23 MSD	SB-108 (1-4)	Total/NA	Solid	Moisture	

Analysis Batch: 227593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-75578-24	SB-108 (4-16)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-109 (4-10)

Date Collected: 02/17/15 14:00

Date Received: 02/18/15 17:05

Lab Sample ID: 480-75578-1

Matrix: Solid

Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 17:19	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 17:00	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:02	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:24	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 11:50	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-110 (4-10)

Date Collected: 02/17/15 13:05

Date Received: 02/18/15 17:05

Lab Sample ID: 480-75578-2

Matrix: Solid

Percent Solids: 76.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 17:42	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF
Total/NA	Analysis	8081B		2	227614	02/20/15 16:37	MAN	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 17:14	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227869	02/23/15 10:38	LSL	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:13	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:27	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 11:52	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-110 (10-16)

Date Collected: 02/17/15 13:10

Date Received: 02/18/15 17:05

Lab Sample ID: 480-75578-3

Matrix: Solid

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:44	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 02:57	LCH	TAL BUF
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 18:06	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-110 (10-16)

Lab Sample ID: 480-75578-3

Date Collected: 02/17/15 13:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081B		1	227614	02/20/15 15:27	MAN	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 17:29	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227739	02/21/15 00:09	JRL	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:16	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:29	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 11:54	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: BLIND DUP 2

Lab Sample ID: 480-75578-4

Date Collected: 02/17/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 45.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 18:30	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 17:44	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:19	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:32	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 11:55	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-111 (6-9)

Lab Sample ID: 480-75578-5

Date Collected: 02/17/15 12:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 18:53	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 17:59	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:22	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:35	SLB	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-111 (6-9)

Lab Sample ID: 480-75578-5

Date Collected: 02/17/15 12:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 11:57	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-112 (0-2)

Lab Sample ID: 480-75578-6

Date Collected: 02/17/15 11:10

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 19:17	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 18:43	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:25	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:37	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		5	227957	02/23/15 11:25	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 11:59	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-112 (2-6)

Lab Sample ID: 480-75578-7

Date Collected: 02/17/15 11:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 16:55	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 16:45	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 14:28	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 17:51	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:01	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-113 (2-6)

Date Collected: 02/17/15 10:30

Date Received: 02/18/15 17:05

Lab Sample ID: 480-75578-8

Matrix: Solid

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 19:40	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 18:58	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:25	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		5	227840	02/21/15 18:28	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:11	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-106 (4-8)

Date Collected: 02/18/15 15:20

Date Received: 02/18/15 17:05

Lab Sample ID: 480-75578-9

Matrix: Solid

Percent Solids: 80.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:44	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 03:23	LCH	TAL BUF
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 20:04	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF
Total/NA	Analysis	8081B		1	227614	02/20/15 15:44	MAN	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 19:13	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227739	02/21/15 00:39	JRL	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:31	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:13	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-106 (8-16)

Date Collected: 02/18/15 15:30

Date Received: 02/18/15 17:05

Lab Sample ID: 480-75578-10

Matrix: Solid

Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:44	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 03:48	LCH	TAL BUF
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 20:28	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-106 (8-16)

Lab Sample ID: 480-75578-10

Date Collected: 02/18/15 15:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8082A		1	227665	02/20/15 19:28	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:33	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		10	227524	02/19/15 12:58	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-107 (0-4)

Lab Sample ID: 480-75578-11

Date Collected: 02/18/15 15:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 20:51	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 19:42	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:36	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:16	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-107 (4-8)

Lab Sample ID: 480-75578-12

Date Collected: 02/18/15 16:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		5	227725	02/20/15 21:15	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 19:57	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:39	SLB	TAL BUF
Total/NA	Prep	7471B			227449	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:18	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-101 (2-7.5)

Lab Sample ID: 480-75578-13

Date Collected: 02/18/15 12:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-101 (2-7.5)

Lab Sample ID: 480-75578-13

Date Collected: 02/18/15 12:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		5	227725	02/20/15 21:38	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 20:12	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:42	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:24	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-102 (0-2)

Lab Sample ID: 480-75578-14

Date Collected: 02/18/15 12:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		20	227725	02/20/15 22:02	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 20:27	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:09	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:55	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:29	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Date Collected: 02/18/15 13:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 65.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:44	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 04:14	LCH	TAL BUF
Total/NA	Prep	3550C			227544	02/19/15 13:56	CPH	TAL BUF
Total/NA	Analysis	8270D		4	227725	02/20/15 22:26	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 20:42	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:12	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 18:58	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:31	LRK	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-102 (2-8)

Lab Sample ID: 480-75578-15

Date Collected: 02/18/15 13:00

Matrix: Solid

Date Received: 02/18/15 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-103 (2-8)

Lab Sample ID: 480-75578-16

Date Collected: 02/18/15 13:45

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 74.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		1	227849	02/23/15 11:54	DMR	TAL BUF
Total/NA	Prep	3550C			227500	02/19/15 11:01	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 20:56	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:23	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 19:00	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:33	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-103 (8-16)

Lab Sample ID: 480-75578-17

Date Collected: 02/18/15 13:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 76.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		1	227849	02/23/15 12:17	DMR	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 12:30	KS	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:26	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 19:03	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:35	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:44	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 04:40	LCH	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (0-4)

Lab Sample ID: 480-75578-18

Date Collected: 02/18/15 14:20

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		5	227849	02/23/15 12:41	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF
Total/NA	Analysis	8081B		50	227614	02/20/15 16:55	MAN	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 12:45	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227739	02/21/15 01:08	JRL	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:29	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 19:05	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:36	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: BLIND DUP

Lab Sample ID: 480-75578-19

Date Collected: 02/18/15 08:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:45	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 05:06	LCH	TAL BUF
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		5	227849	02/23/15 13:05	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF
Total/NA	Analysis	8081B		20	227614	02/20/15 17:12	MAN	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 12:59	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227869	02/23/15 11:08	LSL	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:32	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 19:08	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		5	227840	02/21/15 19:11	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:38	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-104 (4-8)

Lab Sample ID: 480-75578-20

Date Collected: 02/18/15 14:30

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 67.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		5	227849	02/23/15 13:28	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF
Total/NA	Analysis	8081B		20	227614	02/20/15 17:30	MAN	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 13:15	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227739	02/21/15 02:07	JRL	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227907	02/20/15 15:35	SLB	TAL BUF
Total/NA	Prep	3050B			227493	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227840	02/21/15 19:14	SLB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:40	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-105 (0-2)

Lab Sample ID: 480-75578-21

Date Collected: 02/18/15 12:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		5	227849	02/23/15 13:52	DMR	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 13:29	KS	TAL BUF
Total/NA	Prep	3050B			227499	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227796	02/20/15 13:14	TRB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:41	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-105 (2-8)

Lab Sample ID: 480-75578-22

Date Collected: 02/18/15 12:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		1	227849	02/23/15 14:16	DMR	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 13:44	KS	TAL BUF
Total/NA	Prep	3050B			227499	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227796	02/20/15 13:20	TRB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Client Sample ID: SB-105 (2-8)

Lab Sample ID: 480-75578-22

Date Collected: 02/18/15 12:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7471B		1	227524	02/19/15 12:43	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-108 (1-4)

Lab Sample ID: 480-75578-23

Date Collected: 02/17/15 15:00

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			227392	02/18/15 20:45	CDC	TAL BUF
Total/NA	Analysis	8260C		1	227386	02/19/15 05:31	LCH	TAL BUF
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		1	227849	02/23/15 14:39	DMR	TAL BUF
Total/NA	Prep	3550C			227551	02/19/15 14:14	CPH	TAL BUF
Total/NA	Analysis	8081B		1	227614	02/20/15 16:02	MAN	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 14:28	KS	TAL BUF
Total/NA	Prep	8151A			227459	02/19/15 09:07	CAM	TAL BUF
Total/NA	Analysis	8151A		1	227739	02/20/15 22:41	JRL	TAL BUF
Total/NA	Prep	3050B			227499	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227796	02/20/15 13:23	TRB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:45	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227393	02/18/15 21:06	CMK	TAL BUF

Client Sample ID: SB-108 (4-16)

Lab Sample ID: 480-75578-24

Date Collected: 02/17/15 15:15

Matrix: Solid

Date Received: 02/18/15 17:05

Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			227550	02/20/15 09:11	CAM	TAL BUF
Total/NA	Analysis	8270D		1	227849	02/23/15 15:03	DMR	TAL BUF
Total/NA	Prep	3550C			227507	02/19/15 12:08	CAM	TAL BUF
Total/NA	Analysis	8082A		1	227665	02/20/15 14:43	KS	TAL BUF
Total/NA	Prep	3050B			227499	02/19/15 15:35	TAS	TAL BUF
Total/NA	Analysis	6010C		1	227796	02/20/15 13:45	TRB	TAL BUF
Total/NA	Prep	7471B			227450	02/19/15 09:55	LRK	TAL BUF
Total/NA	Analysis	7471B		1	227524	02/19/15 12:56	LRK	TAL BUF
Total/NA	Analysis	Moisture		1	227593	02/19/15 21:06	CMK	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-15 *

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8081B	Organochlorine Pesticides (GC)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
8151A	Herbicides (GC)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

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 BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-75578-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-75578-1	SB-109 (4-10)	Solid	02/17/15 14:00	02/18/15 17:05
480-75578-2	SB-110 (4-10)	Solid	02/17/15 13:05	02/18/15 17:05
480-75578-3	SB-110 (10-16)	Solid	02/17/15 13:10	02/18/15 17:05
480-75578-4	BLIND DUP 2	Solid	02/17/15 08:00	02/18/15 17:05
480-75578-5	SB-111 (6-9)	Solid	02/17/15 12:10	02/18/15 17:05
480-75578-6	SB-112 (0-2)	Solid	02/17/15 11:10	02/18/15 17:05
480-75578-7	SB-112 (2-6)	Solid	02/17/15 11:15	02/18/15 17:05
480-75578-8	SB-113 (2-6)	Solid	02/17/15 10:30	02/18/15 17:05
480-75578-9	SB-106 (4-8)	Solid	02/18/15 15:20	02/18/15 17:05
480-75578-10	SB-106 (8-16)	Solid	02/18/15 15:30	02/18/15 17:05
480-75578-11	SB-107 (0-4)	Solid	02/18/15 15:45	02/18/15 17:05
480-75578-12	SB-107 (4-8)	Solid	02/18/15 16:00	02/18/15 17:05
480-75578-13	SB-101 (2-7.5)	Solid	02/18/15 12:30	02/18/15 17:05
480-75578-14	SB-102 (0-2)	Solid	02/18/15 12:45	02/18/15 17:05
480-75578-15	SB-102 (2-8)	Solid	02/18/15 13:00	02/18/15 17:05
480-75578-16	SB-103 (2-8)	Solid	02/18/15 13:45	02/18/15 17:05
480-75578-17	SB-103 (8-16)	Solid	02/18/15 13:30	02/18/15 17:05
480-75578-18	SB-104 (0-4)	Solid	02/18/15 14:20	02/18/15 17:05
480-75578-19	BLIND DUP	Solid	02/18/15 08:00	02/18/15 17:05
480-75578-20	SB-104 (4-8)	Solid	02/18/15 14:30	02/18/15 17:05
480-75578-21	SB-105 (0-2)	Solid	02/18/15 12:00	02/18/15 17:05
480-75578-22	SB-105 (2-8)	Solid	02/18/15 12:15	02/18/15 17:05
480-75578-23	SB-108 (1-4)	Solid	02/17/15 15:00	02/18/15 17:05
480-75578-24	SB-108 (4-16)	Solid	02/17/15 15:15	02/18/15 17:05

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

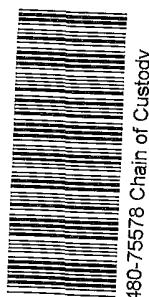
Chain of Custody Record

TAL-4124 (1007)

Client	Benchmark	Project Manager	Nate Munley	Date	2-18-15	Chain of Custody Number	275811
Address	2550 Hamburg Turnpike	Telephone Number (Area Code)/Fax Number	(716) 856-0599 / (716) 856-0583	Lab Number		Page	of
City	Buffalo	State	NY	Zip Code	14248		

Project Name and Location (State)	441 Ohio St	Site Contact	Paul W. Northman	Lab Contact	B. Fisher
Contract/Purchase Order/Quote No.	0292-013-002	Carrier/Waybill Number			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives					Analysis (Attach list if more space is needed)				
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	TLC SVCS	TAL Metals	PCBs
SB-108 109 (4-10)	2-17-15	14:00				X	1						X	X	X
SB-116 (4-10)	↓	13:05				X	2						X	X	X
SB-110 (10-16)	↓	13:10				X	2						X	X	X
Blank Dup 2	2-17-15	8:00				X	1						X	X	X
SB-111 (6-9)	↓	12:10				X	1						X	X	X
SB-112 (0-2)	↓	11:10				X	1						X	X	X
SB-112 (2-6) MS/MSD	↓	11:15				X	3						X	X	X
SB-113 (2-6)	↓	10:30				X	1						X	X	X
SB-106 (4-8)	2-18-15	15:20				X	2						X	X	X
SB-106 (8-16)	↓	15:30				X	1						X	X	X
SB-107 (0-4)	↓	15:45				X	1						X	X	X
SB-107 (4-8)	↓	16:00				X	1						X	X	X



480-75578 Chain of Custody

Possible Hazard Identification	☐ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison B	☒ Unknown	Sample Disposal	☐ Return To Client	☒ Disposal By Lab	☐ Archive For	Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required	☐ 24 Hours	☐ 48 Hours	☐ 7 Days	☐ 14 Days	☐ 21 Days	QC Requirements (Specify)					
1. Relinquished By	<i>[Signature]</i>	Date	2/18/15	Time	16:25	1. Received By	<i>[Signature]</i>	Date	2/18/15	Time	16:25
2. Relinquished By	<i>[Signature]</i>	Date	2/18/15	Time	17:05	2. Received By	<i>[Signature]</i>	Date	2/18/15	Time	17:05
3. Relinquished By	<i>[Signature]</i>	Date		Time		3. Received By		Date		Time	
Comments	Temp 1.3 #1										

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

Temperature on Receipt _____
Drinking Water? Yes ☐ No ☒

TAL-4124 (1007)

Client Benchmark		Project Manager Nate Munley		Date		Chain of Custody Number 275810	
Address 2558 Hamburg Turnpike		Telephone Number (Area Code) / Fax Number (716) 856-0599 / (716) 856-0583		Lab Number		Page 2 of 2	
City Buffalo		State NV		Zip Code 14210		Analysis (Attach list if more space is needed)	
Project Name and Location (State) 441 C-10 St		Site Contact Paul W. Werthman		Lab Contact B. Fischer		Special Instructions/ Conditions of Receipt	
Contract/Purchase Order/Quote No. 0292-013-002		Carrier/Waybill Number		Containers & Preservatives			
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	Containers & Preservatives	Analysis	Special Instructions/ Conditions of Receipt	
SB-101 (2-7-5)	2-18-15	12:30	Air	Impres	TLC + CPB VR		
SB-102 (0-2)		12:45	Soil	H2SO4	TLC SVOC		
SB-102 (2-8)		13:00	Sed	HNO3	PCBs		
SB-103 (2-8)		13:45	Aqueous	HCl	TAL Metals		
SB-103 (8-16)		13:30					
SB-104 (0-4)		14:20					Encore for VOC
Blind Dup		8:00					"
SB-104 (4-8)		14:30					
SB-105 (0-2)		12:00					
SB-105 (2-8)		12:15					
SB-108 (1-4) (MS/MSD)	2-17-15	15:00					Encore for VOC
SB-108 (4-16)	"	15:15					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Return To Client

Sample Disposal
☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)

Turn Around Time Required
☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other: **Standard**

1. Relinquished By **[Signature]** Date **2-18-17** Time **16:25**

2. Relinquished By **[Signature]** Date **2-18-15** Time **17:05**

3. Relinquished By **[Signature]** Date _____ Time _____

Comments
Temp 103 F

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-75578-1

Login Number: 75578

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	BENCHMARK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-76055-1

Client Project/Site: Benchmark - 441 Ohio St.

For:

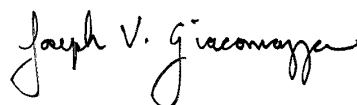
Benchmark Env. Eng. & Science, PLLC

2558 Hamburg Turnpike

Suite 300

Lackawanna, New York 14218

Attn: Mr. Tom Forbes



Authorized for release by:

3/12/2015 9:02:25 AM

Joe Giacomazza, Project Management Assistant II

joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Manager of Project Management

(716)504-9835

brian.fischer@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Qualifiers

GC/MS 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.
F1	MS and/or MSD Recovery exceeds the control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	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.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
X	Surrogate is outside control limits

GC 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.
F2	MS/MSD RPD exceeds control limits
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery exceeds the control limits

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Job ID: 480-76055-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-76055-1

Receipt

The samples were received on 3/3/2015 1:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

GC/MS VOA

Method(s) 8260C: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, the sample was analyzed within 7 days of sampling therefore no corrective action was taken: TMW-01 (480-76055-1).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 229535 recovered above the upper control limit for 1,1,1-Trichloroethane and Trichlorofluoroethane. The samples associated with this CCV were client requested QC samples and the laboratory control sample was acceptable; therefore, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 229535 was above the method criteria for the following analyte(s): 1,1,1-Trichloroethane and Trichlorofluoroethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated and biased high.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D: The large number of analytes included in the continuing calibration verification (CCV) for TALS batch 229267 gives a high probability that one or more analytes will be outside acceptance criteria. As indicated in the reference method, analysis may proceed as long as no more than 20% of the analytes are outside the method-defined %D criteria. The continuing calibration verification (CCV) analyzed in batch 229267 was outside the method criteria for the following analytes: Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes are considered estimated

Method(s) 8270D: The laboratory control sample (LCS) for batch 229070 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline, 4-Chloroaniline, Benzaldehyde and N-Nitrosodiphenylamine. These analytes have been identified as a poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified. (LCS 480-229070/2-A).

Method(s) 8270D: The laboratory control sample (LCS) for batch 229070 recovered outside control limits for Bis (2-ethylhexyl) Phthalate and Carbazole. Four analytes are allowed outside limits when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified. (LCS 480-229070/2-A)

Method(s) 8270D: Surrogate recovery for the following samples were outside control limits: BLIND DUP (480-76055-2), TMW-02 (480-76055-3), TMW-03 (480-76055-4), TMW-04 (480-76055-5), TMW-06 (480-76055-7). Evidence of matrix interference is present.

Method(s) 8270D: The method blank for preparation batch 229070 contained Bis(2-ethylhexyl) phthalate above the reporting limit. The associated samples contained Bis(2-ethylhexyl) phthalate above the reporting limit, however there is no remaining volume for re-extraction.

Method(s) 8270D: The following samples required a dilution due to the nature of the abundance of target analytes: BLIND DUP (480-76055-2), TMW-01 (480-76055-1), TMW-02 (480-76055-3), TMW-03 (480-76055-4), TMW-04 (480-76055-5), TMW-05 (480-76055-6), TMW-06 (480-76055-7). Because of this dilution, the surrogate and spike concentration in the samples were reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270D: The following samples was diluted due to an abundance of target analytes: TMW-02 (480-76055-3 MS), TMW-02 (480-76055-3 MSD). As such, surrogate and MS/MSD spike recoveries were diluted out and are not reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 229267 recovered above the upper control limit for

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Job ID: 480-76055-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

several analytes. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported. (CCVIS 480-229267/3).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 229894 recovered above the upper control limit for several analytes. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported. (CCVIS 480-229894/3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8081B: The closing continuing calibration verification (CCV) standard associated with batch 229082 failed to meet acceptance limits. The associated samples were re-analyzed following a successful CCV and produced similar results, indicating that the sample matrix is adversely affecting the instrument and causing the failures. (CCV 480-229082/36).

Method(s) 8081B: All primary data is reported from the RTX-CLPII column.

Method(s) 8082A: All primary data is reported from the ZB-35 column.

Method(s) 8082A: The percent difference in a multi-component continuing calibration verification is assessed on the basis of the total amount, individual peak calculations are only listed for completeness.

Method(s) 8151A: All primary data is reported from the RTX-CLPI column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: TMW-02 (480-76055-3 MS).

Method(s) 3510C: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: TMW-03 (480-76055-4).

Method(s) 3510C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: TMW-02 (480-76055-3), TMW-02 (480-76055-3 MSD), TMW-04 (480-76055-5).

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 229080.

Method(s) 8151A: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: BLIND DUP (480-76055-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.9	J	10	1.3	ug/L	1		8260C	Total/NA
Acetone	8.9	J	10	3.0	ug/L	1		8260C	Total/NA
Benzo[b]fluoranthene	0.96	J	5.0	0.34	ug/L	1		8270D	Total/NA
Bis(2-ethylhexyl) phthalate	17	B *	5.0	1.8	ug/L	1		8270D	Total/NA
Caprolactam	220	E	5.0	2.2	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.44	J B	5.0	0.31	ug/L	1		8270D	Total/NA
Caprolactam - DL	210		99	44	ug/L	20		8270D	Total/NA
alpha-BHC	0.0099	J	0.049	0.0075	ug/L	1		8081B	Total/NA
beta-BHC	0.17		0.049	0.024	ug/L	1		8081B	Total/NA
delta-BHC	0.010	J	0.049	0.0098	ug/L	1		8081B	Total/NA
gamma-BHC (Lindane)	0.011	J	0.049	0.0078	ug/L	1		8081B	Total/NA
Barium	0.24		0.0020		mg/L	1		6010C	Dissolved
Calcium	157		0.50		mg/L	1		6010C	Dissolved
Magnesium	29.2		0.20		mg/L	1		6010C	Dissolved
Manganese	1.8		0.0030		mg/L	1		6010C	Dissolved
Potassium	11.5		0.50		mg/L	1		6010C	Dissolved
Sodium	78.7		1.0		mg/L	1		6010C	Dissolved

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.1	J	10	3.0	ug/L	1		8260C	Total/NA
Bis(2-ethylhexyl) phthalate	15	B *	4.9	1.8	ug/L	1		8270D	Total/NA
Caprolactam	1600	E	4.9	2.2	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.40	J B	4.9	0.31	ug/L	1		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2.3	J	4.9	0.46	ug/L	1		8270D	Total/NA
Caprolactam - DL	1900		990	430	ug/L	200		8270D	Total/NA
alpha-BHC	0.015	J	0.054	0.0084	ug/L	1		8081B	Total/NA
delta-BHC	0.012	J	0.054	0.011	ug/L	1		8081B	Total/NA
Endosulfan sulfate	0.017	J	0.054	0.017	ug/L	1		8081B	Total/NA
gamma-BHC (Lindane)	0.017	J	0.054	0.0087	ug/L	1		8081B	Total/NA
Heptachlor	0.015	J	0.054	0.0092	ug/L	1		8081B	Total/NA
Heptachlor epoxide	0.023	J	0.054	0.0080	ug/L	1		8081B	Total/NA
Methoxychlor	0.028	J	0.054	0.015	ug/L	1		8081B	Total/NA
Barium	0.22		0.0020		mg/L	1		6010C	Dissolved
Calcium	152		0.50		mg/L	1		6010C	Dissolved
Magnesium	29.0		0.20		mg/L	1		6010C	Dissolved
Manganese	1.9		0.0030		mg/L	1		6010C	Dissolved
Potassium	10.6		0.50		mg/L	1		6010C	Dissolved
Sodium	77.6		1.0		mg/L	1		6010C	Dissolved

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.3	J	10	3.0	ug/L	1		8260C	Total/NA
Benzo[b]fluoranthene	1.3	J	5.2	0.35	ug/L	1		8270D	Total/NA
Benzo[g,h,i]perylene	0.46	J	5.2	0.36	ug/L	1		8270D	Total/NA
Bis(2-ethylhexyl) phthalate	14	B *	5.2	1.9	ug/L	1		8270D	Total/NA
Caprolactam	2000	E	5.2	2.3	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.45	J B	5.2	0.32	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02 (Continued)

Lab Sample ID: 480-76055-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Indeno[1,2,3-cd]pyrene	2.6	J	5.2	0.49	ug/L	1		8270D	Total/NA
Pyrene	0.45	J	5.2	0.35	ug/L	1		8270D	Total/NA
Caprolactam - DL	2200		1000	460	ug/L	200		8270D	Total/NA
alpha-BHC	0.036	J F2	0.053	0.0082	ug/L	1		8081B	Total/NA
delta-BHC	0.012	J F2	0.053	0.011	ug/L	1		8081B	Total/NA
Endosulfan sulfate	0.028	J F2	0.053	0.017	ug/L	1		8081B	Total/NA
Endrin	0.023	J F2	0.053	0.015	ug/L	1		8081B	Total/NA
Endrin aldehyde	0.036	J B F2	0.053	0.017	ug/L	1		8081B	Total/NA
Endrin ketone	0.028	J F2	0.053	0.013	ug/L	1		8081B	Total/NA
gamma-BHC (Lindane)	0.038	J F2	0.053	0.0085	ug/L	1		8081B	Total/NA
Methoxychlor	0.19	F2	0.053	0.015	ug/L	1		8081B	Total/NA
Barium	0.15		0.0020		mg/L	1		6010C	Dissolved
Calcium	67.4		0.50		mg/L	1		6010C	Dissolved
Magnesium	13.4		0.20		mg/L	1		6010C	Dissolved
Manganese	2.2		0.0030		mg/L	1		6010C	Dissolved
Potassium	2.7		0.50		mg/L	1		6010C	Dissolved
Sodium	108		1.0		mg/L	1		6010C	Dissolved

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.6	J	10	3.0	ug/L	1		8260C	Total/NA
Bis(2-ethylhexyl) phthalate	47	B *	7.5	2.7	ug/L	1		8270D	Total/NA
Caprolactam	1200	E	7.5	3.3	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.73	J B	7.5	0.47	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.41	J	7.5	0.33	ug/L	1		8270D	Total/NA
Caprolactam - DL	1200		750	330	ug/L	100		8270D	Total/NA
alpha-BHC	0.025	J	0.056	0.0086	ug/L	1		8081B	Total/NA
Barium	0.59		0.0020		mg/L	1		6010C	Dissolved
Calcium	211		0.50		mg/L	1		6010C	Dissolved
Magnesium	59.4		0.20		mg/L	1		6010C	Dissolved
Manganese	5.7		0.0030		mg/L	1		6010C	Dissolved
Potassium	13.3		0.50		mg/L	1		6010C	Dissolved
Sodium	1140		1.0		mg/L	1		6010C	Dissolved
Zinc	0.11		0.010		mg/L	1		6010C	Dissolved

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.6	J	10	1.3	ug/L	1		8260C	Total/NA
Acetone	13		10	3.0	ug/L	1		8260C	Total/NA
Bis(2-ethylhexyl) phthalate	20	B *	5.1	1.8	ug/L	1		8270D	Total/NA
Caprolactam	1300	E	5.1	2.3	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	1.5	J B	5.1	0.32	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.58	J	5.1	0.23	ug/L	1		8270D	Total/NA
Caprolactam - DL	1400		510	230	ug/L	100		8270D	Total/NA
Barium	0.13		0.0020		mg/L	1		6010C	Dissolved
Calcium	120		0.50		mg/L	1		6010C	Dissolved
Magnesium	39.5		0.20		mg/L	1		6010C	Dissolved
Manganese	0.75		0.0030		mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04 (Continued)

Lab Sample ID: 480-76055-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	13.4		0.50		mg/L	1		6010C	Dissolved
Sodium	77.4		1.0		mg/L	1		6010C	Dissolved
Zinc	0.018		0.010		mg/L	1		6010C	Dissolved

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.5	J	10	1.3	ug/L	1		8260C	Total/NA
Acetone	11		10	3.0	ug/L	1		8260C	Total/NA
Methylene Chloride	0.73	J	1.0	0.44	ug/L	1		8260C	Total/NA
Bis(2-ethylhexyl) phthalate	19	B *	5.4	1.9	ug/L	1		8270D	Total/NA
Caprolactam	630	E	5.4	2.4	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.34	J B	5.4	0.33	ug/L	1		8270D	Total/NA
Caprolactam - DL	550		540	240	ug/L	100		8270D	Total/NA
alpha-BHC	0.020	J	0.048	0.0074	ug/L	1		8081B	Total/NA
Barium	0.17		0.0020		mg/L	1		6010C	Dissolved
Calcium	61.0		0.50		mg/L	1		6010C	Dissolved
Magnesium	14.7		0.20		mg/L	1		6010C	Dissolved
Manganese	0.94		0.0030		mg/L	1		6010C	Dissolved
Potassium	9.5		0.50		mg/L	1		6010C	Dissolved
Sodium	32.4		1.0		mg/L	1		6010C	Dissolved

Client Sample ID: TMW-06

Lab Sample ID: 480-76055-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.3	J	10	3.0	ug/L	1		8260C	Total/NA
Benzo[b]fluoranthene	0.90	J	4.6	0.31	ug/L	1		8270D	Total/NA
Bis(2-ethylhexyl) phthalate	13	B *	4.6	1.6	ug/L	1		8270D	Total/NA
Caprolactam	940	E	4.6	2.0	ug/L	1		8270D	Total/NA
Carbazole	2.4	J *	4.6	0.27	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.58	J B	4.6	0.28	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.20	J	4.6	0.20	ug/L	1		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2.2	J	4.6	0.43	ug/L	1		8270D	Total/NA
Phenanthrene	0.70	J	4.6	0.40	ug/L	1		8270D	Total/NA
Caprolactam - DL	960		920	400	ug/L	200		8270D	Total/NA
alpha-BHC	0.022	J	0.053	0.0082	ug/L	1		8081B	Total/NA
Endosulfan sulfate	0.018	J	0.053	0.017	ug/L	1		8081B	Total/NA
Endrin ketone	0.024	J	0.053	0.013	ug/L	1		8081B	Total/NA
gamma-BHC (Lindane)	0.10		0.053	0.0085	ug/L	1		8081B	Total/NA
Barium	0.31		0.0020		mg/L	1		6010C	Dissolved
Calcium	145		0.50		mg/L	1		6010C	Dissolved
Iron	0.23		0.050		mg/L	1		6010C	Dissolved
Magnesium	35.0		0.20		mg/L	1		6010C	Dissolved
Manganese	1.6		0.0030		mg/L	1		6010C	Dissolved
Potassium	10.6		0.50		mg/L	1		6010C	Dissolved
Sodium	50.0		1.0		mg/L	1		6010C	Dissolved

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-76055-8

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Date Collected: 02/27/15 15:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 17:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 17:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 17:22	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 17:22	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 17:22	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 17:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 17:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 17:22	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 17:22	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 17:22	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 17:22	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 17:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 17:22	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 17:22	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 17:22	1
2-Butanone (MEK)	1.9	J	10	1.3	ug/L			03/04/15 17:22	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 17:22	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 17:22	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 17:22	1
Acetone	8.9	J	10	3.0	ug/L			03/04/15 17:22	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 17:22	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 17:22	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 17:22	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 17:22	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 17:22	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 17:22	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 17:22	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 17:22	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 17:22	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 17:22	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 17:22	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 17:22	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 17:22	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 17:22	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 17:22	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 17:22	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 17:22	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 17:22	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 17:22	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 17:22	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 17:22	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 17:22	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 17:22	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 17:22	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 17:22	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 17:22	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 17:22	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 17:22	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 17:22	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Date Collected: 02/27/15 15:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 17:22	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 17:22	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 17:22	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 17:22	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 17:22	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 17:22	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 17:22	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 17:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		66 - 137		03/04/15 17:22	1
4-Bromofluorobenzene (Surr)	98		73 - 120		03/04/15 17:22	1
Toluene-d8 (Surr)	98		71 - 126		03/04/15 17:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		03/04/15 07:58	03/05/15 20:25	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,4,6-Trichlorophenol	ND		5.0	0.60	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,4-Dinitrophenol	ND		9.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,4-Dinitrotoluene	ND		5.0	0.44	ug/L		03/04/15 07:58	03/05/15 20:25	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 20:25	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		03/04/15 07:58	03/05/15 20:25	1
2-Chlorophenol	ND		5.0	0.53	ug/L		03/04/15 07:58	03/05/15 20:25	1
2-Methylphenol	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 20:25	1
2-Methylnaphthalene	ND		5.0	0.59	ug/L		03/04/15 07:58	03/05/15 20:25	1
2-Nitroaniline	ND		9.9	0.42	ug/L		03/04/15 07:58	03/05/15 20:25	1
2-Nitrophenol	ND		5.0	0.48	ug/L		03/04/15 07:58	03/05/15 20:25	1
3,3'-Dichlorobenzidine	ND *		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 20:25	1
3-Nitroaniline	ND *		9.9	0.48	ug/L		03/04/15 07:58	03/05/15 20:25	1
4,6-Dinitro-2-methylphenol	ND		9.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Chloroaniline	ND *		5.0	0.58	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Methylphenol	ND		9.9	0.36	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Nitroaniline	ND *		9.9	0.25	ug/L		03/04/15 07:58	03/05/15 20:25	1
4-Nitrophenol	ND		9.9	1.5	ug/L		03/04/15 07:58	03/05/15 20:25	1
Acenaphthene	ND		5.0	0.41	ug/L		03/04/15 07:58	03/05/15 20:25	1
Acenaphthylene	ND		5.0	0.38	ug/L		03/04/15 07:58	03/05/15 20:25	1
Acetophenone	ND		5.0	0.54	ug/L		03/04/15 07:58	03/05/15 20:25	1
Anthracene	ND		5.0	0.28	ug/L		03/04/15 07:58	03/05/15 20:25	1
Atrazine	ND		5.0	0.46	ug/L		03/04/15 07:58	03/05/15 20:25	1
Benzaldehyde	ND *		5.0	0.26	ug/L		03/04/15 07:58	03/05/15 20:25	1
Benzo[a]anthracene	ND		5.0	0.36	ug/L		03/04/15 07:58	03/05/15 20:25	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		03/04/15 07:58	03/05/15 20:25	1
Benzo[b]fluoranthene	0.96 J		5.0	0.34	ug/L		03/04/15 07:58	03/05/15 20:25	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Date Collected: 02/27/15 15:00

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		03/04/15 07:58	03/05/15 20:25	1
Benzo[k]fluoranthene	ND		5.0	0.72	ug/L		03/04/15 07:58	03/05/15 20:25	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		03/04/15 07:58	03/05/15 20:25	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 20:25	1
Bis(2-ethylhexyl) phthalate	17	B *	5.0	1.8	ug/L		03/04/15 07:58	03/05/15 20:25	1
Butyl benzyl phthalate	ND		5.0	0.42	ug/L		03/04/15 07:58	03/05/15 20:25	1
Caprolactam	220	E	5.0	2.2	ug/L		03/04/15 07:58	03/05/15 20:25	1
Carbazole	ND	*	5.0	0.30	ug/L		03/04/15 07:58	03/05/15 20:25	1
Chrysene	ND		5.0	0.33	ug/L		03/04/15 07:58	03/05/15 20:25	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		03/04/15 07:58	03/05/15 20:25	1
Di-n-butyl phthalate	0.44	J B	5.0	0.31	ug/L		03/04/15 07:58	03/05/15 20:25	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		03/04/15 07:58	03/05/15 20:25	1
Dibenzofuran	ND		9.9	0.51	ug/L		03/04/15 07:58	03/05/15 20:25	1
Diethyl phthalate	ND		5.0	0.22	ug/L		03/04/15 07:58	03/05/15 20:25	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		03/04/15 07:58	03/05/15 20:25	1
Fluoranthene	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 20:25	1
Fluorene	ND		5.0	0.36	ug/L		03/04/15 07:58	03/05/15 20:25	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		03/04/15 07:58	03/05/15 20:25	1
Hexachlorobutadiene	ND		5.0	0.67	ug/L		03/04/15 07:58	03/05/15 20:25	1
Hexachlorocyclopentadiene	ND		5.0	0.58	ug/L		03/04/15 07:58	03/05/15 20:25	1
Hexachloroethane	ND		5.0	0.58	ug/L		03/04/15 07:58	03/05/15 20:25	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		03/04/15 07:58	03/05/15 20:25	1
Isophorone	ND		5.0	0.43	ug/L		03/04/15 07:58	03/05/15 20:25	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		03/04/15 07:58	03/05/15 20:25	1
N-Nitrosodiphenylamine	ND	*	5.0	0.51	ug/L		03/04/15 07:58	03/05/15 20:25	1
Naphthalene	ND		5.0	0.75	ug/L		03/04/15 07:58	03/05/15 20:25	1
Nitrobenzene	ND		5.0	0.29	ug/L		03/04/15 07:58	03/05/15 20:25	1
Pentachlorophenol	ND		9.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:25	1
Phenanthrene	ND		5.0	0.44	ug/L		03/04/15 07:58	03/05/15 20:25	1
Phenol	ND		5.0	0.39	ug/L		03/04/15 07:58	03/05/15 20:25	1
Pyrene	ND		5.0	0.34	ug/L		03/04/15 07:58	03/05/15 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	82		46 - 120	03/04/15 07:58	03/05/15 20:25	1
Phenol-d5 (Surr)	50		16 - 120	03/04/15 07:58	03/05/15 20:25	1
p-Terphenyl-d14 (Surr)	67		67 - 150	03/04/15 07:58	03/05/15 20:25	1
2,4,6-Tribromophenol (Surr)	93		52 - 132	03/04/15 07:58	03/05/15 20:25	1
2-Fluorobiphenyl	76		48 - 120	03/04/15 07:58	03/05/15 20:25	1
2-Fluorophenol (Surr)	82		20 - 120	03/04/15 07:58	03/05/15 20:25	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		99	13	ug/L		03/04/15 07:58	03/11/15 10:56	20
bis (2-chloroisopropyl) ether	ND		99	10	ug/L		03/04/15 07:58	03/11/15 10:56	20
2,4,5-Trichlorophenol	ND		99	9.5	ug/L		03/04/15 07:58	03/11/15 10:56	20
2,4,6-Trichlorophenol	ND		99	12	ug/L		03/04/15 07:58	03/11/15 10:56	20
2,4-Dichlorophenol	ND		99	10	ug/L		03/04/15 07:58	03/11/15 10:56	20
2,4-Dimethylphenol	ND		99	9.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
2,4-Dinitrophenol	ND		200	44	ug/L		03/04/15 07:58	03/11/15 10:56	20
2,4-Dinitrotoluene	ND		99	8.9	ug/L		03/04/15 07:58	03/11/15 10:56	20

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Date Collected: 02/27/15 15:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		99	7.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
2-Chloronaphthalene	ND		99	9.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
2-Chlorophenol	ND		99	11	ug/L		03/04/15 07:58	03/11/15 10:56	20
2-Methylphenol	ND		99	7.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
2-Methylnaphthalene	ND		99	12	ug/L		03/04/15 07:58	03/11/15 10:56	20
2-Nitroaniline	ND		200	8.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
2-Nitrophenol	ND		99	9.5	ug/L		03/04/15 07:58	03/11/15 10:56	20
3,3'-Dichlorobenzidine	ND	*	99	7.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
3-Nitroaniline	ND	*	200	9.5	ug/L		03/04/15 07:58	03/11/15 10:56	20
4,6-Dinitro-2-methylphenol	ND		200	44	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Bromophenyl phenyl ether	ND		99	8.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Chloro-3-methylphenol	ND		99	8.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Chloroaniline	ND	*	99	12	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Chlorophenyl phenyl ether	ND		99	6.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Methylphenol	ND		200	7.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Nitroaniline	ND	*	200	5.0	ug/L		03/04/15 07:58	03/11/15 10:56	20
4-Nitrophenol	ND		200	30	ug/L		03/04/15 07:58	03/11/15 10:56	20
Acenaphthene	ND		99	8.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
Acenaphthylene	ND		99	7.5	ug/L		03/04/15 07:58	03/11/15 10:56	20
Acetophenone	ND		99	11	ug/L		03/04/15 07:58	03/11/15 10:56	20
Anthracene	ND		99	5.5	ug/L		03/04/15 07:58	03/11/15 10:56	20
Atrazine	ND		99	9.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
Benzaldehyde	ND	*	99	5.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
Benzo[a]anthracene	ND		99	7.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
Benzo[a]pyrene	ND		99	9.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
Benzo[b]fluoranthene	ND		99	6.7	ug/L		03/04/15 07:58	03/11/15 10:56	20
Benzo[g,h,i]perylene	ND		99	6.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
Benzo[k]fluoranthene	ND		99	14	ug/L		03/04/15 07:58	03/11/15 10:56	20
Bis(2-chloroethoxy)methane	ND		99	6.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
Bis(2-chloroethyl)ether	ND		99	7.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
Bis(2-ethylhexyl) phthalate	ND	*	99	36	ug/L		03/04/15 07:58	03/11/15 10:56	20
Butyl benzyl phthalate	ND		99	8.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
Caprolactam	210		99	44	ug/L		03/04/15 07:58	03/11/15 10:56	20
Carbazole	ND	*	99	5.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
Chrysene	ND		99	6.5	ug/L		03/04/15 07:58	03/11/15 10:56	20
Dibenz(a,h)anthracene	ND		99	8.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
Di-n-butyl phthalate	ND		99	6.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
Di-n-octyl phthalate	ND		99	9.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
Dibenzofuran	ND		200	10	ug/L		03/04/15 07:58	03/11/15 10:56	20
Diethyl phthalate	ND		99	4.4	ug/L		03/04/15 07:58	03/11/15 10:56	20
Dimethyl phthalate	ND		99	7.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
Fluoranthene	ND		99	7.9	ug/L		03/04/15 07:58	03/11/15 10:56	20
Fluorene	ND		99	7.1	ug/L		03/04/15 07:58	03/11/15 10:56	20
Hexachlorobenzene	ND		99	10	ug/L		03/04/15 07:58	03/11/15 10:56	20
Hexachlorobutadiene	ND		99	13	ug/L		03/04/15 07:58	03/11/15 10:56	20
Hexachlorocyclopentadiene	ND		99	12	ug/L		03/04/15 07:58	03/11/15 10:56	20
Hexachloroethane	ND		99	12	ug/L		03/04/15 07:58	03/11/15 10:56	20
Indeno[1,2,3-cd]pyrene	ND		99	9.3	ug/L		03/04/15 07:58	03/11/15 10:56	20
Isophorone	ND		99	8.5	ug/L		03/04/15 07:58	03/11/15 10:56	20

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Date Collected: 02/27/15 15:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		99	11	ug/L		03/04/15 07:58	03/11/15 10:56	20
N-Nitrosodiphenylamine	ND	*	99	10	ug/L		03/04/15 07:58	03/11/15 10:56	20
Naphthalene	ND		99	15	ug/L		03/04/15 07:58	03/11/15 10:56	20
Nitrobenzene	ND		99	5.7	ug/L		03/04/15 07:58	03/11/15 10:56	20
Pentachlorophenol	ND		200	44	ug/L		03/04/15 07:58	03/11/15 10:56	20
Phenanthrene	ND		99	8.7	ug/L		03/04/15 07:58	03/11/15 10:56	20
Phenol	ND		99	7.7	ug/L		03/04/15 07:58	03/11/15 10:56	20
Pyrene	ND		99	6.7	ug/L		03/04/15 07:58	03/11/15 10:56	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	85		46 - 120	03/04/15 07:58	03/11/15 10:56	20
Phenol-d5 (Surr)	40		16 - 120	03/04/15 07:58	03/11/15 10:56	20
p-Terphenyl-d14 (Surr)	72		67 - 150	03/04/15 07:58	03/11/15 10:56	20
2,4,6-Tribromophenol (Surr)	72		52 - 132	03/04/15 07:58	03/11/15 10:56	20
2-Fluorobiphenyl	95		48 - 120	03/04/15 07:58	03/11/15 10:56	20
2-Fluorophenol (Surr)	48		20 - 120	03/04/15 07:58	03/11/15 10:56	20

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.049	0.0090	ug/L		03/04/15 08:06	03/04/15 16:53	1
4,4'-DDE	ND		0.049	0.011	ug/L		03/04/15 08:06	03/04/15 16:53	1
4,4'-DDT	ND		0.049	0.011	ug/L		03/04/15 08:06	03/04/15 16:53	1
Aldrin	ND		0.049	0.0079	ug/L		03/04/15 08:06	03/04/15 16:53	1
alpha-BHC	0.0099	J	0.049	0.0075	ug/L		03/04/15 08:06	03/04/15 16:53	1
alpha-Chlordane	ND		0.049	0.014	ug/L		03/04/15 08:06	03/04/15 16:53	1
beta-BHC	0.17		0.049	0.024	ug/L		03/04/15 08:06	03/04/15 16:53	1
delta-BHC	0.010	J	0.049	0.0098	ug/L		03/04/15 08:06	03/04/15 16:53	1
Dieldrin	ND		0.049	0.0096	ug/L		03/04/15 08:06	03/04/15 16:53	1
Endosulfan I	ND		0.049	0.011	ug/L		03/04/15 08:06	03/04/15 16:53	1
Endosulfan II	ND		0.049	0.012	ug/L		03/04/15 08:06	03/04/15 16:53	1
Endosulfan sulfate	ND		0.049	0.015	ug/L		03/04/15 08:06	03/04/15 16:53	1
Endrin	ND		0.049	0.013	ug/L		03/04/15 08:06	03/04/15 16:53	1
Endrin aldehyde	ND		0.049	0.016	ug/L		03/04/15 08:06	03/04/15 16:53	1
Endrin ketone	ND		0.049	0.012	ug/L		03/04/15 08:06	03/04/15 16:53	1
gamma-BHC (Lindane)	0.011	J	0.049	0.0078	ug/L		03/04/15 08:06	03/04/15 16:53	1
gamma-Chlordane	ND		0.049	0.011	ug/L		03/04/15 08:06	03/04/15 16:53	1
Heptachlor	ND		0.049	0.0083	ug/L		03/04/15 08:06	03/04/15 16:53	1
Heptachlor epoxide	ND		0.049	0.0072	ug/L		03/04/15 08:06	03/04/15 16:53	1
Methoxychlor	ND		0.049	0.014	ug/L		03/04/15 08:06	03/04/15 16:53	1
Toxaphene	ND		0.49	0.12	ug/L		03/04/15 08:06	03/04/15 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	29		20 - 120	03/04/15 08:06	03/04/15 16:53	1
DCB Decachlorobiphenyl	42		20 - 120	03/04/15 08:06	03/04/15 16:53	1
Tetrachloro-m-xylene	91		36 - 120	03/04/15 08:06	03/04/15 16:53	1
Tetrachloro-m-xylene	67		36 - 120	03/04/15 08:06	03/04/15 16:53	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 14:50	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Lab Sample ID: 480-76055-1

Date Collected: 02/27/15 15:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 14:50	1
PCB-1232	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 14:50	1
PCB-1242	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 14:50	1
PCB-1248	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 14:50	1
PCB-1254	ND		0.50	0.25	ug/L		03/04/15 08:03	03/04/15 14:50	1
PCB-1260	ND		0.50	0.25	ug/L		03/04/15 08:03	03/04/15 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	65		23 - 127	03/04/15 08:03	03/04/15 14:50	1
Tetrachloro-m-xylene	72		23 - 127	03/04/15 08:03	03/04/15 14:50	1
DCB Decachlorobiphenyl	33		19 - 126	03/04/15 08:03	03/04/15 14:50	1
DCB Decachlorobiphenyl	30		19 - 126	03/04/15 08:03	03/04/15 14:50	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.59	0.18	ug/L		03/04/15 08:15	03/05/15 15:29	1
Silvex (2,4,5-TP)	ND		0.59	0.43	ug/L		03/04/15 08:15	03/05/15 15:29	1
2,4-D	ND		0.59	0.48	ug/L		03/04/15 08:15	03/05/15 15:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	95		29 - 135	03/04/15 08:15	03/05/15 15:29	1
2,4-Dichlorophenylacetic acid	96		29 - 135	03/04/15 08:15	03/05/15 15:29	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 13:50	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:50	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 13:50	1
Barium	0.24		0.0020		mg/L		03/06/15 08:40	03/06/15 13:50	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:50	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:50	1
Calcium	157		0.50		mg/L		03/06/15 08:40	03/06/15 13:50	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:50	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:50	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:50	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 13:50	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:50	1
Magnesium	29.2		0.20		mg/L		03/06/15 08:40	03/06/15 13:50	1
Manganese	1.8		0.0030		mg/L		03/06/15 08:40	03/06/15 13:50	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:50	1
Potassium	11.5		0.50		mg/L		03/06/15 08:40	03/06/15 13:50	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 13:50	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 13:50	1
Sodium	78.7		1.0		mg/L		03/06/15 08:40	03/06/15 13:50	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:50	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 13:50	1
Zinc	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:50	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:38	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 17:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 17:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 17:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 17:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 17:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 17:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 17:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 17:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 17:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 17:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 17:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 17:50	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 17:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 17:50	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 17:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/15 17:50	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 17:50	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 17:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 17:50	1
Acetone	7.1	J	10	3.0	ug/L			03/04/15 17:50	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 17:50	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 17:50	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 17:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 17:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 17:50	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 17:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 17:50	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 17:50	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 17:50	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 17:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 17:50	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 17:50	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 17:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 17:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 17:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 17:50	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 17:50	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 17:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 17:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 17:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 17:50	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 17:50	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 17:50	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 17:50	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 17:50	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 17:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 17:50	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 17:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 17:50	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 17:50	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 17:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 17:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 17:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 17:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 17:50	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 17:50	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		66 - 137		03/04/15 17:50	1
4-Bromofluorobenzene (Surr)	98		73 - 120		03/04/15 17:50	1
Toluene-d8 (Surr)	100		71 - 126		03/04/15 17:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		4.9	0.64	ug/L		03/04/15 07:58	03/05/15 20:49	1
bis (2-chloroisopropyl) ether	ND		4.9	0.51	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,4,5-Trichlorophenol	ND		4.9	0.47	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,4,6-Trichlorophenol	ND		4.9	0.60	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,4-Dichlorophenol	ND		4.9	0.50	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,4-Dimethylphenol	ND		4.9	0.49	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,4-Dinitrophenol	ND		9.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,4-Dinitrotoluene	ND		4.9	0.44	ug/L		03/04/15 07:58	03/05/15 20:49	1
2,6-Dinitrotoluene	ND		4.9	0.39	ug/L		03/04/15 07:58	03/05/15 20:49	1
2-Chloronaphthalene	ND		4.9	0.45	ug/L		03/04/15 07:58	03/05/15 20:49	1
2-Chlorophenol	ND		4.9	0.52	ug/L		03/04/15 07:58	03/05/15 20:49	1
2-Methylphenol	ND		4.9	0.39	ug/L		03/04/15 07:58	03/05/15 20:49	1
2-Methylnaphthalene	ND		4.9	0.59	ug/L		03/04/15 07:58	03/05/15 20:49	1
2-Nitroaniline	ND		9.9	0.41	ug/L		03/04/15 07:58	03/05/15 20:49	1
2-Nitrophenol	ND		4.9	0.47	ug/L		03/04/15 07:58	03/05/15 20:49	1
3,3'-Dichlorobenzidine	ND *		4.9	0.39	ug/L		03/04/15 07:58	03/05/15 20:49	1
3-Nitroaniline	ND *		9.9	0.47	ug/L		03/04/15 07:58	03/05/15 20:49	1
4,6-Dinitro-2-methylphenol	ND		9.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Bromophenyl phenyl ether	ND		4.9	0.44	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Chloro-3-methylphenol	ND		4.9	0.44	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Chloroaniline	ND *		4.9	0.58	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Chlorophenyl phenyl ether	ND		4.9	0.34	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Methylphenol	ND		9.9	0.35	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Nitroaniline	ND *		9.9	0.25	ug/L		03/04/15 07:58	03/05/15 20:49	1
4-Nitrophenol	ND		9.9	1.5	ug/L		03/04/15 07:58	03/05/15 20:49	1
Acenaphthene	ND		4.9	0.40	ug/L		03/04/15 07:58	03/05/15 20:49	1
Acenaphthylene	ND		4.9	0.37	ug/L		03/04/15 07:58	03/05/15 20:49	1
Acetophenone	ND		4.9	0.53	ug/L		03/04/15 07:58	03/05/15 20:49	1
Anthracene	ND		4.9	0.28	ug/L		03/04/15 07:58	03/05/15 20:49	1
Atrazine	ND		4.9	0.45	ug/L		03/04/15 07:58	03/05/15 20:49	1
Benzaldehyde	ND *		4.9	0.26	ug/L		03/04/15 07:58	03/05/15 20:49	1
Benzo[a]anthracene	ND		4.9	0.35	ug/L		03/04/15 07:58	03/05/15 20:49	1
Benzo[a]pyrene	ND		4.9	0.46	ug/L		03/04/15 07:58	03/05/15 20:49	1
Benzo[b]fluoranthene	ND		4.9	0.34	ug/L		03/04/15 07:58	03/05/15 20:49	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		4.9	0.34	ug/L		03/04/15 07:58	03/05/15 20:49	1
Benzo[k]fluoranthene	ND		4.9	0.72	ug/L		03/04/15 07:58	03/05/15 20:49	1
Bis(2-chloroethoxy)methane	ND		4.9	0.34	ug/L		03/04/15 07:58	03/05/15 20:49	1
Bis(2-chloroethyl)ether	ND		4.9	0.39	ug/L		03/04/15 07:58	03/05/15 20:49	1
Bis(2-ethylhexyl) phthalate	15	B *	4.9	1.8	ug/L		03/04/15 07:58	03/05/15 20:49	1
Butyl benzyl phthalate	ND		4.9	0.41	ug/L		03/04/15 07:58	03/05/15 20:49	1
Caprolactam	1600	E	4.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:49	1
Carbazole	ND	*	4.9	0.30	ug/L		03/04/15 07:58	03/05/15 20:49	1
Chrysene	ND		4.9	0.33	ug/L		03/04/15 07:58	03/05/15 20:49	1
Dibenz(a,h)anthracene	ND		4.9	0.41	ug/L		03/04/15 07:58	03/05/15 20:49	1
Di-n-butyl phthalate	0.40	J B	4.9	0.31	ug/L		03/04/15 07:58	03/05/15 20:49	1
Di-n-octyl phthalate	ND		4.9	0.46	ug/L		03/04/15 07:58	03/05/15 20:49	1
Dibenzofuran	ND		9.9	0.50	ug/L		03/04/15 07:58	03/05/15 20:49	1
Diethyl phthalate	ND		4.9	0.22	ug/L		03/04/15 07:58	03/05/15 20:49	1
Dimethyl phthalate	ND		4.9	0.35	ug/L		03/04/15 07:58	03/05/15 20:49	1
Fluoranthene	ND		4.9	0.39	ug/L		03/04/15 07:58	03/05/15 20:49	1
Fluorene	ND		4.9	0.35	ug/L		03/04/15 07:58	03/05/15 20:49	1
Hexachlorobenzene	ND		4.9	0.50	ug/L		03/04/15 07:58	03/05/15 20:49	1
Hexachlorobutadiene	ND		4.9	0.67	ug/L		03/04/15 07:58	03/05/15 20:49	1
Hexachlorocyclopentadiene	ND		4.9	0.58	ug/L		03/04/15 07:58	03/05/15 20:49	1
Hexachloroethane	ND		4.9	0.58	ug/L		03/04/15 07:58	03/05/15 20:49	1
Indeno[1,2,3-cd]pyrene	2.3	J	4.9	0.46	ug/L		03/04/15 07:58	03/05/15 20:49	1
Isophorone	ND		4.9	0.42	ug/L		03/04/15 07:58	03/05/15 20:49	1
N-Nitrosodi-n-propylamine	ND		4.9	0.53	ug/L		03/04/15 07:58	03/05/15 20:49	1
N-Nitrosodiphenylamine	ND	*	4.9	0.50	ug/L		03/04/15 07:58	03/05/15 20:49	1
Naphthalene	ND		4.9	0.75	ug/L		03/04/15 07:58	03/05/15 20:49	1
Nitrobenzene	ND		4.9	0.29	ug/L		03/04/15 07:58	03/05/15 20:49	1
Pentachlorophenol	ND		9.9	2.2	ug/L		03/04/15 07:58	03/05/15 20:49	1
Phenanthrene	ND		4.9	0.43	ug/L		03/04/15 07:58	03/05/15 20:49	1
Phenol	ND		4.9	0.38	ug/L		03/04/15 07:58	03/05/15 20:49	1
Pyrene	ND		4.9	0.34	ug/L		03/04/15 07:58	03/05/15 20:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		46 - 120	03/04/15 07:58	03/05/15 20:49	1
Phenol-d5 (Surr)	2	X	16 - 120	03/04/15 07:58	03/05/15 20:49	1
p-Terphenyl-d14 (Surr)	68		67 - 150	03/04/15 07:58	03/05/15 20:49	1
2,4,6-Tribromophenol (Surr)	86		52 - 132	03/04/15 07:58	03/05/15 20:49	1
2-Fluorobiphenyl	79		48 - 120	03/04/15 07:58	03/05/15 20:49	1
2-Fluorophenol (Surr)	20		20 - 120	03/04/15 07:58	03/05/15 20:49	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		990	130	ug/L		03/04/15 07:58	03/11/15 11:21	200
bis (2-chloroisopropyl) ether	ND		990	100	ug/L		03/04/15 07:58	03/11/15 11:21	200
2,4,5-Trichlorophenol	ND		990	95	ug/L		03/04/15 07:58	03/11/15 11:21	200
2,4,6-Trichlorophenol	ND		990	120	ug/L		03/04/15 07:58	03/11/15 11:21	200
2,4-Dichlorophenol	ND		990	100	ug/L		03/04/15 07:58	03/11/15 11:21	200
2,4-Dimethylphenol	ND		990	99	ug/L		03/04/15 07:58	03/11/15 11:21	200
2,4-Dinitrophenol	ND		2000	440	ug/L		03/04/15 07:58	03/11/15 11:21	200
2,4-Dinitrotoluene	ND		990	88	ug/L		03/04/15 07:58	03/11/15 11:21	200

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		990	79	ug/L		03/04/15 07:58	03/11/15 11:21	200
2-Chloronaphthalene	ND		990	91	ug/L		03/04/15 07:58	03/11/15 11:21	200
2-Chlorophenol	ND		990	100	ug/L		03/04/15 07:58	03/11/15 11:21	200
2-Methylphenol	ND		990	79	ug/L		03/04/15 07:58	03/11/15 11:21	200
2-Methylnaphthalene	ND		990	120	ug/L		03/04/15 07:58	03/11/15 11:21	200
2-Nitroaniline	ND		2000	83	ug/L		03/04/15 07:58	03/11/15 11:21	200
2-Nitrophenol	ND		990	95	ug/L		03/04/15 07:58	03/11/15 11:21	200
3,3'-Dichlorobenzidine	ND	*	990	79	ug/L		03/04/15 07:58	03/11/15 11:21	200
3-Nitroaniline	ND	*	2000	95	ug/L		03/04/15 07:58	03/11/15 11:21	200
4,6-Dinitro-2-methylphenol	ND		2000	430	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Bromophenyl phenyl ether	ND		990	89	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Chloro-3-methylphenol	ND		990	89	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Chloroaniline	ND	*	990	120	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Chlorophenyl phenyl ether	ND		990	69	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Methylphenol	ND		2000	71	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Nitroaniline	ND	*	2000	49	ug/L		03/04/15 07:58	03/11/15 11:21	200
4-Nitrophenol	ND		2000	300	ug/L		03/04/15 07:58	03/11/15 11:21	200
Acenaphthene	ND		990	81	ug/L		03/04/15 07:58	03/11/15 11:21	200
Acenaphthylene	ND		990	75	ug/L		03/04/15 07:58	03/11/15 11:21	200
Acetophenone	ND		990	110	ug/L		03/04/15 07:58	03/11/15 11:21	200
Anthracene	ND		990	55	ug/L		03/04/15 07:58	03/11/15 11:21	200
Atrazine	ND		990	91	ug/L		03/04/15 07:58	03/11/15 11:21	200
Benzaldehyde	ND	*	990	53	ug/L		03/04/15 07:58	03/11/15 11:21	200
Benzo[a]anthracene	ND		990	71	ug/L		03/04/15 07:58	03/11/15 11:21	200
Benzo[a]pyrene	ND		990	93	ug/L		03/04/15 07:58	03/11/15 11:21	200
Benzo[b]fluoranthene	ND		990	67	ug/L		03/04/15 07:58	03/11/15 11:21	200
Benzo[g,h,i]perylene	ND		990	69	ug/L		03/04/15 07:58	03/11/15 11:21	200
Benzo[k]fluoranthene	ND		990	140	ug/L		03/04/15 07:58	03/11/15 11:21	200
Bis(2-chloroethoxy)methane	ND		990	69	ug/L		03/04/15 07:58	03/11/15 11:21	200
Bis(2-chloroethyl)ether	ND		990	79	ug/L		03/04/15 07:58	03/11/15 11:21	200
Bis(2-ethylhexyl) phthalate	ND	*	990	350	ug/L		03/04/15 07:58	03/11/15 11:21	200
Butyl benzyl phthalate	ND		990	83	ug/L		03/04/15 07:58	03/11/15 11:21	200
Caprolactam	1900		990	430	ug/L		03/04/15 07:58	03/11/15 11:21	200
Carbazole	ND	*	990	59	ug/L		03/04/15 07:58	03/11/15 11:21	200
Chrysene	ND		990	65	ug/L		03/04/15 07:58	03/11/15 11:21	200
Dibenz(a,h)anthracene	ND		990	83	ug/L		03/04/15 07:58	03/11/15 11:21	200
Di-n-butyl phthalate	ND		990	61	ug/L		03/04/15 07:58	03/11/15 11:21	200
Di-n-octyl phthalate	ND		990	93	ug/L		03/04/15 07:58	03/11/15 11:21	200
Dibenzofuran	ND		2000	100	ug/L		03/04/15 07:58	03/11/15 11:21	200
Diethyl phthalate	ND		990	43	ug/L		03/04/15 07:58	03/11/15 11:21	200
Dimethyl phthalate	ND		990	71	ug/L		03/04/15 07:58	03/11/15 11:21	200
Fluoranthene	ND		990	79	ug/L		03/04/15 07:58	03/11/15 11:21	200
Fluorene	ND		990	71	ug/L		03/04/15 07:58	03/11/15 11:21	200
Hexachlorobenzene	ND		990	100	ug/L		03/04/15 07:58	03/11/15 11:21	200
Hexachlorobutadiene	ND		990	130	ug/L		03/04/15 07:58	03/11/15 11:21	200
Hexachlorocyclopentadiene	ND		990	120	ug/L		03/04/15 07:58	03/11/15 11:21	200
Hexachloroethane	ND		990	120	ug/L		03/04/15 07:58	03/11/15 11:21	200
Indeno[1,2,3-cd]pyrene	ND		990	93	ug/L		03/04/15 07:58	03/11/15 11:21	200
Isophorone	ND		990	85	ug/L		03/04/15 07:58	03/11/15 11:21	200

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		990	110	ug/L		03/04/15 07:58	03/11/15 11:21	200
N-Nitrosodiphenylamine	ND	*	990	100	ug/L		03/04/15 07:58	03/11/15 11:21	200
Naphthalene	ND		990	150	ug/L		03/04/15 07:58	03/11/15 11:21	200
Nitrobenzene	ND		990	57	ug/L		03/04/15 07:58	03/11/15 11:21	200
Pentachlorophenol	ND		2000	430	ug/L		03/04/15 07:58	03/11/15 11:21	200
Phenanthrene	ND		990	87	ug/L		03/04/15 07:58	03/11/15 11:21	200
Phenol	ND		990	77	ug/L		03/04/15 07:58	03/11/15 11:21	200
Pyrene	ND		990	67	ug/L		03/04/15 07:58	03/11/15 11:21	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	90		46 - 120	03/04/15 07:58	03/11/15 11:21	200
Phenol-d5 (Surr)	45		16 - 120	03/04/15 07:58	03/11/15 11:21	200
p-Terphenyl-d14 (Surr)	74		67 - 150	03/04/15 07:58	03/11/15 11:21	200
2,4,6-Tribromophenol (Surr)	67		52 - 132	03/04/15 07:58	03/11/15 11:21	200
2-Fluorobiphenyl	99		48 - 120	03/04/15 07:58	03/11/15 11:21	200
2-Fluorophenol (Surr)	74		20 - 120	03/04/15 07:58	03/11/15 11:21	200

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.054	0.010	ug/L		03/04/15 08:06	03/04/15 17:11	1
4,4'-DDE	ND		0.054	0.013	ug/L		03/04/15 08:06	03/04/15 17:11	1
4,4'-DDT	ND		0.054	0.012	ug/L		03/04/15 08:06	03/04/15 17:11	1
Aldrin	ND		0.054	0.0088	ug/L		03/04/15 08:06	03/04/15 17:11	1
alpha-BHC	0.015	J	0.054	0.0084	ug/L		03/04/15 08:06	03/04/15 17:11	1
alpha-Chlordane	ND		0.054	0.016	ug/L		03/04/15 08:06	03/04/15 17:11	1
beta-BHC	ND		0.054	0.027	ug/L		03/04/15 08:06	03/04/15 17:11	1
delta-BHC	0.012	J	0.054	0.011	ug/L		03/04/15 08:06	03/04/15 17:11	1
Dieldrin	ND		0.054	0.011	ug/L		03/04/15 08:06	03/04/15 17:11	1
Endosulfan I	ND		0.054	0.012	ug/L		03/04/15 08:06	03/04/15 17:11	1
Endosulfan II	ND		0.054	0.013	ug/L		03/04/15 08:06	03/04/15 17:11	1
Endosulfan sulfate	0.017	J	0.054	0.017	ug/L		03/04/15 08:06	03/04/15 17:11	1
Endrin	ND		0.054	0.015	ug/L		03/04/15 08:06	03/04/15 17:11	1
Endrin aldehyde	ND		0.054	0.018	ug/L		03/04/15 08:06	03/04/15 17:11	1
Endrin ketone	ND		0.054	0.013	ug/L		03/04/15 08:06	03/04/15 17:11	1
gamma-BHC (Lindane)	0.017	J	0.054	0.0087	ug/L		03/04/15 08:06	03/04/15 17:11	1
gamma-Chlordane	ND		0.054	0.012	ug/L		03/04/15 08:06	03/04/15 17:11	1
Heptachlor	0.015	J	0.054	0.0092	ug/L		03/04/15 08:06	03/04/15 17:11	1
Heptachlor epoxide	0.023	J	0.054	0.0080	ug/L		03/04/15 08:06	03/04/15 17:11	1
Methoxychlor	0.028	J	0.054	0.015	ug/L		03/04/15 08:06	03/04/15 17:11	1
Toxaphene	ND		0.54	0.13	ug/L		03/04/15 08:06	03/04/15 17:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	32		20 - 120	03/04/15 08:06	03/04/15 17:11	1
DCB Decachlorobiphenyl	82		20 - 120	03/04/15 08:06	03/04/15 17:11	1
Tetrachloro-m-xylene	79		36 - 120	03/04/15 08:06	03/04/15 17:11	1
Tetrachloro-m-xylene	61		36 - 120	03/04/15 08:06	03/04/15 17:11	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.47	0.17	ug/L		03/04/15 08:03	03/04/15 15:05	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-76055-2

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.47	0.17	ug/L		03/04/15 08:03	03/04/15 15:05	1
PCB-1232	ND		0.47	0.17	ug/L		03/04/15 08:03	03/04/15 15:05	1
PCB-1242	ND		0.47	0.17	ug/L		03/04/15 08:03	03/04/15 15:05	1
PCB-1248	ND		0.47	0.17	ug/L		03/04/15 08:03	03/04/15 15:05	1
PCB-1254	ND		0.47	0.24	ug/L		03/04/15 08:03	03/04/15 15:05	1
PCB-1260	ND		0.47	0.24	ug/L		03/04/15 08:03	03/04/15 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	61		23 - 127	03/04/15 08:03	03/04/15 15:05	1
Tetrachloro-m-xylene	63		23 - 127	03/04/15 08:03	03/04/15 15:05	1
DCB Decachlorobiphenyl	39		19 - 126	03/04/15 08:03	03/04/15 15:05	1
DCB Decachlorobiphenyl	37		19 - 126	03/04/15 08:03	03/04/15 15:05	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.94	0.28	ug/L		03/04/15 08:15	03/05/15 15:59	1
Silvex (2,4,5-TP)	ND		0.94	0.67	ug/L		03/04/15 08:15	03/05/15 15:59	1
2,4-D	ND		0.94	0.75	ug/L		03/04/15 08:15	03/05/15 15:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	90		29 - 135	03/04/15 08:15	03/05/15 15:59	1
2,4-Dichlorophenylacetic acid	100		29 - 135	03/04/15 08:15	03/05/15 15:59	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 13:53	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:53	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 13:53	1
Barium	0.22		0.0020		mg/L		03/06/15 08:40	03/06/15 13:53	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:53	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:53	1
Calcium	152		0.50		mg/L		03/06/15 08:40	03/06/15 13:53	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:53	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:53	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:53	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 13:53	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:53	1
Magnesium	29.0		0.20		mg/L		03/06/15 08:40	03/06/15 13:53	1
Manganese	1.9		0.0030		mg/L		03/06/15 08:40	03/06/15 13:53	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:53	1
Potassium	10.6		0.50		mg/L		03/06/15 08:40	03/06/15 13:53	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 13:53	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 13:53	1
Sodium	77.6		1.0		mg/L		03/06/15 08:40	03/06/15 13:53	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:53	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 13:53	1
Zinc	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:53	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:43	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Date Collected: 02/27/15 15:30

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 18:18	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 18:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 18:18	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 18:18	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 18:18	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 18:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 18:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 18:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 18:18	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 18:18	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 18:18	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 18:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 18:18	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 18:18	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 18:18	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/15 18:18	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 18:18	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 18:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 18:18	1
Acetone	8.3	J	10	3.0	ug/L			03/04/15 18:18	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 18:18	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 18:18	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 18:18	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 18:18	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 18:18	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 18:18	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 18:18	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 18:18	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 18:18	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 18:18	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 18:18	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 18:18	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 18:18	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 18:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 18:18	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 18:18	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 18:18	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 18:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 18:18	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 18:18	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 18:18	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 18:18	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 18:18	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 18:18	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 18:18	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 18:18	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 18:18	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 18:18	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 18:18	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Date Collected: 02/27/15 15:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 18:18	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 18:18	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 18:18	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 18:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 18:18	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 18:18	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 18:18	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		66 - 137		03/04/15 18:18	1
4-Bromofluorobenzene (Surr)	100		73 - 120		03/04/15 18:18	1
Toluene-d8 (Surr)	100		71 - 126		03/04/15 18:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.2	0.68	ug/L		03/04/15 07:58	03/05/15 21:14	1
bis (2-chloroisopropyl) ether	ND		5.2	0.54	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,4,5-Trichlorophenol	ND		5.2	0.50	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,4,6-Trichlorophenol	ND		5.2	0.64	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,4-Dichlorophenol	ND		5.2	0.53	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,4-Dimethylphenol	ND		5.2	0.52	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,4-Dinitrophenol	ND		10	2.3	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,4-Dinitrotoluene	ND		5.2	0.47	ug/L		03/04/15 07:58	03/05/15 21:14	1
2,6-Dinitrotoluene	ND		5.2	0.42	ug/L		03/04/15 07:58	03/05/15 21:14	1
2-Chloronaphthalene	ND		5.2	0.48	ug/L		03/04/15 07:58	03/05/15 21:14	1
2-Chlorophenol	ND		5.2	0.55	ug/L		03/04/15 07:58	03/05/15 21:14	1
2-Methylphenol	ND		5.2	0.42	ug/L		03/04/15 07:58	03/05/15 21:14	1
2-Methylnaphthalene	ND		5.2	0.62	ug/L		03/04/15 07:58	03/05/15 21:14	1
2-Nitroaniline	ND		10	0.44	ug/L		03/04/15 07:58	03/05/15 21:14	1
2-Nitrophenol	ND		5.2	0.50	ug/L		03/04/15 07:58	03/05/15 21:14	1
3,3'-Dichlorobenzidine	ND *		5.2	0.42	ug/L		03/04/15 07:58	03/05/15 21:14	1
3-Nitroaniline	ND *		10	0.50	ug/L		03/04/15 07:58	03/05/15 21:14	1
4,6-Dinitro-2-methylphenol	ND		10	2.3	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Bromophenyl phenyl ether	ND		5.2	0.47	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Chloro-3-methylphenol	ND		5.2	0.47	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Chloroaniline	ND *		5.2	0.61	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Chlorophenyl phenyl ether	ND		5.2	0.36	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Methylphenol	ND		10	0.37	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Nitroaniline	ND *		10	0.26	ug/L		03/04/15 07:58	03/05/15 21:14	1
4-Nitrophenol	ND		10	1.6	ug/L		03/04/15 07:58	03/05/15 21:14	1
Acenaphthene	ND		5.2	0.43	ug/L		03/04/15 07:58	03/05/15 21:14	1
Acenaphthylene	ND		5.2	0.40	ug/L		03/04/15 07:58	03/05/15 21:14	1
Acetophenone	ND		5.2	0.56	ug/L		03/04/15 07:58	03/05/15 21:14	1
Anthracene	ND		5.2	0.29	ug/L		03/04/15 07:58	03/05/15 21:14	1
Atrazine	ND		5.2	0.48	ug/L		03/04/15 07:58	03/05/15 21:14	1
Benzaldehyde	ND *		5.2	0.28	ug/L		03/04/15 07:58	03/05/15 21:14	1
Benzo[a]anthracene	ND		5.2	0.37	ug/L		03/04/15 07:58	03/05/15 21:14	1
Benzo[a]pyrene	ND		5.2	0.49	ug/L		03/04/15 07:58	03/05/15 21:14	1
Benzo[b]fluoranthene	1.3 J		5.2	0.35	ug/L		03/04/15 07:58	03/05/15 21:14	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Date Collected: 02/27/15 15:30

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	0.46	J	5.2	0.36	ug/L		03/04/15 07:58	03/05/15 21:14	1
Benzo[k]fluoranthene	ND		5.2	0.76	ug/L		03/04/15 07:58	03/05/15 21:14	1
Bis(2-chloroethoxy)methane	ND		5.2	0.36	ug/L		03/04/15 07:58	03/05/15 21:14	1
Bis(2-chloroethyl)ether	ND		5.2	0.42	ug/L		03/04/15 07:58	03/05/15 21:14	1
Bis(2-ethylhexyl) phthalate	14	B *	5.2	1.9	ug/L		03/04/15 07:58	03/05/15 21:14	1
Butyl benzyl phthalate	ND		5.2	0.44	ug/L		03/04/15 07:58	03/05/15 21:14	1
Caprolactam	2000	E	5.2	2.3	ug/L		03/04/15 07:58	03/05/15 21:14	1
Carbazole	ND	*	5.2	0.31	ug/L		03/04/15 07:58	03/05/15 21:14	1
Chrysene	ND		5.2	0.34	ug/L		03/04/15 07:58	03/05/15 21:14	1
Dibenz(a,h)anthracene	ND		5.2	0.44	ug/L		03/04/15 07:58	03/05/15 21:14	1
Di-n-butyl phthalate	0.45	J B	5.2	0.32	ug/L		03/04/15 07:58	03/05/15 21:14	1
Di-n-octyl phthalate	ND		5.2	0.49	ug/L		03/04/15 07:58	03/05/15 21:14	1
Dibenzofuran	ND		10	0.53	ug/L		03/04/15 07:58	03/05/15 21:14	1
Diethyl phthalate	ND		5.2	0.23	ug/L		03/04/15 07:58	03/05/15 21:14	1
Dimethyl phthalate	ND		5.2	0.37	ug/L		03/04/15 07:58	03/05/15 21:14	1
Fluoranthene	ND		5.2	0.42	ug/L		03/04/15 07:58	03/05/15 21:14	1
Fluorene	ND		5.2	0.37	ug/L		03/04/15 07:58	03/05/15 21:14	1
Hexachlorobenzene	ND		5.2	0.53	ug/L		03/04/15 07:58	03/05/15 21:14	1
Hexachlorobutadiene	ND		5.2	0.71	ug/L		03/04/15 07:58	03/05/15 21:14	1
Hexachlorocyclopentadiene	ND		5.2	0.61	ug/L		03/04/15 07:58	03/05/15 21:14	1
Hexachloroethane	ND		5.2	0.61	ug/L		03/04/15 07:58	03/05/15 21:14	1
Indeno[1,2,3-cd]pyrene	2.6	J	5.2	0.49	ug/L		03/04/15 07:58	03/05/15 21:14	1
Isophorone	ND		5.2	0.45	ug/L		03/04/15 07:58	03/05/15 21:14	1
N-Nitrosodi-n-propylamine	ND		5.2	0.56	ug/L		03/04/15 07:58	03/05/15 21:14	1
N-Nitrosodiphenylamine	ND	*	5.2	0.53	ug/L		03/04/15 07:58	03/05/15 21:14	1
Naphthalene	ND		5.2	0.79	ug/L		03/04/15 07:58	03/05/15 21:14	1
Nitrobenzene	ND		5.2	0.30	ug/L		03/04/15 07:58	03/05/15 21:14	1
Pentachlorophenol	ND		10	2.3	ug/L		03/04/15 07:58	03/05/15 21:14	1
Phenanthrene	ND		5.2	0.46	ug/L		03/04/15 07:58	03/05/15 21:14	1
Phenol	ND		5.2	0.41	ug/L		03/04/15 07:58	03/05/15 21:14	1
Pyrene	0.45	J	5.2	0.35	ug/L		03/04/15 07:58	03/05/15 21:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	77		46 - 120	03/04/15 07:58	03/05/15 21:14	1
Phenol-d5 (Surr)	3	X	16 - 120	03/04/15 07:58	03/05/15 21:14	1
p-Terphenyl-d14 (Surr)	75		67 - 150	03/04/15 07:58	03/05/15 21:14	1
2,4,6-Tribromophenol (Surr)	78		52 - 132	03/04/15 07:58	03/05/15 21:14	1
2-Fluorobiphenyl	80		48 - 120	03/04/15 07:58	03/05/15 21:14	1
2-Fluorophenol (Surr)	10	X	20 - 120	03/04/15 07:58	03/05/15 21:14	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		1000	140	ug/L		03/04/15 07:58	03/11/15 11:47	200
bis (2-chloroisopropyl) ether	ND		1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
2,4,5-Trichlorophenol	ND		1000	100	ug/L		03/04/15 07:58	03/11/15 11:47	200
2,4,6-Trichlorophenol	ND		1000	130	ug/L		03/04/15 07:58	03/11/15 11:47	200
2,4-Dichlorophenol	ND		1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
2,4-Dimethylphenol	ND		1000	100	ug/L		03/04/15 07:58	03/11/15 11:47	200
2,4-Dinitrophenol	ND		2100	460	ug/L		03/04/15 07:58	03/11/15 11:47	200
2,4-Dinitrotoluene	ND		1000	93	ug/L		03/04/15 07:58	03/11/15 11:47	200

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Date Collected: 02/27/15 15:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		1000	83	ug/L		03/04/15 07:58	03/11/15 11:47	200
2-Chloronaphthalene	ND		1000	96	ug/L		03/04/15 07:58	03/11/15 11:47	200
2-Chlorophenol	ND		1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
2-Methylphenol	ND		1000	83	ug/L		03/04/15 07:58	03/11/15 11:47	200
2-Methylnaphthalene	ND		1000	120	ug/L		03/04/15 07:58	03/11/15 11:47	200
2-Nitroaniline	ND		2100	87	ug/L		03/04/15 07:58	03/11/15 11:47	200
2-Nitrophenol	ND		1000	100	ug/L		03/04/15 07:58	03/11/15 11:47	200
3,3'-Dichlorobenzidine	ND	*	1000	83	ug/L		03/04/15 07:58	03/11/15 11:47	200
3-Nitroaniline	ND	*	2100	100	ug/L		03/04/15 07:58	03/11/15 11:47	200
4,6-Dinitro-2-methylphenol	ND		2100	460	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Bromophenyl phenyl ether	ND		1000	94	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Chloro-3-methylphenol	ND		1000	94	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Chloroaniline	ND	*	1000	120	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Chlorophenyl phenyl ether	ND		1000	73	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Methylphenol	ND		2100	75	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Nitroaniline	ND	*	2100	52	ug/L		03/04/15 07:58	03/11/15 11:47	200
4-Nitrophenol	ND		2100	320	ug/L		03/04/15 07:58	03/11/15 11:47	200
Acenaphthene	ND		1000	85	ug/L		03/04/15 07:58	03/11/15 11:47	200
Acenaphthylene	ND		1000	79	ug/L		03/04/15 07:58	03/11/15 11:47	200
Acetophenone	ND		1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
Anthracene	ND		1000	58	ug/L		03/04/15 07:58	03/11/15 11:47	200
Atrazine	ND		1000	96	ug/L		03/04/15 07:58	03/11/15 11:47	200
Benzaldehyde	ND	*	1000	56	ug/L		03/04/15 07:58	03/11/15 11:47	200
Benzo[a]anthracene	ND		1000	75	ug/L		03/04/15 07:58	03/11/15 11:47	200
Benzo[a]pyrene	ND		1000	98	ug/L		03/04/15 07:58	03/11/15 11:47	200
Benzo[b]fluoranthene	ND		1000	71	ug/L		03/04/15 07:58	03/11/15 11:47	200
Benzo[g,h,i]perylene	ND		1000	73	ug/L		03/04/15 07:58	03/11/15 11:47	200
Benzo[k]fluoranthene	ND		1000	150	ug/L		03/04/15 07:58	03/11/15 11:47	200
Bis(2-chloroethoxy)methane	ND		1000	73	ug/L		03/04/15 07:58	03/11/15 11:47	200
Bis(2-chloroethyl)ether	ND		1000	83	ug/L		03/04/15 07:58	03/11/15 11:47	200
Bis(2-ethylhexyl) phthalate	ND	*	1000	370	ug/L		03/04/15 07:58	03/11/15 11:47	200
Butyl benzyl phthalate	ND		1000	87	ug/L		03/04/15 07:58	03/11/15 11:47	200
Caprolactam	2200		1000	460	ug/L		03/04/15 07:58	03/11/15 11:47	200
Carbazole	ND	*	1000	62	ug/L		03/04/15 07:58	03/11/15 11:47	200
Chrysene	ND		1000	69	ug/L		03/04/15 07:58	03/11/15 11:47	200
Dibenz(a,h)anthracene	ND		1000	87	ug/L		03/04/15 07:58	03/11/15 11:47	200
Di-n-butyl phthalate	ND		1000	65	ug/L		03/04/15 07:58	03/11/15 11:47	200
Di-n-octyl phthalate	ND		1000	98	ug/L		03/04/15 07:58	03/11/15 11:47	200
Dibenzofuran	ND		2100	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
Diethyl phthalate	ND		1000	46	ug/L		03/04/15 07:58	03/11/15 11:47	200
Dimethyl phthalate	ND		1000	75	ug/L		03/04/15 07:58	03/11/15 11:47	200
Fluoranthene	ND		1000	83	ug/L		03/04/15 07:58	03/11/15 11:47	200
Fluorene	ND		1000	75	ug/L		03/04/15 07:58	03/11/15 11:47	200
Hexachlorobenzene	ND		1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
Hexachlorobutadiene	ND		1000	140	ug/L		03/04/15 07:58	03/11/15 11:47	200
Hexachlorocyclopentadiene	ND		1000	120	ug/L		03/04/15 07:58	03/11/15 11:47	200
Hexachloroethane	ND		1000	120	ug/L		03/04/15 07:58	03/11/15 11:47	200
Indeno[1,2,3-cd]pyrene	ND		1000	98	ug/L		03/04/15 07:58	03/11/15 11:47	200
Isophorone	ND		1000	90	ug/L		03/04/15 07:58	03/11/15 11:47	200

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Date Collected: 02/27/15 15:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
N-Nitrosodiphenylamine	ND	*	1000	110	ug/L		03/04/15 07:58	03/11/15 11:47	200
Naphthalene	ND		1000	160	ug/L		03/04/15 07:58	03/11/15 11:47	200
Nitrobenzene	ND		1000	60	ug/L		03/04/15 07:58	03/11/15 11:47	200
Pentachlorophenol	ND		2100	460	ug/L		03/04/15 07:58	03/11/15 11:47	200
Phenanthrene	ND		1000	92	ug/L		03/04/15 07:58	03/11/15 11:47	200
Phenol	ND		1000	81	ug/L		03/04/15 07:58	03/11/15 11:47	200
Pyrene	ND		1000	71	ug/L		03/04/15 07:58	03/11/15 11:47	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	79		46 - 120	03/04/15 07:58	03/11/15 11:47	200
Phenol-d5 (Surr)	41		16 - 120	03/04/15 07:58	03/11/15 11:47	200
p-Terphenyl-d14 (Surr)	79		67 - 150	03/04/15 07:58	03/11/15 11:47	200
2,4,6-Tribromophenol (Surr)	34	X	52 - 132	03/04/15 07:58	03/11/15 11:47	200
2-Fluorobiphenyl	89		48 - 120	03/04/15 07:58	03/11/15 11:47	200
2-Fluorophenol (Surr)	60		20 - 120	03/04/15 07:58	03/11/15 11:47	200

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND	F2	0.053	0.0097	ug/L		03/04/15 08:06	03/04/15 17:29	1
4,4'-DDE	ND	F2	0.053	0.012	ug/L		03/04/15 08:06	03/04/15 17:29	1
4,4'-DDT	ND	F2	0.053	0.012	ug/L		03/04/15 08:06	03/04/15 17:29	1
Aldrin	ND	F2	0.053	0.0086	ug/L		03/04/15 08:06	03/04/15 17:29	1
alpha-BHC	0.036	J F2	0.053	0.0082	ug/L		03/04/15 08:06	03/04/15 17:29	1
alpha-Chlordane	ND	F2	0.053	0.016	ug/L		03/04/15 08:06	03/04/15 17:29	1
beta-BHC	ND	F2	0.053	0.026	ug/L		03/04/15 08:06	03/04/15 17:29	1
delta-BHC	0.012	J F2	0.053	0.011	ug/L		03/04/15 08:06	03/04/15 17:29	1
Dieldrin	ND	F2	0.053	0.010	ug/L		03/04/15 08:06	03/04/15 17:29	1
Endosulfan I	ND	F2	0.053	0.012	ug/L		03/04/15 08:06	03/04/15 17:29	1
Endosulfan II	ND	F2	0.053	0.013	ug/L		03/04/15 08:06	03/04/15 17:29	1
Endosulfan sulfate	0.028	J F2	0.053	0.017	ug/L		03/04/15 08:06	03/04/15 17:29	1
Endrin	0.023	J F2	0.053	0.015	ug/L		03/04/15 08:06	03/04/15 17:29	1
Endrin aldehyde	0.036	J B F2	0.053	0.017	ug/L		03/04/15 08:06	03/04/15 17:29	1
Endrin ketone	0.028	J F2	0.053	0.013	ug/L		03/04/15 08:06	03/04/15 17:29	1
gamma-BHC (Lindane)	0.038	J F2	0.053	0.0085	ug/L		03/04/15 08:06	03/04/15 17:29	1
gamma-Chlordane	ND	F2 F1	0.053	0.012	ug/L		03/04/15 08:06	03/04/15 17:29	1
Heptachlor	ND	F2	0.053	0.0090	ug/L		03/04/15 08:06	03/04/15 17:29	1
Heptachlor epoxide	ND	F2	0.053	0.0078	ug/L		03/04/15 08:06	03/04/15 17:29	1
Methoxychlor	0.19	F2	0.053	0.015	ug/L		03/04/15 08:06	03/04/15 17:29	1
Toxaphene	ND		0.53	0.13	ug/L		03/04/15 08:06	03/04/15 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	29		20 - 120	03/04/15 08:06	03/04/15 17:29	1
DCB Decachlorobiphenyl	106		20 - 120	03/04/15 08:06	03/04/15 17:29	1
Tetrachloro-m-xylene	88		36 - 120	03/04/15 08:06	03/04/15 17:29	1
Tetrachloro-m-xylene	69		36 - 120	03/04/15 08:06	03/04/15 17:29	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.73	0.26	ug/L		03/04/15 08:03	03/04/15 15:20	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Date Collected: 02/27/15 15:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.73	0.26	ug/L		03/04/15 08:03	03/04/15 15:20	1
PCB-1232	ND		0.73	0.26	ug/L		03/04/15 08:03	03/04/15 15:20	1
PCB-1242	ND		0.73	0.26	ug/L		03/04/15 08:03	03/04/15 15:20	1
PCB-1248	ND		0.73	0.26	ug/L		03/04/15 08:03	03/04/15 15:20	1
PCB-1254	ND		0.73	0.36	ug/L		03/04/15 08:03	03/04/15 15:20	1
PCB-1260	ND		0.73	0.36	ug/L		03/04/15 08:03	03/04/15 15:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	56		23 - 127	03/04/15 08:03	03/04/15 15:20	1
Tetrachloro-m-xylene	56		23 - 127	03/04/15 08:03	03/04/15 15:20	1
DCB Decachlorobiphenyl	26		19 - 126	03/04/15 08:03	03/04/15 15:20	1
DCB Decachlorobiphenyl	28		19 - 126	03/04/15 08:03	03/04/15 15:20	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 13:56	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:56	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 13:56	1
Barium	0.15		0.0020		mg/L		03/06/15 08:40	03/06/15 13:56	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:56	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:56	1
Calcium	67.4		0.50		mg/L		03/06/15 08:40	03/06/15 13:56	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:56	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:56	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:56	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 13:56	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:56	1
Magnesium	13.4		0.20		mg/L		03/06/15 08:40	03/06/15 13:56	1
Manganese	2.2		0.0030		mg/L		03/06/15 08:40	03/06/15 13:56	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:56	1
Potassium	2.7		0.50		mg/L		03/06/15 08:40	03/06/15 13:56	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 13:56	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 13:56	1
Sodium	108		1.0		mg/L		03/06/15 08:40	03/06/15 13:56	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:56	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 13:56	1
Zinc	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:56	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:44	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 18:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 18:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 18:47	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 18:47	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 18:47	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 18:47	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 18:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 18:47	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 18:47	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 18:47	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 18:47	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 18:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 18:47	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 18:47	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 18:47	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/15 18:47	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 18:47	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 18:47	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 18:47	1
Acetone	7.6	J	10	3.0	ug/L			03/04/15 18:47	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 18:47	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 18:47	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 18:47	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 18:47	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 18:47	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 18:47	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 18:47	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 18:47	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 18:47	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 18:47	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 18:47	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 18:47	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 18:47	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 18:47	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 18:47	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 18:47	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 18:47	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 18:47	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 18:47	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 18:47	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 18:47	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 18:47	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 18:47	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 18:47	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 18:47	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 18:47	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 18:47	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 18:47	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 18:47	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 18:47	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 18:47	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 18:47	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 18:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 18:47	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 18:47	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 18:47	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 18:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		66 - 137		03/04/15 18:47	1
4-Bromofluorobenzene (Surr)	96		73 - 120		03/04/15 18:47	1
Toluene-d8 (Surr)	99		71 - 126		03/04/15 18:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		7.5	0.98	ug/L		03/04/15 07:58	03/05/15 21:39	1
bis (2-chloroisopropyl) ether	ND		7.5	0.78	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,4,5-Trichlorophenol	ND		7.5	0.72	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,4,6-Trichlorophenol	ND		7.5	0.92	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,4-Dichlorophenol	ND		7.5	0.77	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,4-Dimethylphenol	ND		7.5	0.75	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,4-Dinitrophenol	ND		15	3.3	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,4-Dinitrotoluene	ND		7.5	0.67	ug/L		03/04/15 07:58	03/05/15 21:39	1
2,6-Dinitrotoluene	ND		7.5	0.60	ug/L		03/04/15 07:58	03/05/15 21:39	1
2-Chloronaphthalene	ND		7.5	0.69	ug/L		03/04/15 07:58	03/05/15 21:39	1
2-Chlorophenol	ND		7.5	0.80	ug/L		03/04/15 07:58	03/05/15 21:39	1
2-Methylphenol	ND		7.5	0.60	ug/L		03/04/15 07:58	03/05/15 21:39	1
2-Methylnaphthalene	ND		7.5	0.90	ug/L		03/04/15 07:58	03/05/15 21:39	1
2-Nitroaniline	ND		15	0.63	ug/L		03/04/15 07:58	03/05/15 21:39	1
2-Nitrophenol	ND		7.5	0.72	ug/L		03/04/15 07:58	03/05/15 21:39	1
3,3'-Dichlorobenzidine	ND *		7.5	0.60	ug/L		03/04/15 07:58	03/05/15 21:39	1
3-Nitroaniline	ND *		15	0.72	ug/L		03/04/15 07:58	03/05/15 21:39	1
4,6-Dinitro-2-methylphenol	ND		15	3.3	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Bromophenyl phenyl ether	ND		7.5	0.68	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Chloro-3-methylphenol	ND		7.5	0.68	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Chloroaniline	ND *		7.5	0.89	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Chlorophenyl phenyl ether	ND		7.5	0.53	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Methylphenol	ND		15	0.54	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Nitroaniline	ND *		15	0.38	ug/L		03/04/15 07:58	03/05/15 21:39	1
4-Nitrophenol	ND		15	2.3	ug/L		03/04/15 07:58	03/05/15 21:39	1
Acenaphthene	ND		7.5	0.62	ug/L		03/04/15 07:58	03/05/15 21:39	1
Acenaphthylene	ND		7.5	0.57	ug/L		03/04/15 07:58	03/05/15 21:39	1
Acetophenone	ND		7.5	0.81	ug/L		03/04/15 07:58	03/05/15 21:39	1
Anthracene	ND		7.5	0.42	ug/L		03/04/15 07:58	03/05/15 21:39	1
Atrazine	ND		7.5	0.69	ug/L		03/04/15 07:58	03/05/15 21:39	1
Benzaldehyde	ND *		7.5	0.40	ug/L		03/04/15 07:58	03/05/15 21:39	1
Benzo[a]anthracene	ND		7.5	0.54	ug/L		03/04/15 07:58	03/05/15 21:39	1
Benzo[a]pyrene	ND		7.5	0.71	ug/L		03/04/15 07:58	03/05/15 21:39	1
Benzo[b]fluoranthene	ND		7.5	0.51	ug/L		03/04/15 07:58	03/05/15 21:39	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		7.5	0.53	ug/L		03/04/15 07:58	03/05/15 21:39	1
Benzo[k]fluoranthene	ND		7.5	1.1	ug/L		03/04/15 07:58	03/05/15 21:39	1
Bis(2-chloroethoxy)methane	ND		7.5	0.53	ug/L		03/04/15 07:58	03/05/15 21:39	1
Bis(2-chloroethyl)ether	ND		7.5	0.60	ug/L		03/04/15 07:58	03/05/15 21:39	1
Bis(2-ethylhexyl) phthalate	47	B *	7.5	2.7	ug/L		03/04/15 07:58	03/05/15 21:39	1
Butyl benzyl phthalate	ND		7.5	0.63	ug/L		03/04/15 07:58	03/05/15 21:39	1
Caprolactam	1200	E	7.5	3.3	ug/L		03/04/15 07:58	03/05/15 21:39	1
Carbazole	ND	*	7.5	0.45	ug/L		03/04/15 07:58	03/05/15 21:39	1
Chrysene	ND		7.5	0.50	ug/L		03/04/15 07:58	03/05/15 21:39	1
Dibenz(a,h)anthracene	ND		7.5	0.63	ug/L		03/04/15 07:58	03/05/15 21:39	1
Di-n-butyl phthalate	0.73	J B	7.5	0.47	ug/L		03/04/15 07:58	03/05/15 21:39	1
Di-n-octyl phthalate	ND		7.5	0.71	ug/L		03/04/15 07:58	03/05/15 21:39	1
Dibenzofuran	ND		15	0.77	ug/L		03/04/15 07:58	03/05/15 21:39	1
Diethyl phthalate	0.41	J	7.5	0.33	ug/L		03/04/15 07:58	03/05/15 21:39	1
Dimethyl phthalate	ND		7.5	0.54	ug/L		03/04/15 07:58	03/05/15 21:39	1
Fluoranthene	ND		7.5	0.60	ug/L		03/04/15 07:58	03/05/15 21:39	1
Fluorene	ND		7.5	0.54	ug/L		03/04/15 07:58	03/05/15 21:39	1
Hexachlorobenzene	ND		7.5	0.77	ug/L		03/04/15 07:58	03/05/15 21:39	1
Hexachlorobutadiene	ND		7.5	1.0	ug/L		03/04/15 07:58	03/05/15 21:39	1
Hexachlorocyclopentadiene	ND		7.5	0.89	ug/L		03/04/15 07:58	03/05/15 21:39	1
Hexachloroethane	ND		7.5	0.89	ug/L		03/04/15 07:58	03/05/15 21:39	1
Indeno[1,2,3-cd]pyrene	ND		7.5	0.71	ug/L		03/04/15 07:58	03/05/15 21:39	1
Isophorone	ND		7.5	0.65	ug/L		03/04/15 07:58	03/05/15 21:39	1
N-Nitrosodi-n-propylamine	ND		7.5	0.81	ug/L		03/04/15 07:58	03/05/15 21:39	1
N-Nitrosodiphenylamine	ND	*	7.5	0.77	ug/L		03/04/15 07:58	03/05/15 21:39	1
Naphthalene	ND		7.5	1.1	ug/L		03/04/15 07:58	03/05/15 21:39	1
Nitrobenzene	ND		7.5	0.44	ug/L		03/04/15 07:58	03/05/15 21:39	1
Pentachlorophenol	ND		15	3.3	ug/L		03/04/15 07:58	03/05/15 21:39	1
Phenanthrene	ND		7.5	0.66	ug/L		03/04/15 07:58	03/05/15 21:39	1
Phenol	ND		7.5	0.59	ug/L		03/04/15 07:58	03/05/15 21:39	1
Pyrene	ND		7.5	0.51	ug/L		03/04/15 07:58	03/05/15 21:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	75		46 - 120	03/04/15 07:58	03/05/15 21:39	1
Phenol-d5 (Surr)	8	X	16 - 120	03/04/15 07:58	03/05/15 21:39	1
p-Terphenyl-d14 (Surr)	43	X	67 - 150	03/04/15 07:58	03/05/15 21:39	1
2,4,6-Tribromophenol (Surr)	86		52 - 132	03/04/15 07:58	03/05/15 21:39	1
2-Fluorobiphenyl	71		48 - 120	03/04/15 07:58	03/05/15 21:39	1
2-Fluorophenol (Surr)	75		20 - 120	03/04/15 07:58	03/05/15 21:39	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		750	98	ug/L		03/04/15 07:58	03/11/15 12:12	100
bis (2-chloroisopropyl) ether	ND		750	78	ug/L		03/04/15 07:58	03/11/15 12:12	100
2,4,5-Trichlorophenol	ND		750	72	ug/L		03/04/15 07:58	03/11/15 12:12	100
2,4,6-Trichlorophenol	ND		750	92	ug/L		03/04/15 07:58	03/11/15 12:12	100
2,4-Dichlorophenol	ND		750	77	ug/L		03/04/15 07:58	03/11/15 12:12	100
2,4-Dimethylphenol	ND		750	75	ug/L		03/04/15 07:58	03/11/15 12:12	100
2,4-Dinitrophenol	ND		1500	330	ug/L		03/04/15 07:58	03/11/15 12:12	100
2,4-Dinitrotoluene	ND		750	67	ug/L		03/04/15 07:58	03/11/15 12:12	100

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		750	60	ug/L		03/04/15 07:58	03/11/15 12:12	100
2-Chloronaphthalene	ND		750	69	ug/L		03/04/15 07:58	03/11/15 12:12	100
2-Chlorophenol	ND		750	80	ug/L		03/04/15 07:58	03/11/15 12:12	100
2-Methylphenol	ND		750	60	ug/L		03/04/15 07:58	03/11/15 12:12	100
2-Methylnaphthalene	ND		750	90	ug/L		03/04/15 07:58	03/11/15 12:12	100
2-Nitroaniline	ND		1500	63	ug/L		03/04/15 07:58	03/11/15 12:12	100
2-Nitrophenol	ND		750	72	ug/L		03/04/15 07:58	03/11/15 12:12	100
3,3'-Dichlorobenzidine	ND	*	750	60	ug/L		03/04/15 07:58	03/11/15 12:12	100
3-Nitroaniline	ND	*	1500	72	ug/L		03/04/15 07:58	03/11/15 12:12	100
4,6-Dinitro-2-methylphenol	ND		1500	330	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Bromophenyl phenyl ether	ND		750	68	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Chloro-3-methylphenol	ND		750	68	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Chloroaniline	ND	*	750	89	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Chlorophenyl phenyl ether	ND		750	53	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Methylphenol	ND		1500	54	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Nitroaniline	ND	*	1500	38	ug/L		03/04/15 07:58	03/11/15 12:12	100
4-Nitrophenol	ND		1500	230	ug/L		03/04/15 07:58	03/11/15 12:12	100
Acenaphthene	ND		750	62	ug/L		03/04/15 07:58	03/11/15 12:12	100
Acenaphthylene	ND		750	57	ug/L		03/04/15 07:58	03/11/15 12:12	100
Acetophenone	ND		750	81	ug/L		03/04/15 07:58	03/11/15 12:12	100
Anthracene	ND		750	42	ug/L		03/04/15 07:58	03/11/15 12:12	100
Atrazine	ND		750	69	ug/L		03/04/15 07:58	03/11/15 12:12	100
Benzaldehyde	ND	*	750	40	ug/L		03/04/15 07:58	03/11/15 12:12	100
Benzo[a]anthracene	ND		750	54	ug/L		03/04/15 07:58	03/11/15 12:12	100
Benzo[a]pyrene	ND		750	71	ug/L		03/04/15 07:58	03/11/15 12:12	100
Benzo[b]fluoranthene	ND		750	51	ug/L		03/04/15 07:58	03/11/15 12:12	100
Benzo[g,h,i]perylene	ND		750	53	ug/L		03/04/15 07:58	03/11/15 12:12	100
Benzo[k]fluoranthene	ND		750	110	ug/L		03/04/15 07:58	03/11/15 12:12	100
Bis(2-chloroethoxy)methane	ND		750	53	ug/L		03/04/15 07:58	03/11/15 12:12	100
Bis(2-chloroethyl)ether	ND		750	60	ug/L		03/04/15 07:58	03/11/15 12:12	100
Bis(2-ethylhexyl) phthalate	ND	*	750	270	ug/L		03/04/15 07:58	03/11/15 12:12	100
Butyl benzyl phthalate	ND		750	63	ug/L		03/04/15 07:58	03/11/15 12:12	100
Caprolactam	1200		750	330	ug/L		03/04/15 07:58	03/11/15 12:12	100
Carbazole	ND	*	750	45	ug/L		03/04/15 07:58	03/11/15 12:12	100
Chrysene	ND		750	50	ug/L		03/04/15 07:58	03/11/15 12:12	100
Dibenz(a,h)anthracene	ND		750	63	ug/L		03/04/15 07:58	03/11/15 12:12	100
Di-n-butyl phthalate	ND		750	47	ug/L		03/04/15 07:58	03/11/15 12:12	100
Di-n-octyl phthalate	ND		750	71	ug/L		03/04/15 07:58	03/11/15 12:12	100
Dibenzofuran	ND		1500	77	ug/L		03/04/15 07:58	03/11/15 12:12	100
Diethyl phthalate	ND		750	33	ug/L		03/04/15 07:58	03/11/15 12:12	100
Dimethyl phthalate	ND		750	54	ug/L		03/04/15 07:58	03/11/15 12:12	100
Fluoranthene	ND		750	60	ug/L		03/04/15 07:58	03/11/15 12:12	100
Fluorene	ND		750	54	ug/L		03/04/15 07:58	03/11/15 12:12	100
Hexachlorobenzene	ND		750	77	ug/L		03/04/15 07:58	03/11/15 12:12	100
Hexachlorobutadiene	ND		750	100	ug/L		03/04/15 07:58	03/11/15 12:12	100
Hexachlorocyclopentadiene	ND		750	89	ug/L		03/04/15 07:58	03/11/15 12:12	100
Hexachloroethane	ND		750	89	ug/L		03/04/15 07:58	03/11/15 12:12	100
Indeno[1,2,3-cd]pyrene	ND		750	71	ug/L		03/04/15 07:58	03/11/15 12:12	100
Isophorone	ND		750	65	ug/L		03/04/15 07:58	03/11/15 12:12	100

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		750	81	ug/L		03/04/15 07:58	03/11/15 12:12	100
N-Nitrosodiphenylamine	ND	*	750	77	ug/L		03/04/15 07:58	03/11/15 12:12	100
Naphthalene	ND		750	110	ug/L		03/04/15 07:58	03/11/15 12:12	100
Nitrobenzene	ND		750	44	ug/L		03/04/15 07:58	03/11/15 12:12	100
Pentachlorophenol	ND		1500	330	ug/L		03/04/15 07:58	03/11/15 12:12	100
Phenanthrene	ND		750	66	ug/L		03/04/15 07:58	03/11/15 12:12	100
Phenol	ND		750	59	ug/L		03/04/15 07:58	03/11/15 12:12	100
Pyrene	ND		750	51	ug/L		03/04/15 07:58	03/11/15 12:12	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	73		46 - 120	03/04/15 07:58	03/11/15 12:12	100
Phenol-d5 (Surr)	50		16 - 120	03/04/15 07:58	03/11/15 12:12	100
p-Terphenyl-d14 (Surr)	41	X	67 - 150	03/04/15 07:58	03/11/15 12:12	100
2,4,6-Tribromophenol (Surr)	60		52 - 132	03/04/15 07:58	03/11/15 12:12	100
2-Fluorobiphenyl	84		48 - 120	03/04/15 07:58	03/11/15 12:12	100
2-Fluorophenol (Surr)	73		20 - 120	03/04/15 07:58	03/11/15 12:12	100

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.056	0.010	ug/L		03/04/15 08:06	03/04/15 17:46	1
4,4'-DDE	ND		0.056	0.013	ug/L		03/04/15 08:06	03/04/15 17:46	1
4,4'-DDT	ND		0.056	0.012	ug/L		03/04/15 08:06	03/04/15 17:46	1
Aldrin	ND		0.056	0.0090	ug/L		03/04/15 08:06	03/04/15 17:46	1
alpha-BHC	0.025	J	0.056	0.0086	ug/L		03/04/15 08:06	03/04/15 17:46	1
alpha-Chlordane	ND		0.056	0.017	ug/L		03/04/15 08:06	03/04/15 17:46	1
beta-BHC	ND		0.056	0.028	ug/L		03/04/15 08:06	03/04/15 17:46	1
delta-BHC	ND		0.056	0.011	ug/L		03/04/15 08:06	03/04/15 17:46	1
Dieldrin	ND		0.056	0.011	ug/L		03/04/15 08:06	03/04/15 17:46	1
Endosulfan I	ND		0.056	0.012	ug/L		03/04/15 08:06	03/04/15 17:46	1
Endosulfan II	ND		0.056	0.013	ug/L		03/04/15 08:06	03/04/15 17:46	1
Endosulfan sulfate	ND		0.056	0.018	ug/L		03/04/15 08:06	03/04/15 17:46	1
Endrin	ND		0.056	0.015	ug/L		03/04/15 08:06	03/04/15 17:46	1
Endrin aldehyde	ND		0.056	0.018	ug/L		03/04/15 08:06	03/04/15 17:46	1
Endrin ketone	ND		0.056	0.013	ug/L		03/04/15 08:06	03/04/15 17:46	1
gamma-BHC (Lindane)	ND		0.056	0.0089	ug/L		03/04/15 08:06	03/04/15 17:46	1
gamma-Chlordane	ND		0.056	0.012	ug/L		03/04/15 08:06	03/04/15 17:46	1
Heptachlor	ND		0.056	0.0095	ug/L		03/04/15 08:06	03/04/15 17:46	1
Heptachlor epoxide	ND		0.056	0.0083	ug/L		03/04/15 08:06	03/04/15 17:46	1
Methoxychlor	ND		0.056	0.016	ug/L		03/04/15 08:06	03/04/15 17:46	1
Toxaphene	ND		0.56	0.13	ug/L		03/04/15 08:06	03/04/15 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	40		20 - 120	03/04/15 08:06	03/04/15 17:46	1
DCB Decachlorobiphenyl	53		20 - 120	03/04/15 08:06	03/04/15 17:46	1
Tetrachloro-m-xylene	71		36 - 120	03/04/15 08:06	03/04/15 17:46	1
Tetrachloro-m-xylene	58		36 - 120	03/04/15 08:06	03/04/15 17:46	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.62	0.22	ug/L		03/04/15 08:03	03/04/15 15:34	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.62	0.22	ug/L		03/04/15 08:03	03/04/15 15:34	1
PCB-1232	ND		0.62	0.22	ug/L		03/04/15 08:03	03/04/15 15:34	1
PCB-1242	ND		0.62	0.22	ug/L		03/04/15 08:03	03/04/15 15:34	1
PCB-1248	ND		0.62	0.22	ug/L		03/04/15 08:03	03/04/15 15:34	1
PCB-1254	ND		0.62	0.31	ug/L		03/04/15 08:03	03/04/15 15:34	1
PCB-1260	ND		0.62	0.31	ug/L		03/04/15 08:03	03/04/15 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		23 - 127	03/04/15 08:03	03/04/15 15:34	1
Tetrachloro-m-xylene	63		23 - 127	03/04/15 08:03	03/04/15 15:34	1
DCB Decachlorobiphenyl	26		19 - 126	03/04/15 08:03	03/04/15 15:34	1
DCB Decachlorobiphenyl	25		19 - 126	03/04/15 08:03	03/04/15 15:34	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.47	0.14	ug/L		03/04/15 08:15	03/05/15 16:28	1
Silvex (2,4,5-TP)	ND		0.47	0.34	ug/L		03/04/15 08:15	03/05/15 16:28	1
2,4-D	ND		0.47	0.38	ug/L		03/04/15 08:15	03/05/15 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	79		29 - 135	03/04/15 08:15	03/05/15 16:28	1
2,4-Dichlorophenylacetic acid	84		29 - 135	03/04/15 08:15	03/05/15 16:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 14:18	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:18	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 14:18	1
Barium	0.59		0.0020		mg/L		03/06/15 08:40	03/06/15 14:18	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:18	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:18	1
Calcium	211		0.50		mg/L		03/06/15 08:40	03/06/15 14:18	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:18	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:18	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:18	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 14:18	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:18	1
Magnesium	59.4		0.20		mg/L		03/06/15 08:40	03/06/15 14:18	1
Manganese	5.7		0.0030		mg/L		03/06/15 08:40	03/06/15 14:18	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:18	1
Potassium	13.3		0.50		mg/L		03/06/15 08:40	03/06/15 14:18	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 14:18	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 14:18	1
Sodium	1140		1.0		mg/L		03/06/15 08:40	03/06/15 14:18	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:18	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 14:18	1
Zinc	0.11		0.010		mg/L		03/06/15 08:40	03/06/15 14:18	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:51	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Date Collected: 02/27/15 13:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-5

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 19:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 19:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 19:15	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 19:15	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 19:15	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 19:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 19:15	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 19:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 19:15	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 19:15	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 19:15	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 19:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 19:15	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 19:15	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 19:15	1
2-Butanone (MEK)	1.6	J	10	1.3	ug/L			03/04/15 19:15	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 19:15	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 19:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 19:15	1
Acetone	13		10	3.0	ug/L			03/04/15 19:15	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 19:15	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 19:15	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 19:15	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 19:15	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 19:15	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 19:15	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 19:15	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 19:15	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 19:15	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 19:15	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 19:15	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 19:15	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 19:15	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 19:15	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 19:15	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 19:15	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 19:15	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 19:15	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 19:15	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 19:15	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 19:15	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 19:15	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 19:15	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 19:15	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 19:15	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 19:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 19:15	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 19:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 19:15	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Date Collected: 02/27/15 13:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 19:15	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 19:15	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 19:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 19:15	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 19:15	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 19:15	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 19:15	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		66 - 137		03/04/15 19:15	1
4-Bromofluorobenzene (Surr)	94		73 - 120		03/04/15 19:15	1
Toluene-d8 (Surr)	97		71 - 126		03/04/15 19:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.1	0.67	ug/L		03/04/15 07:58	03/05/15 22:04	1
bis (2-chloroisopropyl) ether	ND		5.1	0.53	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,4,5-Trichlorophenol	ND		5.1	0.49	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,4,6-Trichlorophenol	ND		5.1	0.63	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,4-Dichlorophenol	ND		5.1	0.52	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,4-Dimethylphenol	ND		5.1	0.51	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,4-Dinitrophenol	ND		10	2.3	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,4-Dinitrotoluene	ND		5.1	0.46	ug/L		03/04/15 07:58	03/05/15 22:04	1
2,6-Dinitrotoluene	ND		5.1	0.41	ug/L		03/04/15 07:58	03/05/15 22:04	1
2-Chloronaphthalene	ND		5.1	0.47	ug/L		03/04/15 07:58	03/05/15 22:04	1
2-Chlorophenol	ND		5.1	0.54	ug/L		03/04/15 07:58	03/05/15 22:04	1
2-Methylphenol	ND		5.1	0.41	ug/L		03/04/15 07:58	03/05/15 22:04	1
2-Methylnaphthalene	ND		5.1	0.62	ug/L		03/04/15 07:58	03/05/15 22:04	1
2-Nitroaniline	ND		10	0.43	ug/L		03/04/15 07:58	03/05/15 22:04	1
2-Nitrophenol	ND		5.1	0.49	ug/L		03/04/15 07:58	03/05/15 22:04	1
3,3'-Dichlorobenzidine	ND *		5.1	0.41	ug/L		03/04/15 07:58	03/05/15 22:04	1
3-Nitroaniline	ND *		10	0.49	ug/L		03/04/15 07:58	03/05/15 22:04	1
4,6-Dinitro-2-methylphenol	ND		10	2.3	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Bromophenyl phenyl ether	ND		5.1	0.46	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Chloro-3-methylphenol	ND		5.1	0.46	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Chloroaniline	ND *		5.1	0.61	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Chlorophenyl phenyl ether	ND		5.1	0.36	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Methylphenol	ND		10	0.37	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Nitroaniline	ND *		10	0.26	ug/L		03/04/15 07:58	03/05/15 22:04	1
4-Nitrophenol	ND		10	1.6	ug/L		03/04/15 07:58	03/05/15 22:04	1
Acenaphthene	ND		5.1	0.42	ug/L		03/04/15 07:58	03/05/15 22:04	1
Acenaphthylene	ND		5.1	0.39	ug/L		03/04/15 07:58	03/05/15 22:04	1
Acetophenone	ND		5.1	0.55	ug/L		03/04/15 07:58	03/05/15 22:04	1
Anthracene	ND		5.1	0.29	ug/L		03/04/15 07:58	03/05/15 22:04	1
Atrazine	ND		5.1	0.47	ug/L		03/04/15 07:58	03/05/15 22:04	1
Benzaldehyde	ND *		5.1	0.27	ug/L		03/04/15 07:58	03/05/15 22:04	1
Benzo[a]anthracene	ND		5.1	0.37	ug/L		03/04/15 07:58	03/05/15 22:04	1
Benzo[a]pyrene	ND		5.1	0.48	ug/L		03/04/15 07:58	03/05/15 22:04	1
Benzo[b]fluoranthene	ND		5.1	0.35	ug/L		03/04/15 07:58	03/05/15 22:04	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Date Collected: 02/27/15 13:00

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		5.1	0.36	ug/L		03/04/15 07:58	03/05/15 22:04	1
Benzo[k]fluoranthene	ND		5.1	0.75	ug/L		03/04/15 07:58	03/05/15 22:04	1
Bis(2-chloroethoxy)methane	ND		5.1	0.36	ug/L		03/04/15 07:58	03/05/15 22:04	1
Bis(2-chloroethyl)ether	ND		5.1	0.41	ug/L		03/04/15 07:58	03/05/15 22:04	1
Bis(2-ethylhexyl) phthalate	20	B *	5.1	1.8	ug/L		03/04/15 07:58	03/05/15 22:04	1
Butyl benzyl phthalate	ND		5.1	0.43	ug/L		03/04/15 07:58	03/05/15 22:04	1
Caprolactam	1300	E	5.1	2.3	ug/L		03/04/15 07:58	03/05/15 22:04	1
Carbazole	ND	*	5.1	0.31	ug/L		03/04/15 07:58	03/05/15 22:04	1
Chrysene	ND		5.1	0.34	ug/L		03/04/15 07:58	03/05/15 22:04	1
Dibenz(a,h)anthracene	ND		5.1	0.43	ug/L		03/04/15 07:58	03/05/15 22:04	1
Di-n-butyl phthalate	1.5	J B	5.1	0.32	ug/L		03/04/15 07:58	03/05/15 22:04	1
Di-n-octyl phthalate	ND		5.1	0.48	ug/L		03/04/15 07:58	03/05/15 22:04	1
Dibenzofuran	ND		10	0.52	ug/L		03/04/15 07:58	03/05/15 22:04	1
Diethyl phthalate	0.58	J	5.1	0.23	ug/L		03/04/15 07:58	03/05/15 22:04	1
Dimethyl phthalate	ND		5.1	0.37	ug/L		03/04/15 07:58	03/05/15 22:04	1
Fluoranthene	ND		5.1	0.41	ug/L		03/04/15 07:58	03/05/15 22:04	1
Fluorene	ND		5.1	0.37	ug/L		03/04/15 07:58	03/05/15 22:04	1
Hexachlorobenzene	ND		5.1	0.52	ug/L		03/04/15 07:58	03/05/15 22:04	1
Hexachlorobutadiene	ND		5.1	0.70	ug/L		03/04/15 07:58	03/05/15 22:04	1
Hexachlorocyclopentadiene	ND		5.1	0.61	ug/L		03/04/15 07:58	03/05/15 22:04	1
Hexachloroethane	ND		5.1	0.61	ug/L		03/04/15 07:58	03/05/15 22:04	1
Indeno[1,2,3-cd]pyrene	ND		5.1	0.48	ug/L		03/04/15 07:58	03/05/15 22:04	1
Isophorone	ND		5.1	0.44	ug/L		03/04/15 07:58	03/05/15 22:04	1
N-Nitrosodi-n-propylamine	ND		5.1	0.55	ug/L		03/04/15 07:58	03/05/15 22:04	1
N-Nitrosodiphenylamine	ND	*	5.1	0.52	ug/L		03/04/15 07:58	03/05/15 22:04	1
Naphthalene	ND		5.1	0.78	ug/L		03/04/15 07:58	03/05/15 22:04	1
Nitrobenzene	ND		5.1	0.30	ug/L		03/04/15 07:58	03/05/15 22:04	1
Pentachlorophenol	ND		10	2.3	ug/L		03/04/15 07:58	03/05/15 22:04	1
Phenanthrene	ND		5.1	0.45	ug/L		03/04/15 07:58	03/05/15 22:04	1
Phenol	ND		5.1	0.40	ug/L		03/04/15 07:58	03/05/15 22:04	1
Pyrene	ND		5.1	0.35	ug/L		03/04/15 07:58	03/05/15 22:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		46 - 120	03/04/15 07:58	03/05/15 22:04	1
Phenol-d5 (Surr)	0.6	X	16 - 120	03/04/15 07:58	03/05/15 22:04	1
p-Terphenyl-d14 (Surr)	59	X	67 - 150	03/04/15 07:58	03/05/15 22:04	1
2,4,6-Tribromophenol (Surr)	100		52 - 132	03/04/15 07:58	03/05/15 22:04	1
2-Fluorobiphenyl	81		48 - 120	03/04/15 07:58	03/05/15 22:04	1
2-Fluorophenol (Surr)	82		20 - 120	03/04/15 07:58	03/05/15 22:04	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		510	67	ug/L		03/04/15 07:58	03/11/15 12:37	100
bis (2-chloroisopropyl) ether	ND		510	53	ug/L		03/04/15 07:58	03/11/15 12:37	100
2,4,5-Trichlorophenol	ND		510	49	ug/L		03/04/15 07:58	03/11/15 12:37	100
2,4,6-Trichlorophenol	ND		510	63	ug/L		03/04/15 07:58	03/11/15 12:37	100
2,4-Dichlorophenol	ND		510	52	ug/L		03/04/15 07:58	03/11/15 12:37	100
2,4-Dimethylphenol	ND		510	51	ug/L		03/04/15 07:58	03/11/15 12:37	100
2,4-Dinitrophenol	ND		1000	230	ug/L		03/04/15 07:58	03/11/15 12:37	100
2,4-Dinitrotoluene	ND		510	46	ug/L		03/04/15 07:58	03/11/15 12:37	100

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Date Collected: 02/27/15 13:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		510	41	ug/L		03/04/15 07:58	03/11/15 12:37	100
2-Chloronaphthalene	ND		510	47	ug/L		03/04/15 07:58	03/11/15 12:37	100
2-Chlorophenol	ND		510	54	ug/L		03/04/15 07:58	03/11/15 12:37	100
2-Methylphenol	ND		510	41	ug/L		03/04/15 07:58	03/11/15 12:37	100
2-Methylnaphthalene	ND		510	62	ug/L		03/04/15 07:58	03/11/15 12:37	100
2-Nitroaniline	ND		1000	43	ug/L		03/04/15 07:58	03/11/15 12:37	100
2-Nitrophenol	ND		510	49	ug/L		03/04/15 07:58	03/11/15 12:37	100
3,3'-Dichlorobenzidine	ND	*	510	41	ug/L		03/04/15 07:58	03/11/15 12:37	100
3-Nitroaniline	ND	*	1000	49	ug/L		03/04/15 07:58	03/11/15 12:37	100
4,6-Dinitro-2-methylphenol	ND		1000	230	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Bromophenyl phenyl ether	ND		510	46	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Chloro-3-methylphenol	ND		510	46	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Chloroaniline	ND	*	510	61	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Chlorophenyl phenyl ether	ND		510	36	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Methylphenol	ND		1000	37	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Nitroaniline	ND	*	1000	26	ug/L		03/04/15 07:58	03/11/15 12:37	100
4-Nitrophenol	ND		1000	160	ug/L		03/04/15 07:58	03/11/15 12:37	100
Acenaphthene	ND		510	42	ug/L		03/04/15 07:58	03/11/15 12:37	100
Acenaphthylene	ND		510	39	ug/L		03/04/15 07:58	03/11/15 12:37	100
Acetophenone	ND		510	55	ug/L		03/04/15 07:58	03/11/15 12:37	100
Anthracene	ND		510	29	ug/L		03/04/15 07:58	03/11/15 12:37	100
Atrazine	ND		510	47	ug/L		03/04/15 07:58	03/11/15 12:37	100
Benzaldehyde	ND	*	510	27	ug/L		03/04/15 07:58	03/11/15 12:37	100
Benzo[a]anthracene	ND		510	37	ug/L		03/04/15 07:58	03/11/15 12:37	100
Benzo[a]pyrene	ND		510	48	ug/L		03/04/15 07:58	03/11/15 12:37	100
Benzo[b]fluoranthene	ND		510	35	ug/L		03/04/15 07:58	03/11/15 12:37	100
Benzo[g,h,i]perylene	ND		510	36	ug/L		03/04/15 07:58	03/11/15 12:37	100
Benzo[k]fluoranthene	ND		510	75	ug/L		03/04/15 07:58	03/11/15 12:37	100
Bis(2-chloroethoxy)methane	ND		510	36	ug/L		03/04/15 07:58	03/11/15 12:37	100
Bis(2-chloroethyl)ether	ND		510	41	ug/L		03/04/15 07:58	03/11/15 12:37	100
Bis(2-ethylhexyl) phthalate	ND	*	510	180	ug/L		03/04/15 07:58	03/11/15 12:37	100
Butyl benzyl phthalate	ND		510	43	ug/L		03/04/15 07:58	03/11/15 12:37	100
Caprolactam	1400		510	230	ug/L		03/04/15 07:58	03/11/15 12:37	100
Carbazole	ND	*	510	31	ug/L		03/04/15 07:58	03/11/15 12:37	100
Chrysene	ND		510	34	ug/L		03/04/15 07:58	03/11/15 12:37	100
Dibenz(a,h)anthracene	ND		510	43	ug/L		03/04/15 07:58	03/11/15 12:37	100
Di-n-butyl phthalate	ND		510	32	ug/L		03/04/15 07:58	03/11/15 12:37	100
Di-n-octyl phthalate	ND		510	48	ug/L		03/04/15 07:58	03/11/15 12:37	100
Dibenzofuran	ND		1000	52	ug/L		03/04/15 07:58	03/11/15 12:37	100
Diethyl phthalate	ND		510	23	ug/L		03/04/15 07:58	03/11/15 12:37	100
Dimethyl phthalate	ND		510	37	ug/L		03/04/15 07:58	03/11/15 12:37	100
Fluoranthene	ND		510	41	ug/L		03/04/15 07:58	03/11/15 12:37	100
Fluorene	ND		510	37	ug/L		03/04/15 07:58	03/11/15 12:37	100
Hexachlorobenzene	ND		510	52	ug/L		03/04/15 07:58	03/11/15 12:37	100
Hexachlorobutadiene	ND		510	70	ug/L		03/04/15 07:58	03/11/15 12:37	100
Hexachlorocyclopentadiene	ND		510	61	ug/L		03/04/15 07:58	03/11/15 12:37	100
Hexachloroethane	ND		510	61	ug/L		03/04/15 07:58	03/11/15 12:37	100
Indeno[1,2,3-cd]pyrene	ND		510	48	ug/L		03/04/15 07:58	03/11/15 12:37	100
Isophorone	ND		510	44	ug/L		03/04/15 07:58	03/11/15 12:37	100

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Date Collected: 02/27/15 13:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		510	55	ug/L		03/04/15 07:58	03/11/15 12:37	100
N-Nitrosodiphenylamine	ND	*	510	52	ug/L		03/04/15 07:58	03/11/15 12:37	100
Naphthalene	ND		510	78	ug/L		03/04/15 07:58	03/11/15 12:37	100
Nitrobenzene	ND		510	30	ug/L		03/04/15 07:58	03/11/15 12:37	100
Pentachlorophenol	ND		1000	230	ug/L		03/04/15 07:58	03/11/15 12:37	100
Phenanthrene	ND		510	45	ug/L		03/04/15 07:58	03/11/15 12:37	100
Phenol	ND		510	40	ug/L		03/04/15 07:58	03/11/15 12:37	100
Pyrene	ND		510	35	ug/L		03/04/15 07:58	03/11/15 12:37	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	86		46 - 120	03/04/15 07:58	03/11/15 12:37	100
Phenol-d5 (Surr)	44		16 - 120	03/04/15 07:58	03/11/15 12:37	100
p-Terphenyl-d14 (Surr)	60	X	67 - 150	03/04/15 07:58	03/11/15 12:37	100
2,4,6-Tribromophenol (Surr)	66		52 - 132	03/04/15 07:58	03/11/15 12:37	100
2-Fluorobiphenyl	91		48 - 120	03/04/15 07:58	03/11/15 12:37	100
2-Fluorophenol (Surr)	78		20 - 120	03/04/15 07:58	03/11/15 12:37	100

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.89	0.31	ug/L		03/04/15 08:03	03/04/15 15:49	1
PCB-1221	ND		0.89	0.31	ug/L		03/04/15 08:03	03/04/15 15:49	1
PCB-1232	ND		0.89	0.31	ug/L		03/04/15 08:03	03/04/15 15:49	1
PCB-1242	ND		0.89	0.31	ug/L		03/04/15 08:03	03/04/15 15:49	1
PCB-1248	ND		0.89	0.31	ug/L		03/04/15 08:03	03/04/15 15:49	1
PCB-1254	ND		0.89	0.45	ug/L		03/04/15 08:03	03/04/15 15:49	1
PCB-1260	ND		0.89	0.45	ug/L		03/04/15 08:03	03/04/15 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		23 - 127	03/04/15 08:03	03/04/15 15:49	1
Tetrachloro-m-xylene	70		23 - 127	03/04/15 08:03	03/04/15 15:49	1
DCB Decachlorobiphenyl	35		19 - 126	03/04/15 08:03	03/04/15 15:49	1
DCB Decachlorobiphenyl	34		19 - 126	03/04/15 08:03	03/04/15 15:49	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 14:21	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:21	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 14:21	1
Barium	0.13		0.0020		mg/L		03/06/15 08:40	03/06/15 14:21	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:21	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:21	1
Calcium	120		0.50		mg/L		03/06/15 08:40	03/06/15 14:21	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:21	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:21	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:21	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 14:21	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:21	1
Magnesium	39.5		0.20		mg/L		03/06/15 08:40	03/06/15 14:21	1
Manganese	0.75		0.0030		mg/L		03/06/15 08:40	03/06/15 14:21	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:21	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Date Collected: 02/27/15 13:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	13.4		0.50		mg/L		03/06/15 08:40	03/06/15 14:21	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 14:21	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 14:21	1
Sodium	77.4		1.0		mg/L		03/06/15 08:40	03/06/15 14:21	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:21	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 14:21	1
Zinc	0.018		0.010		mg/L		03/06/15 08:40	03/06/15 14:21	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:53	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-05

Date Collected: 02/27/15 09:30

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-6

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 19:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 19:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 19:43	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 19:43	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 19:43	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 19:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 19:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 19:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 19:43	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 19:43	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 19:43	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 19:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 19:43	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 19:43	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 19:43	1
2-Butanone (MEK)	1.5	J	10	1.3	ug/L			03/04/15 19:43	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 19:43	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 19:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 19:43	1
Acetone	11		10	3.0	ug/L			03/04/15 19:43	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 19:43	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 19:43	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 19:43	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 19:43	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 19:43	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 19:43	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 19:43	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 19:43	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 19:43	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 19:43	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 19:43	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 19:43	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 19:43	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 19:43	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 19:43	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 19:43	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 19:43	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 19:43	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 19:43	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 19:43	1
Methylene Chloride	0.73	J	1.0	0.44	ug/L			03/04/15 19:43	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 19:43	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 19:43	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 19:43	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 19:43	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 19:43	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 19:43	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 19:43	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 19:43	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Date Collected: 02/27/15 09:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 19:43	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 19:43	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 19:43	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 19:43	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 19:43	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 19:43	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 19:43	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		03/04/15 19:43	1
4-Bromofluorobenzene (Surr)	95		73 - 120		03/04/15 19:43	1
Toluene-d8 (Surr)	94		71 - 126		03/04/15 19:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.4	0.70	ug/L		03/04/15 07:58	03/05/15 22:28	1
bis (2-chloroisopropyl) ether	ND		5.4	0.56	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,4,5-Trichlorophenol	ND		5.4	0.51	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,4,6-Trichlorophenol	ND		5.4	0.65	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,4-Dichlorophenol	ND		5.4	0.55	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,4-Dimethylphenol	ND		5.4	0.54	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,4-Dinitrophenol	ND		11	2.4	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,4-Dinitrotoluene	ND		5.4	0.48	ug/L		03/04/15 07:58	03/05/15 22:28	1
2,6-Dinitrotoluene	ND		5.4	0.43	ug/L		03/04/15 07:58	03/05/15 22:28	1
2-Chloronaphthalene	ND		5.4	0.49	ug/L		03/04/15 07:58	03/05/15 22:28	1
2-Chlorophenol	ND		5.4	0.57	ug/L		03/04/15 07:58	03/05/15 22:28	1
2-Methylphenol	ND		5.4	0.43	ug/L		03/04/15 07:58	03/05/15 22:28	1
2-Methylnaphthalene	ND		5.4	0.64	ug/L		03/04/15 07:58	03/05/15 22:28	1
2-Nitroaniline	ND		11	0.45	ug/L		03/04/15 07:58	03/05/15 22:28	1
2-Nitrophenol	ND		5.4	0.51	ug/L		03/04/15 07:58	03/05/15 22:28	1
3,3'-Dichlorobenzidine	ND *		5.4	0.43	ug/L		03/04/15 07:58	03/05/15 22:28	1
3-Nitroaniline	ND *		11	0.51	ug/L		03/04/15 07:58	03/05/15 22:28	1
4,6-Dinitro-2-methylphenol	ND		11	2.4	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Bromophenyl phenyl ether	ND		5.4	0.48	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Chloro-3-methylphenol	ND		5.4	0.48	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Chloroaniline	ND *		5.4	0.63	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Chlorophenyl phenyl ether	ND		5.4	0.38	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Methylphenol	ND		11	0.39	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Nitroaniline	ND *		11	0.27	ug/L		03/04/15 07:58	03/05/15 22:28	1
4-Nitrophenol	ND		11	1.6	ug/L		03/04/15 07:58	03/05/15 22:28	1
Acenaphthene	ND		5.4	0.44	ug/L		03/04/15 07:58	03/05/15 22:28	1
Acenaphthylene	ND		5.4	0.41	ug/L		03/04/15 07:58	03/05/15 22:28	1
Acetophenone	ND		5.4	0.58	ug/L		03/04/15 07:58	03/05/15 22:28	1
Anthracene	ND		5.4	0.30	ug/L		03/04/15 07:58	03/05/15 22:28	1
Atrazine	ND		5.4	0.49	ug/L		03/04/15 07:58	03/05/15 22:28	1
Benzaldehyde	ND *		5.4	0.29	ug/L		03/04/15 07:58	03/05/15 22:28	1
Benzo[a]anthracene	ND		5.4	0.39	ug/L		03/04/15 07:58	03/05/15 22:28	1
Benzo[a]pyrene	ND		5.4	0.50	ug/L		03/04/15 07:58	03/05/15 22:28	1
Benzo[b]fluoranthene	ND		5.4	0.36	ug/L		03/04/15 07:58	03/05/15 22:28	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Date Collected: 02/27/15 09:30

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		5.4	0.38	ug/L		03/04/15 07:58	03/05/15 22:28	1
Benzo[k]fluoranthene	ND		5.4	0.78	ug/L		03/04/15 07:58	03/05/15 22:28	1
Bis(2-chloroethoxy)methane	ND		5.4	0.38	ug/L		03/04/15 07:58	03/05/15 22:28	1
Bis(2-chloroethyl)ether	ND		5.4	0.43	ug/L		03/04/15 07:58	03/05/15 22:28	1
Bis(2-ethylhexyl) phthalate	19	B *	5.4	1.9	ug/L		03/04/15 07:58	03/05/15 22:28	1
Butyl benzyl phthalate	ND		5.4	0.45	ug/L		03/04/15 07:58	03/05/15 22:28	1
Caprolactam	630	E	5.4	2.4	ug/L		03/04/15 07:58	03/05/15 22:28	1
Carbazole	ND	*	5.4	0.32	ug/L		03/04/15 07:58	03/05/15 22:28	1
Chrysene	ND		5.4	0.35	ug/L		03/04/15 07:58	03/05/15 22:28	1
Dibenz(a,h)anthracene	ND		5.4	0.45	ug/L		03/04/15 07:58	03/05/15 22:28	1
Di-n-butyl phthalate	0.34	J B	5.4	0.33	ug/L		03/04/15 07:58	03/05/15 22:28	1
Di-n-octyl phthalate	ND		5.4	0.50	ug/L		03/04/15 07:58	03/05/15 22:28	1
Dibenzofuran	ND		11	0.55	ug/L		03/04/15 07:58	03/05/15 22:28	1
Diethyl phthalate	ND		5.4	0.24	ug/L		03/04/15 07:58	03/05/15 22:28	1
Dimethyl phthalate	ND		5.4	0.39	ug/L		03/04/15 07:58	03/05/15 22:28	1
Fluoranthene	ND		5.4	0.43	ug/L		03/04/15 07:58	03/05/15 22:28	1
Fluorene	ND		5.4	0.39	ug/L		03/04/15 07:58	03/05/15 22:28	1
Hexachlorobenzene	ND		5.4	0.55	ug/L		03/04/15 07:58	03/05/15 22:28	1
Hexachlorobutadiene	ND		5.4	0.73	ug/L		03/04/15 07:58	03/05/15 22:28	1
Hexachlorocyclopentadiene	ND		5.4	0.63	ug/L		03/04/15 07:58	03/05/15 22:28	1
Hexachloroethane	ND		5.4	0.63	ug/L		03/04/15 07:58	03/05/15 22:28	1
Indeno[1,2,3-cd]pyrene	ND		5.4	0.50	ug/L		03/04/15 07:58	03/05/15 22:28	1
Isophorone	ND		5.4	0.46	ug/L		03/04/15 07:58	03/05/15 22:28	1
N-Nitrosodi-n-propylamine	ND		5.4	0.58	ug/L		03/04/15 07:58	03/05/15 22:28	1
N-Nitrosodiphenylamine	ND	*	5.4	0.55	ug/L		03/04/15 07:58	03/05/15 22:28	1
Naphthalene	ND		5.4	0.82	ug/L		03/04/15 07:58	03/05/15 22:28	1
Nitrobenzene	ND		5.4	0.31	ug/L		03/04/15 07:58	03/05/15 22:28	1
Pentachlorophenol	ND		11	2.4	ug/L		03/04/15 07:58	03/05/15 22:28	1
Phenanthrene	ND		5.4	0.47	ug/L		03/04/15 07:58	03/05/15 22:28	1
Phenol	ND		5.4	0.42	ug/L		03/04/15 07:58	03/05/15 22:28	1
Pyrene	ND		5.4	0.36	ug/L		03/04/15 07:58	03/05/15 22:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	85		46 - 120	03/04/15 07:58	03/05/15 22:28	1
Phenol-d5 (Surr)	29		16 - 120	03/04/15 07:58	03/05/15 22:28	1
p-Terphenyl-d14 (Surr)	80		67 - 150	03/04/15 07:58	03/05/15 22:28	1
2,4,6-Tribromophenol (Surr)	101		52 - 132	03/04/15 07:58	03/05/15 22:28	1
2-Fluorobiphenyl	82		48 - 120	03/04/15 07:58	03/05/15 22:28	1
2-Fluorophenol (Surr)	88		20 - 120	03/04/15 07:58	03/05/15 22:28	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		540	70	ug/L		03/04/15 07:58	03/11/15 13:02	100
bis (2-chloroisopropyl) ether	ND		540	56	ug/L		03/04/15 07:58	03/11/15 13:02	100
2,4,5-Trichlorophenol	ND		540	51	ug/L		03/04/15 07:58	03/11/15 13:02	100
2,4,6-Trichlorophenol	ND		540	65	ug/L		03/04/15 07:58	03/11/15 13:02	100
2,4-Dichlorophenol	ND		540	55	ug/L		03/04/15 07:58	03/11/15 13:02	100
2,4-Dimethylphenol	ND		540	54	ug/L		03/04/15 07:58	03/11/15 13:02	100
2,4-Dinitrophenol	ND		1100	240	ug/L		03/04/15 07:58	03/11/15 13:02	100
2,4-Dinitrotoluene	ND		540	48	ug/L		03/04/15 07:58	03/11/15 13:02	100

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Date Collected: 02/27/15 09:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		540	43	ug/L		03/04/15 07:58	03/11/15 13:02	100
2-Chloronaphthalene	ND		540	49	ug/L		03/04/15 07:58	03/11/15 13:02	100
2-Chlorophenol	ND		540	57	ug/L		03/04/15 07:58	03/11/15 13:02	100
2-Methylphenol	ND		540	43	ug/L		03/04/15 07:58	03/11/15 13:02	100
2-Methylnaphthalene	ND		540	64	ug/L		03/04/15 07:58	03/11/15 13:02	100
2-Nitroaniline	ND		1100	45	ug/L		03/04/15 07:58	03/11/15 13:02	100
2-Nitrophenol	ND		540	51	ug/L		03/04/15 07:58	03/11/15 13:02	100
3,3'-Dichlorobenzidine	ND	*	540	43	ug/L		03/04/15 07:58	03/11/15 13:02	100
3-Nitroaniline	ND	*	1100	51	ug/L		03/04/15 07:58	03/11/15 13:02	100
4,6-Dinitro-2-methylphenol	ND		1100	240	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Bromophenyl phenyl ether	ND		540	48	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Chloro-3-methylphenol	ND		540	48	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Chloroaniline	ND	*	540	63	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Chlorophenyl phenyl ether	ND		540	38	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Methylphenol	ND		1100	39	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Nitroaniline	ND	*	1100	27	ug/L		03/04/15 07:58	03/11/15 13:02	100
4-Nitrophenol	ND		1100	160	ug/L		03/04/15 07:58	03/11/15 13:02	100
Acenaphthene	ND		540	44	ug/L		03/04/15 07:58	03/11/15 13:02	100
Acenaphthylene	ND		540	41	ug/L		03/04/15 07:58	03/11/15 13:02	100
Acetophenone	ND		540	58	ug/L		03/04/15 07:58	03/11/15 13:02	100
Anthracene	ND		540	30	ug/L		03/04/15 07:58	03/11/15 13:02	100
Atrazine	ND		540	49	ug/L		03/04/15 07:58	03/11/15 13:02	100
Benzaldehyde	ND	*	540	29	ug/L		03/04/15 07:58	03/11/15 13:02	100
Benzo[a]anthracene	ND		540	39	ug/L		03/04/15 07:58	03/11/15 13:02	100
Benzo[a]pyrene	ND		540	50	ug/L		03/04/15 07:58	03/11/15 13:02	100
Benzo[b]fluoranthene	ND		540	36	ug/L		03/04/15 07:58	03/11/15 13:02	100
Benzo[g,h,i]perylene	ND		540	38	ug/L		03/04/15 07:58	03/11/15 13:02	100
Benzo[k]fluoranthene	ND		540	78	ug/L		03/04/15 07:58	03/11/15 13:02	100
Bis(2-chloroethoxy)methane	ND		540	38	ug/L		03/04/15 07:58	03/11/15 13:02	100
Bis(2-chloroethyl)ether	ND		540	43	ug/L		03/04/15 07:58	03/11/15 13:02	100
Bis(2-ethylhexyl) phthalate	ND	*	540	190	ug/L		03/04/15 07:58	03/11/15 13:02	100
Butyl benzyl phthalate	ND		540	45	ug/L		03/04/15 07:58	03/11/15 13:02	100
Caprolactam	550		540	240	ug/L		03/04/15 07:58	03/11/15 13:02	100
Carbazole	ND	*	540	32	ug/L		03/04/15 07:58	03/11/15 13:02	100
Chrysene	ND		540	35	ug/L		03/04/15 07:58	03/11/15 13:02	100
Dibenz(a,h)anthracene	ND		540	45	ug/L		03/04/15 07:58	03/11/15 13:02	100
Di-n-butyl phthalate	ND		540	33	ug/L		03/04/15 07:58	03/11/15 13:02	100
Di-n-octyl phthalate	ND		540	50	ug/L		03/04/15 07:58	03/11/15 13:02	100
Dibenzofuran	ND		1100	55	ug/L		03/04/15 07:58	03/11/15 13:02	100
Diethyl phthalate	ND		540	24	ug/L		03/04/15 07:58	03/11/15 13:02	100
Dimethyl phthalate	ND		540	39	ug/L		03/04/15 07:58	03/11/15 13:02	100
Fluoranthene	ND		540	43	ug/L		03/04/15 07:58	03/11/15 13:02	100
Fluorene	ND		540	39	ug/L		03/04/15 07:58	03/11/15 13:02	100
Hexachlorobenzene	ND		540	55	ug/L		03/04/15 07:58	03/11/15 13:02	100
Hexachlorobutadiene	ND		540	73	ug/L		03/04/15 07:58	03/11/15 13:02	100
Hexachlorocyclopentadiene	ND		540	63	ug/L		03/04/15 07:58	03/11/15 13:02	100
Hexachloroethane	ND		540	63	ug/L		03/04/15 07:58	03/11/15 13:02	100
Indeno[1,2,3-cd]pyrene	ND		540	50	ug/L		03/04/15 07:58	03/11/15 13:02	100
Isophorone	ND		540	46	ug/L		03/04/15 07:58	03/11/15 13:02	100

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Date Collected: 02/27/15 09:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		540	58	ug/L		03/04/15 07:58	03/11/15 13:02	100
N-Nitrosodiphenylamine	ND	*	540	55	ug/L		03/04/15 07:58	03/11/15 13:02	100
Naphthalene	ND		540	82	ug/L		03/04/15 07:58	03/11/15 13:02	100
Nitrobenzene	ND		540	31	ug/L		03/04/15 07:58	03/11/15 13:02	100
Pentachlorophenol	ND		1100	240	ug/L		03/04/15 07:58	03/11/15 13:02	100
Phenanthrene	ND		540	47	ug/L		03/04/15 07:58	03/11/15 13:02	100
Phenol	ND		540	42	ug/L		03/04/15 07:58	03/11/15 13:02	100
Pyrene	ND		540	36	ug/L		03/04/15 07:58	03/11/15 13:02	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		46 - 120	03/04/15 07:58	03/11/15 13:02	100
Phenol-d5 (Surr)	40		16 - 120	03/04/15 07:58	03/11/15 13:02	100
p-Terphenyl-d14 (Surr)	78		67 - 150	03/04/15 07:58	03/11/15 13:02	100
2,4,6-Tribromophenol (Surr)	72		52 - 132	03/04/15 07:58	03/11/15 13:02	100
2-Fluorobiphenyl	88		48 - 120	03/04/15 07:58	03/11/15 13:02	100
2-Fluorophenol (Surr)	71		20 - 120	03/04/15 07:58	03/11/15 13:02	100

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.048	0.0088	ug/L		03/04/15 08:06	03/04/15 18:04	1
4,4'-DDE	ND		0.048	0.011	ug/L		03/04/15 08:06	03/04/15 18:04	1
4,4'-DDT	ND		0.048	0.011	ug/L		03/04/15 08:06	03/04/15 18:04	1
Aldrin	ND		0.048	0.0077	ug/L		03/04/15 08:06	03/04/15 18:04	1
alpha-BHC	0.020	J	0.048	0.0074	ug/L		03/04/15 08:06	03/04/15 18:04	1
alpha-Chlordane	ND		0.048	0.014	ug/L		03/04/15 08:06	03/04/15 18:04	1
beta-BHC	ND		0.048	0.024	ug/L		03/04/15 08:06	03/04/15 18:04	1
delta-BHC	ND		0.048	0.0096	ug/L		03/04/15 08:06	03/04/15 18:04	1
Dieldrin	ND		0.048	0.0094	ug/L		03/04/15 08:06	03/04/15 18:04	1
Endosulfan I	ND		0.048	0.011	ug/L		03/04/15 08:06	03/04/15 18:04	1
Endosulfan II	ND		0.048	0.011	ug/L		03/04/15 08:06	03/04/15 18:04	1
Endosulfan sulfate	ND		0.048	0.015	ug/L		03/04/15 08:06	03/04/15 18:04	1
Endrin	ND		0.048	0.013	ug/L		03/04/15 08:06	03/04/15 18:04	1
Endrin aldehyde	ND		0.048	0.016	ug/L		03/04/15 08:06	03/04/15 18:04	1
Endrin ketone	ND		0.048	0.011	ug/L		03/04/15 08:06	03/04/15 18:04	1
gamma-BHC (Lindane)	ND		0.048	0.0076	ug/L		03/04/15 08:06	03/04/15 18:04	1
gamma-Chlordane	ND		0.048	0.011	ug/L		03/04/15 08:06	03/04/15 18:04	1
Heptachlor	ND		0.048	0.0081	ug/L		03/04/15 08:06	03/04/15 18:04	1
Heptachlor epoxide	ND		0.048	0.0071	ug/L		03/04/15 08:06	03/04/15 18:04	1
Methoxychlor	ND		0.048	0.013	ug/L		03/04/15 08:06	03/04/15 18:04	1
Toxaphene	ND		0.48	0.11	ug/L		03/04/15 08:06	03/04/15 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	40		20 - 120	03/04/15 08:06	03/04/15 18:04	1
DCB Decachlorobiphenyl	55		20 - 120	03/04/15 08:06	03/04/15 18:04	1
Tetrachloro-m-xylene	75		36 - 120	03/04/15 08:06	03/04/15 18:04	1
Tetrachloro-m-xylene	61		36 - 120	03/04/15 08:06	03/04/15 18:04	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.55	0.19	ug/L		03/04/15 08:03	03/04/15 16:04	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Date Collected: 02/27/15 09:30

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.55	0.19	ug/L		03/04/15 08:03	03/04/15 16:04	1
PCB-1232	ND		0.55	0.19	ug/L		03/04/15 08:03	03/04/15 16:04	1
PCB-1242	ND		0.55	0.19	ug/L		03/04/15 08:03	03/04/15 16:04	1
PCB-1248	ND		0.55	0.19	ug/L		03/04/15 08:03	03/04/15 16:04	1
PCB-1254	ND		0.55	0.28	ug/L		03/04/15 08:03	03/04/15 16:04	1
PCB-1260	ND		0.55	0.28	ug/L		03/04/15 08:03	03/04/15 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		23 - 127	03/04/15 08:03	03/04/15 16:04	1
Tetrachloro-m-xylene	72		23 - 127	03/04/15 08:03	03/04/15 16:04	1
DCB Decachlorobiphenyl	41		19 - 126	03/04/15 08:03	03/04/15 16:04	1
DCB Decachlorobiphenyl	39		19 - 126	03/04/15 08:03	03/04/15 16:04	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.49	0.15	ug/L		03/04/15 08:15	03/05/15 16:58	1
Silvex (2,4,5-TP)	ND		0.49	0.35	ug/L		03/04/15 08:15	03/05/15 16:58	1
2,4-D	ND		0.49	0.39	ug/L		03/04/15 08:15	03/05/15 16:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	94		29 - 135	03/04/15 08:15	03/05/15 16:58	1
2,4-Dichlorophenylacetic acid	88		29 - 135	03/04/15 08:15	03/05/15 16:58	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 14:24	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:24	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 14:24	1
Barium	0.17		0.0020		mg/L		03/06/15 08:40	03/06/15 14:24	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:24	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:24	1
Calcium	61.0		0.50		mg/L		03/06/15 08:40	03/06/15 14:24	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:24	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:24	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:24	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 14:24	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:24	1
Magnesium	14.7		0.20		mg/L		03/06/15 08:40	03/06/15 14:24	1
Manganese	0.94		0.0030		mg/L		03/06/15 08:40	03/06/15 14:24	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:24	1
Potassium	9.5		0.50		mg/L		03/06/15 08:40	03/06/15 14:24	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 14:24	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 14:24	1
Sodium	32.4		1.0		mg/L		03/06/15 08:40	03/06/15 14:24	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:24	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 14:24	1
Zinc	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:24	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:55	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Date Collected: 02/27/15 10:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-7

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 20:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 20:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 20:11	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 20:11	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 20:11	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 20:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 20:11	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 20:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 20:11	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 20:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 20:11	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 20:11	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 20:11	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 20:11	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 20:11	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/15 20:11	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 20:11	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 20:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 20:11	1
Acetone	5.3	J	10	3.0	ug/L			03/04/15 20:11	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 20:11	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 20:11	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 20:11	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 20:11	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 20:11	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 20:11	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 20:11	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 20:11	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 20:11	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 20:11	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 20:11	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 20:11	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 20:11	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 20:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 20:11	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 20:11	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 20:11	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 20:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 20:11	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 20:11	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 20:11	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 20:11	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 20:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 20:11	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 20:11	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 20:11	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 20:11	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 20:11	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 20:11	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Lab Sample ID: 480-76055-7

Date Collected: 02/27/15 10:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 20:11	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 20:11	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 20:11	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 20:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 20:11	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 20:11	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 20:11	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		66 - 137		03/04/15 20:11	1
4-Bromofluorobenzene (Surr)	95		73 - 120		03/04/15 20:11	1
Toluene-d8 (Surr)	96		71 - 126		03/04/15 20:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		4.6	0.60	ug/L		03/04/15 07:58	03/05/15 22:53	1
bis (2-chloroisopropyl) ether	ND		4.6	0.48	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,4,5-Trichlorophenol	ND		4.6	0.44	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,4,6-Trichlorophenol	ND		4.6	0.56	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,4-Dichlorophenol	ND		4.6	0.47	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,4-Dimethylphenol	ND		4.6	0.46	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,4-Dinitrophenol	ND		9.2	2.0	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,4-Dinitrotoluene	ND		4.6	0.41	ug/L		03/04/15 07:58	03/05/15 22:53	1
2,6-Dinitrotoluene	ND		4.6	0.37	ug/L		03/04/15 07:58	03/05/15 22:53	1
2-Chloronaphthalene	ND		4.6	0.42	ug/L		03/04/15 07:58	03/05/15 22:53	1
2-Chlorophenol	ND		4.6	0.49	ug/L		03/04/15 07:58	03/05/15 22:53	1
2-Methylphenol	ND		4.6	0.37	ug/L		03/04/15 07:58	03/05/15 22:53	1
2-Methylnaphthalene	ND		4.6	0.55	ug/L		03/04/15 07:58	03/05/15 22:53	1
2-Nitroaniline	ND		9.2	0.38	ug/L		03/04/15 07:58	03/05/15 22:53	1
2-Nitrophenol	ND		4.6	0.44	ug/L		03/04/15 07:58	03/05/15 22:53	1
3,3'-Dichlorobenzidine	ND *		4.6	0.37	ug/L		03/04/15 07:58	03/05/15 22:53	1
3-Nitroaniline	ND *		9.2	0.44	ug/L		03/04/15 07:58	03/05/15 22:53	1
4,6-Dinitro-2-methylphenol	ND		9.2	2.0	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Bromophenyl phenyl ether	ND		4.6	0.41	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Chloro-3-methylphenol	ND		4.6	0.41	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Chloroaniline	ND *		4.6	0.54	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Chlorophenyl phenyl ether	ND		4.6	0.32	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Methylphenol	ND		9.2	0.33	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Nitroaniline	ND *		9.2	0.23	ug/L		03/04/15 07:58	03/05/15 22:53	1
4-Nitrophenol	ND		9.2	1.4	ug/L		03/04/15 07:58	03/05/15 22:53	1
Acenaphthene	ND		4.6	0.38	ug/L		03/04/15 07:58	03/05/15 22:53	1
Acenaphthylene	ND		4.6	0.35	ug/L		03/04/15 07:58	03/05/15 22:53	1
Acetophenone	ND		4.6	0.49	ug/L		03/04/15 07:58	03/05/15 22:53	1
Anthracene	ND		4.6	0.26	ug/L		03/04/15 07:58	03/05/15 22:53	1
Atrazine	ND		4.6	0.42	ug/L		03/04/15 07:58	03/05/15 22:53	1
Benzaldehyde	ND *		4.6	0.24	ug/L		03/04/15 07:58	03/05/15 22:53	1
Benzo[a]anthracene	ND		4.6	0.33	ug/L		03/04/15 07:58	03/05/15 22:53	1
Benzo[a]pyrene	ND		4.6	0.43	ug/L		03/04/15 07:58	03/05/15 22:53	1
Benzo[b]fluoranthene	0.90 J		4.6	0.31	ug/L		03/04/15 07:58	03/05/15 22:53	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Lab Sample ID: 480-76055-7

Date Collected: 02/27/15 10:00

Matrix: Water

Date Received: 03/03/15 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		4.6	0.32	ug/L		03/04/15 07:58	03/05/15 22:53	1
Benzo[k]fluoranthene	ND		4.6	0.67	ug/L		03/04/15 07:58	03/05/15 22:53	1
Bis(2-chloroethoxy)methane	ND		4.6	0.32	ug/L		03/04/15 07:58	03/05/15 22:53	1
Bis(2-chloroethyl)ether	ND		4.6	0.37	ug/L		03/04/15 07:58	03/05/15 22:53	1
Bis(2-ethylhexyl) phthalate	13	B *	4.6	1.6	ug/L		03/04/15 07:58	03/05/15 22:53	1
Butyl benzyl phthalate	ND		4.6	0.38	ug/L		03/04/15 07:58	03/05/15 22:53	1
Caprolactam	940	E	4.6	2.0	ug/L		03/04/15 07:58	03/05/15 22:53	1
Carbazole	2.4	J *	4.6	0.27	ug/L		03/04/15 07:58	03/05/15 22:53	1
Chrysene	ND		4.6	0.30	ug/L		03/04/15 07:58	03/05/15 22:53	1
Dibenz(a,h)anthracene	ND		4.6	0.38	ug/L		03/04/15 07:58	03/05/15 22:53	1
Di-n-butyl phthalate	0.58	J B	4.6	0.28	ug/L		03/04/15 07:58	03/05/15 22:53	1
Di-n-octyl phthalate	ND		4.6	0.43	ug/L		03/04/15 07:58	03/05/15 22:53	1
Dibenzofuran	ND		9.2	0.47	ug/L		03/04/15 07:58	03/05/15 22:53	1
Diethyl phthalate	0.20	J	4.6	0.20	ug/L		03/04/15 07:58	03/05/15 22:53	1
Dimethyl phthalate	ND		4.6	0.33	ug/L		03/04/15 07:58	03/05/15 22:53	1
Fluoranthene	ND		4.6	0.37	ug/L		03/04/15 07:58	03/05/15 22:53	1
Fluorene	ND		4.6	0.33	ug/L		03/04/15 07:58	03/05/15 22:53	1
Hexachlorobenzene	ND		4.6	0.47	ug/L		03/04/15 07:58	03/05/15 22:53	1
Hexachlorobutadiene	ND		4.6	0.62	ug/L		03/04/15 07:58	03/05/15 22:53	1
Hexachlorocyclopentadiene	ND		4.6	0.54	ug/L		03/04/15 07:58	03/05/15 22:53	1
Hexachloroethane	ND		4.6	0.54	ug/L		03/04/15 07:58	03/05/15 22:53	1
Indeno[1,2,3-cd]pyrene	2.2	J	4.6	0.43	ug/L		03/04/15 07:58	03/05/15 22:53	1
Isophorone	ND		4.6	0.39	ug/L		03/04/15 07:58	03/05/15 22:53	1
N-Nitrosodi-n-propylamine	ND		4.6	0.49	ug/L		03/04/15 07:58	03/05/15 22:53	1
N-Nitrosodiphenylamine	ND *		4.6	0.47	ug/L		03/04/15 07:58	03/05/15 22:53	1
Naphthalene	ND		4.6	0.70	ug/L		03/04/15 07:58	03/05/15 22:53	1
Nitrobenzene	ND		4.6	0.27	ug/L		03/04/15 07:58	03/05/15 22:53	1
Pentachlorophenol	ND		9.2	2.0	ug/L		03/04/15 07:58	03/05/15 22:53	1
Phenanthrene	0.70	J	4.6	0.40	ug/L		03/04/15 07:58	03/05/15 22:53	1
Phenol	ND		4.6	0.36	ug/L		03/04/15 07:58	03/05/15 22:53	1
Pyrene	ND		4.6	0.31	ug/L		03/04/15 07:58	03/05/15 22:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	70		46 - 120	03/04/15 07:58	03/05/15 22:53	1
Phenol-d5 (Surr)	7	X	16 - 120	03/04/15 07:58	03/05/15 22:53	1
p-Terphenyl-d14 (Surr)	58	X	67 - 150	03/04/15 07:58	03/05/15 22:53	1
2,4,6-Tribromophenol (Surr)	88		52 - 132	03/04/15 07:58	03/05/15 22:53	1
2-Fluorobiphenyl	72		48 - 120	03/04/15 07:58	03/05/15 22:53	1
2-Fluorophenol (Surr)	67		20 - 120	03/04/15 07:58	03/05/15 22:53	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		920	120	ug/L		03/04/15 07:58	03/11/15 13:26	200
bis (2-chloroisopropyl) ether	ND		920	95	ug/L		03/04/15 07:58	03/11/15 13:26	200
2,4,5-Trichlorophenol	ND		920	88	ug/L		03/04/15 07:58	03/11/15 13:26	200
2,4,6-Trichlorophenol	ND		920	110	ug/L		03/04/15 07:58	03/11/15 13:26	200
2,4-Dichlorophenol	ND		920	93	ug/L		03/04/15 07:58	03/11/15 13:26	200
2,4-Dimethylphenol	ND		920	92	ug/L		03/04/15 07:58	03/11/15 13:26	200
2,4-Dinitrophenol	ND		1800	410	ug/L		03/04/15 07:58	03/11/15 13:26	200
2,4-Dinitrotoluene	ND		920	82	ug/L		03/04/15 07:58	03/11/15 13:26	200

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Lab Sample ID: 480-76055-7

Date Collected: 02/27/15 10:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		920	73	ug/L		03/04/15 07:58	03/11/15 13:26	200
2-Chloronaphthalene	ND		920	84	ug/L		03/04/15 07:58	03/11/15 13:26	200
2-Chlorophenol	ND		920	97	ug/L		03/04/15 07:58	03/11/15 13:26	200
2-Methylphenol	ND		920	73	ug/L		03/04/15 07:58	03/11/15 13:26	200
2-Methylnaphthalene	ND		920	110	ug/L		03/04/15 07:58	03/11/15 13:26	200
2-Nitroaniline	ND		1800	77	ug/L		03/04/15 07:58	03/11/15 13:26	200
2-Nitrophenol	ND		920	88	ug/L		03/04/15 07:58	03/11/15 13:26	200
3,3'-Dichlorobenzidine	ND	*	920	73	ug/L		03/04/15 07:58	03/11/15 13:26	200
3-Nitroaniline	ND	*	1800	88	ug/L		03/04/15 07:58	03/11/15 13:26	200
4,6-Dinitro-2-methylphenol	ND		1800	400	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Bromophenyl phenyl ether	ND		920	82	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Chloro-3-methylphenol	ND		920	82	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Chloroaniline	ND	*	920	110	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Chlorophenyl phenyl ether	ND		920	64	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Methylphenol	ND		1800	66	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Nitroaniline	ND	*	1800	46	ug/L		03/04/15 07:58	03/11/15 13:26	200
4-Nitrophenol	ND		1800	280	ug/L		03/04/15 07:58	03/11/15 13:26	200
Acenaphthene	ND		920	75	ug/L		03/04/15 07:58	03/11/15 13:26	200
Acenaphthylene	ND		920	70	ug/L		03/04/15 07:58	03/11/15 13:26	200
Acetophenone	ND		920	99	ug/L		03/04/15 07:58	03/11/15 13:26	200
Anthracene	ND		920	51	ug/L		03/04/15 07:58	03/11/15 13:26	200
Atrazine	ND		920	84	ug/L		03/04/15 07:58	03/11/15 13:26	200
Benzaldehyde	ND	*	920	49	ug/L		03/04/15 07:58	03/11/15 13:26	200
Benzo[a]anthracene	ND		920	66	ug/L		03/04/15 07:58	03/11/15 13:26	200
Benzo[a]pyrene	ND		920	86	ug/L		03/04/15 07:58	03/11/15 13:26	200
Benzo[b]fluoranthene	ND		920	62	ug/L		03/04/15 07:58	03/11/15 13:26	200
Benzo[g,h,i]perylene	ND		920	64	ug/L		03/04/15 07:58	03/11/15 13:26	200
Benzo[k]fluoranthene	ND		920	130	ug/L		03/04/15 07:58	03/11/15 13:26	200
Bis(2-chloroethoxy)methane	ND		920	64	ug/L		03/04/15 07:58	03/11/15 13:26	200
Bis(2-chloroethyl)ether	ND		920	73	ug/L		03/04/15 07:58	03/11/15 13:26	200
Bis(2-ethylhexyl) phthalate	ND	*	920	330	ug/L		03/04/15 07:58	03/11/15 13:26	200
Butyl benzyl phthalate	ND		920	77	ug/L		03/04/15 07:58	03/11/15 13:26	200
Caprolactam	960		920	400	ug/L		03/04/15 07:58	03/11/15 13:26	200
Carbazole	ND	*	920	55	ug/L		03/04/15 07:58	03/11/15 13:26	200
Chrysene	ND		920	60	ug/L		03/04/15 07:58	03/11/15 13:26	200
Dibenz(a,h)anthracene	ND		920	77	ug/L		03/04/15 07:58	03/11/15 13:26	200
Di-n-butyl phthalate	ND		920	57	ug/L		03/04/15 07:58	03/11/15 13:26	200
Di-n-octyl phthalate	ND		920	86	ug/L		03/04/15 07:58	03/11/15 13:26	200
Dibenzofuran	ND		1800	93	ug/L		03/04/15 07:58	03/11/15 13:26	200
Diethyl phthalate	ND		920	40	ug/L		03/04/15 07:58	03/11/15 13:26	200
Dimethyl phthalate	ND		920	66	ug/L		03/04/15 07:58	03/11/15 13:26	200
Fluoranthene	ND		920	73	ug/L		03/04/15 07:58	03/11/15 13:26	200
Fluorene	ND		920	66	ug/L		03/04/15 07:58	03/11/15 13:26	200
Hexachlorobenzene	ND		920	93	ug/L		03/04/15 07:58	03/11/15 13:26	200
Hexachlorobutadiene	ND		920	120	ug/L		03/04/15 07:58	03/11/15 13:26	200
Hexachlorocyclopentadiene	ND		920	110	ug/L		03/04/15 07:58	03/11/15 13:26	200
Hexachloroethane	ND		920	110	ug/L		03/04/15 07:58	03/11/15 13:26	200
Indeno[1,2,3-cd]pyrene	ND		920	86	ug/L		03/04/15 07:58	03/11/15 13:26	200
Isophorone	ND		920	79	ug/L		03/04/15 07:58	03/11/15 13:26	200

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Date Collected: 02/27/15 10:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-7

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		920	99	ug/L		03/04/15 07:58	03/11/15 13:26	200
N-Nitrosodiphenylamine	ND	*	920	93	ug/L		03/04/15 07:58	03/11/15 13:26	200
Naphthalene	ND		920	140	ug/L		03/04/15 07:58	03/11/15 13:26	200
Nitrobenzene	ND		920	53	ug/L		03/04/15 07:58	03/11/15 13:26	200
Pentachlorophenol	ND		1800	400	ug/L		03/04/15 07:58	03/11/15 13:26	200
Phenanthrene	ND		920	81	ug/L		03/04/15 07:58	03/11/15 13:26	200
Phenol	ND		920	71	ug/L		03/04/15 07:58	03/11/15 13:26	200
Pyrene	ND		920	62	ug/L		03/04/15 07:58	03/11/15 13:26	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		46 - 120	03/04/15 07:58	03/11/15 13:26	200
Phenol-d5 (Surr)	29		16 - 120	03/04/15 07:58	03/11/15 13:26	200
p-Terphenyl-d14 (Surr)	56	X	67 - 150	03/04/15 07:58	03/11/15 13:26	200
2,4,6-Tribromophenol (Surr)	40	X	52 - 132	03/04/15 07:58	03/11/15 13:26	200
2-Fluorobiphenyl	91		48 - 120	03/04/15 07:58	03/11/15 13:26	200
2-Fluorophenol (Surr)	55		20 - 120	03/04/15 07:58	03/11/15 13:26	200

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.053	0.0098	ug/L		03/04/15 08:06	03/04/15 18:21	1
4,4'-DDE	ND		0.053	0.012	ug/L		03/04/15 08:06	03/04/15 18:21	1
4,4'-DDT	ND		0.053	0.012	ug/L		03/04/15 08:06	03/04/15 18:21	1
Aldrin	ND		0.053	0.0086	ug/L		03/04/15 08:06	03/04/15 18:21	1
alpha-BHC	0.022	J	0.053	0.0082	ug/L		03/04/15 08:06	03/04/15 18:21	1
alpha-Chlordane	ND		0.053	0.016	ug/L		03/04/15 08:06	03/04/15 18:21	1
beta-BHC	ND		0.053	0.026	ug/L		03/04/15 08:06	03/04/15 18:21	1
delta-BHC	ND		0.053	0.011	ug/L		03/04/15 08:06	03/04/15 18:21	1
Dieldrin	ND		0.053	0.010	ug/L		03/04/15 08:06	03/04/15 18:21	1
Endosulfan I	ND		0.053	0.012	ug/L		03/04/15 08:06	03/04/15 18:21	1
Endosulfan II	ND		0.053	0.013	ug/L		03/04/15 08:06	03/04/15 18:21	1
Endosulfan sulfate	0.018	J	0.053	0.017	ug/L		03/04/15 08:06	03/04/15 18:21	1
Endrin	ND		0.053	0.015	ug/L		03/04/15 08:06	03/04/15 18:21	1
Endrin aldehyde	ND		0.053	0.017	ug/L		03/04/15 08:06	03/04/15 18:21	1
Endrin ketone	0.024	J	0.053	0.013	ug/L		03/04/15 08:06	03/04/15 18:21	1
gamma-BHC (Lindane)	0.10		0.053	0.0085	ug/L		03/04/15 08:06	03/04/15 18:21	1
gamma-Chlordane	ND		0.053	0.012	ug/L		03/04/15 08:06	03/04/15 18:21	1
Heptachlor	ND		0.053	0.0090	ug/L		03/04/15 08:06	03/04/15 18:21	1
Heptachlor epoxide	ND		0.053	0.0078	ug/L		03/04/15 08:06	03/04/15 18:21	1
Methoxychlor	ND		0.053	0.015	ug/L		03/04/15 08:06	03/04/15 18:21	1
Toxaphene	ND		0.53	0.13	ug/L		03/04/15 08:06	03/04/15 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	42		20 - 120	03/04/15 08:06	03/04/15 18:21	1
DCB Decachlorobiphenyl	118		20 - 120	03/04/15 08:06	03/04/15 18:21	1
Tetrachloro-m-xylene	98		36 - 120	03/04/15 08:06	03/04/15 18:21	1
Tetrachloro-m-xylene	107		36 - 120	03/04/15 08:06	03/04/15 18:21	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.51	0.18	ug/L		03/04/15 08:03	03/04/15 16:49	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Lab Sample ID: 480-76055-7

Date Collected: 02/27/15 10:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.51	0.18	ug/L		03/04/15 08:03	03/04/15 16:49	1
PCB-1232	ND		0.51	0.18	ug/L		03/04/15 08:03	03/04/15 16:49	1
PCB-1242	ND		0.51	0.18	ug/L		03/04/15 08:03	03/04/15 16:49	1
PCB-1248	ND		0.51	0.18	ug/L		03/04/15 08:03	03/04/15 16:49	1
PCB-1254	ND		0.51	0.26	ug/L		03/04/15 08:03	03/04/15 16:49	1
PCB-1260	ND		0.51	0.26	ug/L		03/04/15 08:03	03/04/15 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		23 - 127	03/04/15 08:03	03/04/15 16:49	1
Tetrachloro-m-xylene	73		23 - 127	03/04/15 08:03	03/04/15 16:49	1
DCB Decachlorobiphenyl	39		19 - 126	03/04/15 08:03	03/04/15 16:49	1
DCB Decachlorobiphenyl	39		19 - 126	03/04/15 08:03	03/04/15 16:49	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.56	0.17	ug/L		03/04/15 08:15	03/05/15 17:27	1
Silvex (2,4,5-TP)	ND		0.56	0.40	ug/L		03/04/15 08:15	03/05/15 17:27	1
2,4-D	ND		0.56	0.45	ug/L		03/04/15 08:15	03/05/15 17:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	91		29 - 135	03/04/15 08:15	03/05/15 17:27	1
2,4-Dichlorophenylacetic acid	114		29 - 135	03/04/15 08:15	03/05/15 17:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 14:26	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:26	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 14:26	1
Barium	0.31		0.0020		mg/L		03/06/15 08:40	03/06/15 14:26	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:26	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 14:26	1
Calcium	145		0.50		mg/L		03/06/15 08:40	03/06/15 14:26	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:26	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 14:26	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:26	1
Iron	0.23		0.050		mg/L		03/06/15 08:40	03/06/15 14:26	1
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:26	1
Magnesium	35.0		0.20		mg/L		03/06/15 08:40	03/06/15 14:26	1
Manganese	1.6		0.0030		mg/L		03/06/15 08:40	03/06/15 14:26	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:26	1
Potassium	10.6		0.50		mg/L		03/06/15 08:40	03/06/15 14:26	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 14:26	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 14:26	1
Sodium	50.0		1.0		mg/L		03/06/15 08:40	03/06/15 14:26	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 14:26	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 14:26	1
Zinc	ND		0.010		mg/L		03/06/15 08:40	03/06/15 14:26	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:56	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-76055-8

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/05/15 13:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/05/15 13:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/05/15 13:12	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/05/15 13:12	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/05/15 13:12	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/05/15 13:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/05/15 13:12	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/05/15 13:12	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/05/15 13:12	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/05/15 13:12	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/05/15 13:12	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/05/15 13:12	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/05/15 13:12	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/05/15 13:12	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/05/15 13:12	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/05/15 13:12	1
2-Hexanone	ND		5.0	1.2	ug/L			03/05/15 13:12	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/05/15 13:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/05/15 13:12	1
Acetone	ND		10	3.0	ug/L			03/05/15 13:12	1
Benzene	ND		1.0	0.41	ug/L			03/05/15 13:12	1
Bromoform	ND		1.0	0.26	ug/L			03/05/15 13:12	1
Bromomethane	ND		1.0	0.69	ug/L			03/05/15 13:12	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/05/15 13:12	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/05/15 13:12	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/05/15 13:12	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/05/15 13:12	1
Chloroethane	ND		1.0	0.32	ug/L			03/05/15 13:12	1
Chloroform	ND		1.0	0.34	ug/L			03/05/15 13:12	1
Chloromethane	ND		1.0	0.35	ug/L			03/05/15 13:12	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/05/15 13:12	1
Cyclohexane	ND		1.0	0.18	ug/L			03/05/15 13:12	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/05/15 13:12	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/05/15 13:12	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/05/15 13:12	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/05/15 13:12	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/05/15 13:12	1
Methyl acetate	ND		2.5	0.50	ug/L			03/05/15 13:12	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/05/15 13:12	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/05/15 13:12	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/05/15 13:12	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/05/15 13:12	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/05/15 13:12	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/05/15 13:12	1
o-Xylene	ND		1.0	0.76	ug/L			03/05/15 13:12	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/05/15 13:12	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/05/15 13:12	1
Toluene	ND		1.0	0.51	ug/L			03/05/15 13:12	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/05/15 13:12	1

TestAmerica Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-76055-8

Date Collected: 02/27/15 08:00

Matrix: Water

Date Received: 03/03/15 13:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/05/15 13:12	1
Trichloroethene	ND		1.0	0.46	ug/L			03/05/15 13:12	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/05/15 13:12	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/05/15 13:12	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/05/15 13:12	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/05/15 13:12	1
Styrene	ND		1.0	0.73	ug/L			03/05/15 13:12	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/05/15 13:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		66 - 137					03/05/15 13:12	1
4-Bromofluorobenzene (Surr)	109		73 - 120					03/05/15 13:12	1
Toluene-d8 (Surr)	111		71 - 126					03/05/15 13:12	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		12DCE (66-137)	BFB (73-120)	TOL (71-126)
480-76055-1	TMW-01	107	98	98
480-76055-2	BLIND DUP	105	98	100
480-76055-3	TMW-02	102	100	100
480-76055-3 MS	TMW-02	111	108	110
480-76055-3 MSD	TMW-02	110	107	106
480-76055-4	TMW-03	107	96	99
480-76055-5	TMW-04	103	94	97
480-76055-6	TMW-05	104	95	94
480-76055-7	TMW-06	102	95	96
480-76055-8	TRIP BLANK	112	109	111
LCS 480-229120/5	Lab Control Sample	101	91	94
LCS 480-229234/4	Lab Control Sample	107	96	100
LCS 480-229535/5	Lab Control Sample	106	105	105
LCSD 480-229234/37	Lab Control Sample Dup	107	98	98
MB 480-229120/8	Method Blank	109	95	97
MB 480-229234/6	Method Blank	98	99	100
MB 480-229535/7	Method Blank	107	108	106

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (46-120)	PHL (16-120)	TPH (67-150)	TBP (52-132)	FBP (48-120)	2FP (20-120)
480-76055-1	TMW-01	82	50	67	93	76	82
480-76055-1 - DL	TMW-01	85	40	72	72	95	48
480-76055-2	BLIND DUP	80	2 X	68	86	79	20
480-76055-2 - DL	BLIND DUP	90	45	74	67	99	74
480-76055-3	TMW-02	77	3 X	75	78	80	10 X
480-76055-3 - DL	TMW-02	79	41	79	34 X	89	60
480-76055-3 MS	TMW-02	79	50	45 X	55	90	57
480-76055-3 MSD	TMW-02	81	46	60 X	57	90	53
480-76055-4	TMW-03	75	8 X	43 X	86	71	75
480-76055-4 - DL	TMW-03	73	50	41 X	60	84	73
480-76055-5	TMW-04	80	0.6 X	59 X	100	81	82
480-76055-5 - DL	TMW-04	86	44	60 X	66	91	78
480-76055-6	TMW-05	85	29	80	101	82	88
480-76055-6 - DL	TMW-05	81	40	78	72	88	71
480-76055-7	TMW-06	70	7 X	58 X	88	72	67
480-76055-7 - DL	TMW-06	78	29	56 X	40 X	91	55
LCS 480-229070/2-A	Lab Control Sample	87	62	94	104	83	97
MB 480-229070/1-A	Method Blank	77	53	97	94	72	78

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)

TestAmerica Buffalo

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

PHL = Phenol-d5 (Surr)
TPH = p-Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (20-120)	DCB2 (20-120)	TCX1 (36-120)	TCX2 (36-120)
480-76055-1	TMW-01	29	42	91	67
480-76055-2	BLIND DUP	32	82	79	61
480-76055-3	TMW-02	29	106	88	69
480-76055-3 MS	TMW-02	56	90	81	70
480-76055-3 MSD	TMW-02	34	51	102	80
480-76055-4	TMW-03	40	53	71	58
480-76055-6	TMW-05	40	55	75	61
480-76055-7	TMW-06	42	118	98	107
LCS 480-229074/2-A	Lab Control Sample	73	82	103	80
MB 480-229074/1-A	Method Blank	69	80	90	70

Surrogate Legend
DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (23-127)	TCX2 (23-127)	DCB1 (19-126)	DCB2 (19-126)
480-76055-1	TMW-01	65	72	33	30
480-76055-2	BLIND DUP	61	63	39	37
480-76055-3	TMW-02	56	56	26	28
480-76055-3 MS	TMW-02	69	65	27	26
480-76055-3 MSD	TMW-02	71	62	30	30
480-76055-4	TMW-03	73	63	26	25
480-76055-5	TMW-04	67	70	35	34
480-76055-6	TMW-05	73	72	41	39
480-76055-7	TMW-06	71	73	39	39
LCS 480-229073/2-A	Lab Control Sample	78	63	43	40
MB 480-229073/1-A	Method Blank	74	75	66	60

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1 (29-135)	DCPA2 (29-135)
480-76055-1	TMW-01	95	96

TestAmerica Buffalo

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8151A - Herbicides (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPA1 (29-135)	DCPA2 (29-135)
480-76055-2	BLIND DUP	90	100
480-76055-4	TMW-03	79	84
480-76055-6	TMW-05	94	88
480-76055-7	TMW-06	91	114
LCS 480-229080/2-A	Lab Control Sample	67	63
LCSD 480-229080/3-A	Lab Control Sample Dup	56	57
MB 480-229080/1-A	Method Blank	82	81
Surrogate Legend			
DCPA = 2,4-Dichlorophenylacetic acid			

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-229120/8

Matrix: Water

Analysis Batch: 229120

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/04/15 12:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/04/15 12:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/04/15 12:20	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/04/15 12:20	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/04/15 12:20	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/04/15 12:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/04/15 12:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/04/15 12:20	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/04/15 12:20	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/04/15 12:20	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/04/15 12:20	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/04/15 12:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/04/15 12:20	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/04/15 12:20	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/04/15 12:20	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/04/15 12:20	1
2-Hexanone	ND		5.0	1.2	ug/L			03/04/15 12:20	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/04/15 12:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/04/15 12:20	1
Acetone	ND		10	3.0	ug/L			03/04/15 12:20	1
Benzene	ND		1.0	0.41	ug/L			03/04/15 12:20	1
Bromoform	ND		1.0	0.26	ug/L			03/04/15 12:20	1
Bromomethane	ND		1.0	0.69	ug/L			03/04/15 12:20	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/04/15 12:20	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/04/15 12:20	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/04/15 12:20	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/04/15 12:20	1
Chloroethane	ND		1.0	0.32	ug/L			03/04/15 12:20	1
Chloroform	ND		1.0	0.34	ug/L			03/04/15 12:20	1
Chloromethane	ND		1.0	0.35	ug/L			03/04/15 12:20	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/04/15 12:20	1
Cyclohexane	ND		1.0	0.18	ug/L			03/04/15 12:20	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/04/15 12:20	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/04/15 12:20	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/04/15 12:20	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/04/15 12:20	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/04/15 12:20	1
Methyl acetate	ND		2.5	0.50	ug/L			03/04/15 12:20	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/04/15 12:20	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/04/15 12:20	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/04/15 12:20	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/04/15 12:20	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/04/15 12:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/04/15 12:20	1
o-Xylene	ND		1.0	0.76	ug/L			03/04/15 12:20	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/04/15 12:20	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/04/15 12:20	1
Toluene	ND		1.0	0.51	ug/L			03/04/15 12:20	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-229120/8

Matrix: Water

Analysis Batch: 229120

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/04/15 12:20	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/04/15 12:20	1
Trichloroethene	ND		1.0	0.46	ug/L			03/04/15 12:20	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/04/15 12:20	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/04/15 12:20	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/04/15 12:20	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/04/15 12:20	1
Styrene	ND		1.0	0.73	ug/L			03/04/15 12:20	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/04/15 12:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		66 - 137		03/04/15 12:20	1
4-Bromofluorobenzene (Surr)	95		73 - 120		03/04/15 12:20	1
Toluene-d8 (Surr)	97		71 - 126		03/04/15 12:20	1

Lab Sample ID: LCS 480-229120/5

Matrix: Water

Analysis Batch: 229120

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.5		ug/L		98	71 - 129
1,1-Dichloroethene	25.0	23.6		ug/L		94	58 - 121
1,2,4-Trimethylbenzene	25.0	26.0		ug/L		104	76 - 121
1,2-Dichlorobenzene	25.0	23.5		ug/L		94	80 - 124
1,2-Dichloroethane	25.0	25.7		ug/L		103	75 - 127
Benzene	25.0	23.5		ug/L		94	71 - 124
Chlorobenzene	25.0	21.3		ug/L		85	72 - 120
cis-1,2-Dichloroethene	25.0	24.9		ug/L		99	74 - 124
Ethylbenzene	25.0	22.2		ug/L		89	77 - 123
Methyl tert-butyl ether	25.0	25.7		ug/L		103	64 - 127
m,p-Xylene	25.0	21.9		ug/L		88	76 - 122
o-Xylene	25.0	22.4		ug/L		89	76 - 122
Tetrachloroethene	25.0	21.6		ug/L		86	74 - 122
Toluene	25.0	22.7		ug/L		91	80 - 122
trans-1,2-Dichloroethene	25.0	23.0		ug/L		92	73 - 127
Trichloroethene	25.0	24.0		ug/L		96	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
4-Bromofluorobenzene (Surr)	91		73 - 120
Toluene-d8 (Surr)	94		71 - 126

Lab Sample ID: MB 480-229234/6

Matrix: Water

Analysis Batch: 229234

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/05/15 12:32	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-229234/6

Matrix: Water

Analysis Batch: 229234

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/05/15 12:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/05/15 12:32	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/05/15 12:32	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/05/15 12:32	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/05/15 12:32	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/05/15 12:32	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/05/15 12:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/05/15 12:32	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/05/15 12:32	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/05/15 12:32	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/05/15 12:32	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/05/15 12:32	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/05/15 12:32	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/05/15 12:32	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/05/15 12:32	1
2-Hexanone	ND		5.0	1.2	ug/L			03/05/15 12:32	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/05/15 12:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/05/15 12:32	1
Acetone	ND		10	3.0	ug/L			03/05/15 12:32	1
Benzene	ND		1.0	0.41	ug/L			03/05/15 12:32	1
Bromoform	ND		1.0	0.26	ug/L			03/05/15 12:32	1
Bromomethane	ND		1.0	0.69	ug/L			03/05/15 12:32	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/05/15 12:32	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/05/15 12:32	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/05/15 12:32	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/05/15 12:32	1
Chloroethane	ND		1.0	0.32	ug/L			03/05/15 12:32	1
Chloroform	ND		1.0	0.34	ug/L			03/05/15 12:32	1
Chloromethane	ND		1.0	0.35	ug/L			03/05/15 12:32	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/05/15 12:32	1
Cyclohexane	ND		1.0	0.18	ug/L			03/05/15 12:32	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/05/15 12:32	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/05/15 12:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/05/15 12:32	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/05/15 12:32	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/05/15 12:32	1
Methyl acetate	ND		2.5	0.50	ug/L			03/05/15 12:32	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/05/15 12:32	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/05/15 12:32	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/05/15 12:32	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/05/15 12:32	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/05/15 12:32	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/05/15 12:32	1
o-Xylene	ND		1.0	0.76	ug/L			03/05/15 12:32	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/05/15 12:32	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/05/15 12:32	1
Toluene	ND		1.0	0.51	ug/L			03/05/15 12:32	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/05/15 12:32	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-229234/6

Matrix: Water

Analysis Batch: 229234

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/05/15 12:32	1
Trichloroethene	ND		1.0	0.46	ug/L			03/05/15 12:32	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/05/15 12:32	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/05/15 12:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/05/15 12:32	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/05/15 12:32	1
Styrene	ND		1.0	0.73	ug/L			03/05/15 12:32	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/05/15 12:32	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		66 - 137					03/05/15 12:32	1
4-Bromofluorobenzene (Surr)	99		73 - 120					03/05/15 12:32	1
Toluene-d8 (Surr)	100		71 - 126					03/05/15 12:32	1

Lab Sample ID: LCS 480-229234/4

Matrix: Water

Analysis Batch: 229234

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.8		ug/L		99	71 - 129
1,1-Dichloroethene	25.0	25.5		ug/L		102	58 - 121
1,2,4-Trimethylbenzene	25.0	25.1		ug/L		101	76 - 121
1,2-Dichlorobenzene	25.0	22.4		ug/L		90	80 - 124
1,2-Dichloroethane	25.0	22.1		ug/L		88	75 - 127
Benzene	25.0	23.2		ug/L		93	71 - 124
Chlorobenzene	25.0	21.5		ug/L		86	72 - 120
cis-1,2-Dichloroethene	25.0	24.1		ug/L		96	74 - 124
Ethylbenzene	25.0	22.9		ug/L		92	77 - 123
Methyl tert-butyl ether	25.0	24.3		ug/L		97	64 - 127
m,p-Xylene	25.0	22.7		ug/L		91	76 - 122
o-Xylene	25.0	22.9		ug/L		92	76 - 122
Tetrachloroethene	25.0	22.7		ug/L		91	74 - 122
Toluene	25.0	23.1		ug/L		92	80 - 122
trans-1,2-Dichloroethene	25.0	24.3		ug/L		97	73 - 127
Trichloroethene	25.0	23.2		ug/L		93	74 - 123
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	107		66 - 137				
4-Bromofluorobenzene (Surr)	96		73 - 120				
Toluene-d8 (Surr)	100		71 - 126				

Lab Sample ID: LCSD 480-229234/37

Matrix: Water

Analysis Batch: 229234

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1-Dichloroethane	25.0	23.9		ug/L		96	71 - 129	3	20
1,1-Dichloroethene	25.0	24.1		ug/L		96	58 - 121	6	16

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 480-229234/37

Matrix: Water

Analysis Batch: 229234

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
1,2,4-Trimethylbenzene	25.0	25.5		ug/L		102	76 - 121	1	20
1,2-Dichlorobenzene	25.0	23.6		ug/L		94	80 - 124	5	20
1,2-Dichloroethane	25.0	21.7		ug/L		87	75 - 127	2	20
Benzene	25.0	22.7		ug/L		91	71 - 124	2	13
Chlorobenzene	25.0	21.0		ug/L		84	72 - 120	2	25
cis-1,2-Dichloroethene	25.0	24.6		ug/L		98	74 - 124	2	15
Ethylbenzene	25.0	22.4		ug/L		90	77 - 123	2	15
Methyl tert-butyl ether	25.0	24.0		ug/L		96	64 - 127	1	37
m,p-Xylene	25.0	22.0		ug/L		88	76 - 122	3	16
o-Xylene	25.0	22.0		ug/L		88	76 - 122	4	16
Tetrachloroethene	25.0	22.7		ug/L		91	74 - 122	0	20
Toluene	25.0	22.7		ug/L		91	80 - 122	2	15
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	73 - 127	2	20
Trichloroethene	25.0	22.7		ug/L		91	74 - 123	2	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	98		71 - 126

Lab Sample ID: MB 480-229535/7

Matrix: Water

Analysis Batch: 229535

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			03/07/15 15:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/07/15 15:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/07/15 15:07	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/07/15 15:07	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/07/15 15:07	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/07/15 15:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/07/15 15:07	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			03/07/15 15:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/07/15 15:07	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/07/15 15:07	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/07/15 15:07	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/07/15 15:07	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			03/07/15 15:07	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/07/15 15:07	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/07/15 15:07	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/07/15 15:07	1
2-Hexanone	ND		5.0	1.2	ug/L			03/07/15 15:07	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			03/07/15 15:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/07/15 15:07	1
Acetone	ND		10	3.0	ug/L			03/07/15 15:07	1
Benzene	ND		1.0	0.41	ug/L			03/07/15 15:07	1
Bromoform	ND		1.0	0.26	ug/L			03/07/15 15:07	1
Bromomethane	ND		1.0	0.69	ug/L			03/07/15 15:07	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-229535/7

Matrix: Water

Analysis Batch: 229535

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.19	ug/L			03/07/15 15:07	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/07/15 15:07	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/07/15 15:07	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/07/15 15:07	1
Chloroethane	ND		1.0	0.32	ug/L			03/07/15 15:07	1
Chloroform	ND		1.0	0.34	ug/L			03/07/15 15:07	1
Chloromethane	ND		1.0	0.35	ug/L			03/07/15 15:07	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/07/15 15:07	1
Cyclohexane	ND		1.0	0.18	ug/L			03/07/15 15:07	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/07/15 15:07	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/07/15 15:07	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/07/15 15:07	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/07/15 15:07	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/07/15 15:07	1
Methyl acetate	ND		2.5	0.50	ug/L			03/07/15 15:07	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/07/15 15:07	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/07/15 15:07	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/07/15 15:07	1
m,p-Xylene	ND		2.0	0.66	ug/L			03/07/15 15:07	1
n-Butylbenzene	ND		1.0	0.64	ug/L			03/07/15 15:07	1
N-Propylbenzene	ND		1.0	0.69	ug/L			03/07/15 15:07	1
o-Xylene	ND		1.0	0.76	ug/L			03/07/15 15:07	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			03/07/15 15:07	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/07/15 15:07	1
Toluene	ND		1.0	0.51	ug/L			03/07/15 15:07	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/07/15 15:07	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/07/15 15:07	1
Trichloroethene	ND		1.0	0.46	ug/L			03/07/15 15:07	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/07/15 15:07	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/07/15 15:07	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/07/15 15:07	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/07/15 15:07	1
Styrene	ND		1.0	0.73	ug/L			03/07/15 15:07	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/07/15 15:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		66 - 137		03/07/15 15:07	1
4-Bromofluorobenzene (Surr)	108		73 - 120		03/07/15 15:07	1
Toluene-d8 (Surr)	106		71 - 126		03/07/15 15:07	1

Lab Sample ID: LCS 480-229535/5

Matrix: Water

Analysis Batch: 229535

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	26.0		ug/L		104	71 - 129
1,1-Dichloroethene	25.0	25.8		ug/L		103	58 - 121
1,2,4-Trimethylbenzene	25.0	25.3		ug/L		101	76 - 121

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-229535/5

Matrix: Water

Analysis Batch: 229535

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	80 - 124
1,2-Dichloroethane	25.0	26.1		ug/L		104	75 - 127
Benzene	25.0	26.6		ug/L		107	71 - 124
Chlorobenzene	25.0	26.3		ug/L		105	72 - 120
cis-1,2-Dichloroethene	25.0	27.0		ug/L		108	74 - 124
Ethylbenzene	25.0	25.5		ug/L		102	77 - 123
Methyl tert-butyl ether	25.0	25.8		ug/L		103	64 - 127
m,p-Xylene	25.0	25.9		ug/L		104	76 - 122
o-Xylene	25.0	26.4		ug/L		106	76 - 122
Tetrachloroethene	25.0	28.8		ug/L		115	74 - 122
Toluene	25.0	25.8		ug/L		103	80 - 122
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	73 - 127
Trichloroethene	25.0	26.7		ug/L		107	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Toluene-d8 (Surr)	105		71 - 126

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229535

Client Sample ID: TMW-02

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	ND		25.0	30.4		ug/L		121	71 - 129
1,1-Dichloroethene	ND		25.0	30.2		ug/L		121	58 - 121
1,2,4-Trimethylbenzene	ND		25.0	26.7		ug/L		107	76 - 121
1,2-Dichlorobenzene	ND		25.0	27.3		ug/L		109	80 - 124
1,2-Dichloroethane	ND		25.0	29.2		ug/L		117	75 - 127
Benzene	ND		25.0	30.3		ug/L		121	71 - 124
Chlorobenzene	ND		25.0	29.8		ug/L		119	72 - 120
cis-1,2-Dichloroethene	ND		25.0	31.4	F1	ug/L		125	74 - 124
Ethylbenzene	ND		25.0	29.2		ug/L		117	77 - 123
Methyl tert-butyl ether	ND		25.0	28.6		ug/L		115	64 - 127
m,p-Xylene	ND		25.0	29.4		ug/L		118	76 - 122
o-Xylene	ND		25.0	29.4		ug/L		118	76 - 122
Tetrachloroethene	ND		25.0	33.3	F1	ug/L		133	74 - 122
Toluene	ND		25.0	29.1		ug/L		117	80 - 122
trans-1,2-Dichloroethene	ND		25.0	31.8		ug/L		127	73 - 127
Trichloroethene	ND		25.0	31.4	F1	ug/L		125	74 - 123

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		66 - 137
4-Bromofluorobenzene (Surr)	108		73 - 120
Toluene-d8 (Surr)	110		71 - 126

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-76055-3 MSD

Matrix: Water

Analysis Batch: 229535

Client Sample ID: TMW-02

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	ND		25.0	29.9		ug/L		119	71 - 129	2	20
1,1-Dichloroethene	ND		25.0	30.4	F1	ug/L		122	58 - 121	1	16
1,2,4-Trimethylbenzene	ND		25.0	26.3		ug/L		105	76 - 121	1	20
1,2-Dichlorobenzene	ND		25.0	27.3		ug/L		109	80 - 124	0	20
1,2-Dichloroethane	ND		25.0	29.6		ug/L		118	75 - 127	1	20
Benzene	ND		25.0	30.0		ug/L		120	71 - 124	1	13
Chlorobenzene	ND		25.0	29.0		ug/L		116	72 - 120	3	25
cis-1,2-Dichloroethene	ND		25.0	30.8		ug/L		123	74 - 124	2	15
Ethylbenzene	ND		25.0	28.6		ug/L		115	77 - 123	2	15
Methyl tert-butyl ether	ND		25.0	27.8		ug/L		111	64 - 127	3	37
m,p-Xylene	ND		25.0	29.0		ug/L		116	76 - 122	1	16
o-Xylene	ND		25.0	28.9		ug/L		115	76 - 122	2	16
Tetrachloroethene	ND		25.0	31.7	F1	ug/L		127	74 - 122	5	20
Toluene	ND		25.0	29.4		ug/L		118	80 - 122	1	15
trans-1,2-Dichloroethene	ND		25.0	31.4		ug/L		126	73 - 127	1	20
Trichloroethene	ND		25.0	30.6		ug/L		122	74 - 123	3	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
4-Bromofluorobenzene (Surr)	107		73 - 120
Toluene-d8 (Surr)	106		71 - 126

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

Lab Sample ID: MB 480-229070/1-A

Matrix: Water

Analysis Batch: 229267

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		03/04/15 07:58	03/05/15 18:46	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		03/04/15 07:58	03/05/15 18:46	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 18:46	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		03/04/15 07:58	03/05/15 18:46	1
2-Chlorophenol	ND		5.0	0.53	ug/L		03/04/15 07:58	03/05/15 18:46	1
2-Methylphenol	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 18:46	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		03/04/15 07:58	03/05/15 18:46	1
2-Nitroaniline	ND		10	0.42	ug/L		03/04/15 07:58	03/05/15 18:46	1
2-Nitrophenol	ND		5.0	0.48	ug/L		03/04/15 07:58	03/05/15 18:46	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 18:46	1
3-Nitroaniline	ND		10	0.48	ug/L		03/04/15 07:58	03/05/15 18:46	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		03/04/15 07:58	03/05/15 18:46	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

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

Lab Sample ID: MB 480-229070/1-A

Matrix: Water

Analysis Batch: 229267

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		03/04/15 07:58	03/05/15 18:46	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		03/04/15 07:58	03/05/15 18:46	1
4-Chloroaniline	ND		5.0	0.59	ug/L		03/04/15 07:58	03/05/15 18:46	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		03/04/15 07:58	03/05/15 18:46	1
4-Methylphenol	ND		10	0.36	ug/L		03/04/15 07:58	03/05/15 18:46	1
4-Nitroaniline	ND		10	0.25	ug/L		03/04/15 07:58	03/05/15 18:46	1
4-Nitrophenol	ND		10	1.5	ug/L		03/04/15 07:58	03/05/15 18:46	1
Acenaphthene	ND		5.0	0.41	ug/L		03/04/15 07:58	03/05/15 18:46	1
Acenaphthylene	ND		5.0	0.38	ug/L		03/04/15 07:58	03/05/15 18:46	1
Acetophenone	ND		5.0	0.54	ug/L		03/04/15 07:58	03/05/15 18:46	1
Anthracene	ND		5.0	0.28	ug/L		03/04/15 07:58	03/05/15 18:46	1
Atrazine	ND		5.0	0.46	ug/L		03/04/15 07:58	03/05/15 18:46	1
Benzaldehyde	ND		5.0	0.27	ug/L		03/04/15 07:58	03/05/15 18:46	1
Benzo[a]anthracene	ND		5.0	0.36	ug/L		03/04/15 07:58	03/05/15 18:46	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		03/04/15 07:58	03/05/15 18:46	1
Benzo[b]fluoranthene	ND		5.0	0.34	ug/L		03/04/15 07:58	03/05/15 18:46	1
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		03/04/15 07:58	03/05/15 18:46	1
Benzo[k]fluoranthene	ND		5.0	0.73	ug/L		03/04/15 07:58	03/05/15 18:46	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		03/04/15 07:58	03/05/15 18:46	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 18:46	1
Bis(2-ethylhexyl) phthalate	13.2		5.0	1.8	ug/L		03/04/15 07:58	03/05/15 18:46	1
Butyl benzyl phthalate	ND		5.0	0.42	ug/L		03/04/15 07:58	03/05/15 18:46	1
Caprolactam	ND		5.0	2.2	ug/L		03/04/15 07:58	03/05/15 18:46	1
Carbazole	ND		5.0	0.30	ug/L		03/04/15 07:58	03/05/15 18:46	1
Chrysene	ND		5.0	0.33	ug/L		03/04/15 07:58	03/05/15 18:46	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		03/04/15 07:58	03/05/15 18:46	1
Di-n-butyl phthalate	0.346	J	5.0	0.31	ug/L		03/04/15 07:58	03/05/15 18:46	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		03/04/15 07:58	03/05/15 18:46	1
Dibenzofuran	ND		10	0.51	ug/L		03/04/15 07:58	03/05/15 18:46	1
Diethyl phthalate	ND		5.0	0.22	ug/L		03/04/15 07:58	03/05/15 18:46	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		03/04/15 07:58	03/05/15 18:46	1
Fluoranthene	ND		5.0	0.40	ug/L		03/04/15 07:58	03/05/15 18:46	1
Fluorene	ND		5.0	0.36	ug/L		03/04/15 07:58	03/05/15 18:46	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		03/04/15 07:58	03/05/15 18:46	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		03/04/15 07:58	03/05/15 18:46	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		03/04/15 07:58	03/05/15 18:46	1
Hexachloroethane	ND		5.0	0.59	ug/L		03/04/15 07:58	03/05/15 18:46	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		03/04/15 07:58	03/05/15 18:46	1
Isophorone	ND		5.0	0.43	ug/L		03/04/15 07:58	03/05/15 18:46	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		03/04/15 07:58	03/05/15 18:46	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		03/04/15 07:58	03/05/15 18:46	1
Naphthalene	ND		5.0	0.76	ug/L		03/04/15 07:58	03/05/15 18:46	1
Nitrobenzene	ND		5.0	0.29	ug/L		03/04/15 07:58	03/05/15 18:46	1
Pentachlorophenol	ND		10	2.2	ug/L		03/04/15 07:58	03/05/15 18:46	1
Phenanthrene	ND		5.0	0.44	ug/L		03/04/15 07:58	03/05/15 18:46	1
Phenol	ND		5.0	0.39	ug/L		03/04/15 07:58	03/05/15 18:46	1
Pyrene	ND		5.0	0.34	ug/L		03/04/15 07:58	03/05/15 18:46	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

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

Lab Sample ID: MB 480-229070/1-A

Matrix: Water

Analysis Batch: 229267

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229070

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	77		46 - 120	03/04/15 07:58	03/05/15 18:46	1
Phenol-d5 (Surr)	53		16 - 120	03/04/15 07:58	03/05/15 18:46	1
p-Terphenyl-d14 (Surr)	97		67 - 150	03/04/15 07:58	03/05/15 18:46	1
2,4,6-Tribromophenol (Surr)	94		52 - 132	03/04/15 07:58	03/05/15 18:46	1
2-Fluorobiphenyl	72		48 - 120	03/04/15 07:58	03/05/15 18:46	1
2-Fluorophenol (Surr)	78		20 - 120	03/04/15 07:58	03/05/15 18:46	1

Lab Sample ID: LCS 480-229070/2-A

Matrix: Water

Analysis Batch: 229267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 229070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	16.0	16.2		ug/L		101	65 - 154
2-Chlorophenol	16.0	15.4		ug/L		96	48 - 120
4-Chloro-3-methylphenol	16.0	16.3		ug/L		102	64 - 120
4-Nitrophenol	32.0	22.2		ug/L		70	16 - 120
Acenaphthene	16.0	15.3		ug/L		95	60 - 120
Atrazine	32.0	41.4		ug/L		129	56 - 179
Bis(2-ethylhexyl) phthalate	16.0	30.0 *		ug/L		187	53 - 158
Fluorene	16.0	16.5		ug/L		103	55 - 143
Hexachloroethane	16.0	12.0		ug/L		75	14 - 101
N-Nitrosodi-n-propylamine	16.0	14.3		ug/L		90	56 - 120
Pentachlorophenol	32.0	18.1		ug/L		56	39 - 136
Phenol	16.0	11.2		ug/L		70	17 - 120
Pyrene	16.0	16.1		ug/L		101	58 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	87		46 - 120
Phenol-d5 (Surr)	62		16 - 120
p-Terphenyl-d14 (Surr)	94		67 - 150
2,4,6-Tribromophenol (Surr)	104		52 - 132
2-Fluorobiphenyl	83		48 - 120
2-Fluorophenol (Surr)	97		20 - 120

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229894

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrotoluene	ND		19.5	ND		ug/L		NC	62 - 148
2-Chlorophenol	ND		19.5	ND		ug/L		NC	48 - 120
4-Chloro-3-methylphenol	ND		19.5	ND		ug/L		NC	64 - 120
4-Nitrophenol	ND		39.0	ND		ug/L		NC	16 - 120
Acenaphthene	ND		19.5	ND		ug/L		NC	60 - 120
Atrazine	ND		39.0	ND		ug/L		NC	56 - 179
Bis(2-ethylhexyl) phthalate	ND *		19.5	ND		ug/L		NC	53 - 158
Fluorene	ND		19.5	ND		ug/L		NC	55 - 143
Hexachloroethane	ND		19.5	ND		ug/L		NC	14 - 101

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

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

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229894

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodi-n-propylamine	ND		19.5	ND		ug/L		NC	56 - 120
Pentachlorophenol	ND		39.0	ND		ug/L		NC	39 - 136
Phenol	ND		19.5	ND		ug/L		NC	17 - 120
Pyrene	ND		19.5	ND		ug/L		NC	58 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5 (Surr)	79		46 - 120
Phenol-d5 (Surr)	50		16 - 120
p-Terphenyl-d14 (Surr)	45	X	67 - 150
2,4,6-Tribromophenol (Surr)	55		52 - 132
2-Fluorobiphenyl	90		48 - 120
2-Fluorophenol (Surr)	57		20 - 120

Lab Sample ID: 480-76055-3 MSD

Matrix: Water

Analysis Batch: 229894

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229070

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene	ND		18.7	ND		ug/L		NC	62 - 148	NC	20
2-Chlorophenol	ND		18.7	ND		ug/L		NC	48 - 120	NC	25
4-Chloro-3-methylphenol	ND		18.7	ND		ug/L		NC	64 - 120	NC	27
4-Nitrophenol	ND		37.5	ND		ug/L		NC	16 - 120	NC	48
Acenaphthene	ND		18.7	ND		ug/L		NC	60 - 120	NC	24
Atrazine	ND		37.5	ND		ug/L		NC	56 - 179	NC	20
Bis(2-ethylhexyl) phthalate	ND	*	18.7	ND		ug/L		NC	53 - 158	NC	15
Fluorene	ND		18.7	ND		ug/L		NC	55 - 143	NC	15
Hexachloroethane	ND		18.7	ND		ug/L		NC	14 - 101	NC	46
N-Nitrosodi-n-propylamine	ND		18.7	ND		ug/L		NC	56 - 120	NC	31
Pentachlorophenol	ND		37.5	ND		ug/L		NC	39 - 136	NC	37
Phenol	ND		18.7	ND		ug/L		NC	17 - 120	NC	34
Pyrene	ND		18.7	ND		ug/L		NC	58 - 136	NC	19

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	81		46 - 120
Phenol-d5 (Surr)	46		16 - 120
p-Terphenyl-d14 (Surr)	60	X	67 - 150
2,4,6-Tribromophenol (Surr)	57		52 - 132
2-Fluorobiphenyl	90		48 - 120
2-Fluorophenol (Surr)	53		20 - 120

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-229074/1-A

Matrix: Water

Analysis Batch: 229082

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		03/04/15 08:06	03/04/15 15:43	1
4,4'-DDE	ND		0.050	0.012	ug/L		03/04/15 08:06	03/04/15 15:43	1
4,4'-DDT	ND		0.050	0.011	ug/L		03/04/15 08:06	03/04/15 15:43	1
Aldrin	ND		0.050	0.0081	ug/L		03/04/15 08:06	03/04/15 15:43	1
alpha-BHC	ND		0.050	0.0077	ug/L		03/04/15 08:06	03/04/15 15:43	1
alpha-Chlordane	ND		0.050	0.015	ug/L		03/04/15 08:06	03/04/15 15:43	1
beta-BHC	ND		0.050	0.025	ug/L		03/04/15 08:06	03/04/15 15:43	1
delta-BHC	ND		0.050	0.010	ug/L		03/04/15 08:06	03/04/15 15:43	1
Dieldrin	ND		0.050	0.0098	ug/L		03/04/15 08:06	03/04/15 15:43	1
Endosulfan I	ND		0.050	0.011	ug/L		03/04/15 08:06	03/04/15 15:43	1
Endosulfan II	ND		0.050	0.012	ug/L		03/04/15 08:06	03/04/15 15:43	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		03/04/15 08:06	03/04/15 15:43	1
Endrin	ND		0.050	0.014	ug/L		03/04/15 08:06	03/04/15 15:43	1
Endrin aldehyde	0.0641		0.050	0.016	ug/L		03/04/15 08:06	03/04/15 15:43	1
Endrin ketone	ND		0.050	0.012	ug/L		03/04/15 08:06	03/04/15 15:43	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		03/04/15 08:06	03/04/15 15:43	1
gamma-Chlordane	ND		0.050	0.011	ug/L		03/04/15 08:06	03/04/15 15:43	1
Heptachlor	ND		0.050	0.0085	ug/L		03/04/15 08:06	03/04/15 15:43	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		03/04/15 08:06	03/04/15 15:43	1
Methoxychlor	ND		0.050	0.014	ug/L		03/04/15 08:06	03/04/15 15:43	1
Toxaphene	ND		0.50	0.12	ug/L		03/04/15 08:06	03/04/15 15:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	69		20 - 120	03/04/15 08:06	03/04/15 15:43	1
DCB Decachlorobiphenyl	80		20 - 120	03/04/15 08:06	03/04/15 15:43	1
Tetrachloro-m-xylene	90		36 - 120	03/04/15 08:06	03/04/15 15:43	1
Tetrachloro-m-xylene	70		36 - 120	03/04/15 08:06	03/04/15 15:43	1

Lab Sample ID: LCS 480-229074/2-A

Matrix: Water

Analysis Batch: 229082

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 229074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.400	0.410		ug/L		103	51 - 138
4,4'-DDE	0.400	0.364		ug/L		91	45 - 133
4,4'-DDT	0.400	0.387		ug/L		97	50 - 136
Aldrin	0.400	0.351		ug/L		88	40 - 125
alpha-BHC	0.400	0.351		ug/L		88	52 - 125
alpha-Chlordane	0.400	0.377		ug/L		94	52 - 133
beta-BHC	0.400	0.330		ug/L		83	51 - 135
delta-BHC	0.400	0.292		ug/L		73	51 - 132
Dieldrin	0.400	0.402		ug/L		101	49 - 136
Endosulfan I	0.400	0.380		ug/L		95	51 - 134
Endosulfan II	0.400	0.404		ug/L		101	52 - 138
Endosulfan sulfate	0.400	0.373		ug/L		93	47 - 136
Endrin	0.400	0.399		ug/L		100	52 - 143
Endrin aldehyde	0.400	0.416		ug/L		104	46 - 134
Endrin ketone	0.400	0.432		ug/L		108	51 - 138

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-229074/2-A

Matrix: Water

Analysis Batch: 229082

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 229074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
gamma-BHC (Lindane)	0.400	0.374		ug/L		93	56 - 127
gamma-Chlordane	0.400	0.331		ug/L		83	52 - 128
Heptachlor	0.400	0.381		ug/L		95	51 - 125
Heptachlor epoxide	0.400	0.388		ug/L		97	50 - 140
Methoxychlor	0.400	0.430		ug/L		108	50 - 151

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	73		20 - 120
DCB Decachlorobiphenyl	82		20 - 120
Tetrachloro-m-xylene	103		36 - 120
Tetrachloro-m-xylene	80		36 - 120

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229082

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229074

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND	F2	0.651	0.550		ug/L		84	43 - 146
4,4'-DDE	ND	F2	0.651	0.492		ug/L		75	27 - 144
4,4'-DDT	ND	F2	0.651	0.549		ug/L		84	37 - 140
Aldrin	ND	F2	0.651	0.474		ug/L		73	39 - 125
alpha-BHC	0.036	J F2	0.651	0.506		ug/L		72	47 - 130
alpha-Chlordane	ND	F2	0.651	0.510		ug/L		78	36 - 142
beta-BHC	ND	F2	0.651	0.456		ug/L		58	54 - 139
delta-BHC	0.012	J F2	0.651	0.489		ug/L		73	43 - 139
Dieldrin	ND	F2	0.651	0.550		ug/L		84	46 - 144
Endosulfan I	ND	F2	0.651	0.511		ug/L		78	40 - 147
Endosulfan II	ND	F2	0.651	0.549		ug/L		84	51 - 140
Endosulfan sulfate	0.028	J F2	0.651	0.506		ug/L		73	36 - 159
Endrin	0.023	J F2	0.651	0.539		ug/L		79	48 - 156
Endrin aldehyde	0.036	J B F2	0.651	0.594		ug/L		86	29 - 142
Endrin ketone	0.028	J F2	0.651	0.608		ug/L		89	57 - 138
gamma-BHC (Lindane)	0.038	J F2	0.651	0.531		ug/L		76	48 - 133
gamma-Chlordane	ND	F2 F1	0.651	0.458		ug/L		70	46 - 132
Heptachlor	ND	F2	0.651	0.518		ug/L		80	36 - 142
Heptachlor epoxide	ND	F2	0.651	0.531		ug/L		82	53 - 139
Methoxychlor	0.19	F2	0.651	0.618		ug/L		66	40 - 175

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	56		20 - 120
DCB Decachlorobiphenyl	90		20 - 120
Tetrachloro-m-xylene	81		36 - 120
Tetrachloro-m-xylene	70		36 - 120

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 480-76055-3 MSD

Matrix: Water

Analysis Batch: 229082

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229074

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND	F2	0.375	0.333	F2	ug/L		89	43 - 146	49	12
4,4'-DDE	ND	F2	0.375	0.238	F2	ug/L		63	27 - 144	70	14
4,4'-DDT	ND	F2	0.375	0.307	F2	ug/L		82	37 - 140	57	17
Aldrin	ND	F2	0.375	0.268	F2	ug/L		71	39 - 125	56	13
alpha-BHC	0.036	J F2	0.375	0.303	F2	ug/L		71	47 - 130	50	15
alpha-Chlordane	ND	F2	0.375	0.267	F2	ug/L		71	36 - 142	63	12
beta-BHC	ND	F2	0.375	0.282	F2	ug/L		54	54 - 139	47	22
delta-BHC	0.012	J F2	0.375	0.352	F2	ug/L		91	43 - 139	33	10
Dieldrin	ND	F2	0.375	0.318	F2	ug/L		85	46 - 144	53	12
Endosulfan I	ND	F2	0.375	0.282	F2	ug/L		75	40 - 147	58	10
Endosulfan II	ND	F2	0.375	0.320	F2	ug/L		85	51 - 140	53	11
Endosulfan sulfate	0.028	J F2	0.375	0.316	F2	ug/L		77	36 - 159	46	18
Endrin	0.023	J F2	0.375	0.312	F2	ug/L		77	48 - 156	53	13
Endrin aldehyde	0.036	J B F2	0.375	0.436	F2	ug/L		107	29 - 142	31	18
Endrin ketone	0.028	J F2	0.375	0.370	F2	ug/L		91	57 - 138	49	33
gamma-BHC (Lindane)	0.038	J F2	0.375	0.349	F2	ug/L		83	48 - 133	41	15
gamma-Chlordane	ND	F2 F1	0.375	0.543	F1 F2	ug/L		145	46 - 132	17	11
Heptachlor	ND	F2	0.375	0.278	F2	ug/L		74	36 - 142	60	10
Heptachlor epoxide	ND	F2	0.375	0.305	F2	ug/L		81	53 - 139	54	11
Methoxychlor	0.19	F2	0.375	0.357	F2	ug/L		46	40 - 175	53	10
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
DCB Decachlorobiphenyl	34		20 - 120								
DCB Decachlorobiphenyl	51		20 - 120								
Tetrachloro-m-xylene	102		36 - 120								
Tetrachloro-m-xylene	80		36 - 120								

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-229073/1-A

Matrix: Water

Analysis Batch: 229149

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229073

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 13:51	1
PCB-1221	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 13:51	1
PCB-1232	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 13:51	1
PCB-1242	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 13:51	1
PCB-1248	ND		0.50	0.18	ug/L		03/04/15 08:03	03/04/15 13:51	1
PCB-1254	ND		0.50	0.25	ug/L		03/04/15 08:03	03/04/15 13:51	1
PCB-1260	ND		0.50	0.25	ug/L		03/04/15 08:03	03/04/15 13:51	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		23 - 127				03/04/15 08:03	03/04/15 13:51	1
Tetrachloro-m-xylene	75		23 - 127				03/04/15 08:03	03/04/15 13:51	1
DCB Decachlorobiphenyl	66		19 - 126				03/04/15 08:03	03/04/15 13:51	1
DCB Decachlorobiphenyl	60		19 - 126				03/04/15 08:03	03/04/15 13:51	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 480-229073/2-A

Matrix: Water

Analysis Batch: 229149

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 229073

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec.		
			Added	Result	Qualifier				Limits		
PCB-1016			4.00	3.18		ug/L		79	51 - 137		
PCB-1260			4.00	2.97		ug/L		74	45 - 139		
Surrogate	LCS		Limits								
	%Recovery	Qualifier									
Tetrachloro-m-xylene		78		23 - 127							
Tetrachloro-m-xylene		63		23 - 127							
DCB Decachlorobiphenyl		43		19 - 126							
DCB Decachlorobiphenyl		40		19 - 126							

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229149

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229073

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
PCB-1016	ND		4.05	3.05		ug/L		75	59 - 135		
PCB-1260	ND		4.05	1.90		ug/L		47	12 - 133		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
Tetrachloro-m-xylene	69		23 - 127								
Tetrachloro-m-xylene	65		23 - 127								
DCB Decachlorobiphenyl	27		19 - 126								
DCB Decachlorobiphenyl	26		19 - 126								

Lab Sample ID: 480-76055-3 MSD

Matrix: Water

Analysis Batch: 229149

Client Sample ID: TMW-02

Prep Type: Total/NA

Prep Batch: 229073

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
PCB-1016	ND		5.80	4.14		ug/L		71	59 - 135	30	50
PCB-1260	ND		5.80	2.15		ug/L		37	12 - 133	12	50
Surrogate	MSD	MSD	Limits								
	%Recovery	Qualifier									
Tetrachloro-m-xylene	71		23 - 127								
Tetrachloro-m-xylene	62		23 - 127								
DCB Decachlorobiphenyl	30		19 - 126								
DCB Decachlorobiphenyl	30		19 - 126								

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-229080/1-A

Matrix: Water

Analysis Batch: 229216

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.15	ug/L		03/04/15 08:15	03/05/15 13:40	1
Silvex (2,4,5-TP)	ND		0.50	0.36	ug/L		03/04/15 08:15	03/05/15 13:40	1
2,4-D	ND		0.50	0.40	ug/L		03/04/15 08:15	03/05/15 13:40	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: MB 480-229080/1-A

Matrix: Water

Analysis Batch: 229216

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229080

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	82		29 - 135	03/04/15 08:15	03/05/15 13:40	1
2,4-Dichlorophenylacetic acid	81		29 - 135	03/04/15 08:15	03/05/15 13:40	1

Lab Sample ID: LCS 480-229080/2-A

Matrix: Water

Analysis Batch: 229216

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 229080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	1.40		ug/L		70	33 - 159
Silvex (2,4,5-TP)	2.00	1.31		ug/L		65	35 - 173
2,4-D	2.00	1.27		ug/L		64	39 - 157

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	67		29 - 135
2,4-Dichlorophenylacetic acid	63		29 - 135

Lab Sample ID: LCSD 480-229080/3-A

Matrix: Water

Analysis Batch: 229216

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 229080

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,4,5-T	2.00	1.96		ug/L		98	33 - 159	33	50
Silvex (2,4,5-TP)	2.00	1.52		ug/L		76	35 - 173	15	50
2,4-D	2.00	1.64		ug/L		82	39 - 157	26	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	56		29 - 135
2,4-Dichlorophenylacetic acid	57		29 - 135

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-229122/1-B

Matrix: Water

Analysis Batch: 229582

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 229294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		03/06/15 08:40	03/06/15 13:45	1
Antimony	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:45	1
Arsenic	ND		0.015		mg/L		03/06/15 08:40	03/06/15 13:45	1
Barium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:45	1
Beryllium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:45	1
Cadmium	ND		0.0020		mg/L		03/06/15 08:40	03/06/15 13:45	1
Calcium	ND		0.50		mg/L		03/06/15 08:40	03/06/15 13:45	1
Chromium	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:45	1
Cobalt	ND		0.0040		mg/L		03/06/15 08:40	03/06/15 13:45	1
Copper	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:45	1
Iron	ND		0.050		mg/L		03/06/15 08:40	03/06/15 13:45	1

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-229122/1-B

Matrix: Water

Analysis Batch: 229582

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 229294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:45	1
Magnesium	ND		0.20		mg/L		03/06/15 08:40	03/06/15 13:45	1
Manganese	ND		0.0030		mg/L		03/06/15 08:40	03/06/15 13:45	1
Nickel	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:45	1
Potassium	ND		0.50		mg/L		03/06/15 08:40	03/06/15 13:45	1
Selenium	ND		0.025		mg/L		03/06/15 08:40	03/06/15 13:45	1
Silver	ND		0.0060		mg/L		03/06/15 08:40	03/06/15 13:45	1
Sodium	ND		1.0		mg/L		03/06/15 08:40	03/06/15 13:45	1
Thallium	ND		0.020		mg/L		03/06/15 08:40	03/06/15 13:45	1
Vanadium	ND		0.0050		mg/L		03/06/15 08:40	03/06/15 13:45	1
Zinc	ND		0.010		mg/L		03/06/15 08:40	03/06/15 13:45	1

Lab Sample ID: LCS 480-229122/2-B

Matrix: Water

Analysis Batch: 229582

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 229294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	10.74		mg/L		107	80 - 120
Antimony	0.200	0.202		mg/L		101	80 - 120
Arsenic	0.200	0.197		mg/L		99	80 - 120
Barium	0.200	0.208		mg/L		104	80 - 120
Beryllium	0.200	0.203		mg/L		101	80 - 120
Cadmium	0.200	0.203		mg/L		101	80 - 120
Calcium	10.0	9.95		mg/L		100	80 - 120
Chromium	0.200	0.209		mg/L		104	80 - 120
Cobalt	0.200	0.204		mg/L		102	80 - 120
Copper	0.200	0.200		mg/L		100	80 - 120
Iron	10.0	10.15		mg/L		101	80 - 120
Lead	0.200	0.198		mg/L		99	80 - 120
Magnesium	10.0	10.30		mg/L		103	80 - 120
Manganese	0.200	0.206		mg/L		103	80 - 120
Nickel	0.200	0.197		mg/L		98	80 - 120
Potassium	10.0	10.20		mg/L		102	80 - 120
Selenium	0.200	0.202		mg/L		101	80 - 120
Silver	0.0500	0.0507		mg/L		101	80 - 120
Sodium	10.0	11.47		mg/L		115	80 - 120
Thallium	0.200	0.202		mg/L		101	80 - 120
Vanadium	0.200	0.209		mg/L		105	80 - 120
Zinc	0.200	0.201		mg/L		101	80 - 120

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229582

Client Sample ID: TMW-02

Prep Type: Dissolved

Prep Batch: 229294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		10.0	10.88		mg/L		109	75 - 125
Antimony	ND		0.200	0.205		mg/L		102	75 - 125
Arsenic	ND		0.200	0.204		mg/L		102	75 - 125
Barium	0.15		0.200	0.352		mg/L		101	75 - 125

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-76055-3 MS

Matrix: Water

Analysis Batch: 229582

Client Sample ID: TMW-02

Prep Type: Dissolved

Prep Batch: 229294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		0.200	0.204		mg/L		102	75 - 125
Cadmium	ND		0.200	0.207		mg/L		104	75 - 125
Calcium	67.4		10.0	77.78	4	mg/L		103	75 - 125
Chromium	ND		0.200	0.206		mg/L		102	75 - 125
Cobalt	ND		0.200	0.211		mg/L		105	75 - 125
Copper	ND		0.200	0.202		mg/L		101	75 - 125
Iron	ND		10.0	9.96		mg/L		99	75 - 125
Lead	ND		0.200	0.198		mg/L		99	75 - 125
Magnesium	13.4		10.0	23.53		mg/L		102	75 - 125
Manganese	2.2		0.200	2.34	4	mg/L		64	75 - 125
Nickel	ND		0.200	0.201		mg/L		100	75 - 125
Potassium	2.7		10.0	13.08		mg/L		104	75 - 125
Selenium	ND		0.200	0.208		mg/L		104	75 - 125
Silver	ND		0.0500	0.0512		mg/L		102	75 - 125
Sodium	108		10.0	115.2	4	mg/L		73	75 - 125
Thallium	ND		0.200	0.201		mg/L		100	75 - 125
Vanadium	ND		0.200	0.206		mg/L		103	75 - 125
Zinc	ND		0.200	0.205		mg/L		100	75 - 125

Lab Sample ID: 480-76055-3 MSD

Matrix: Water

Analysis Batch: 229582

Client Sample ID: TMW-02

Prep Type: Dissolved

Prep Batch: 229294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		10.0	11.12		mg/L		111	75 - 125	2	20
Antimony	ND		0.200	0.209		mg/L		105	75 - 125	2	20
Arsenic	ND		0.200	0.209		mg/L		105	75 - 125	3	20
Barium	0.15		0.200	0.359		mg/L		104	75 - 125	2	20
Beryllium	ND		0.200	0.206		mg/L		103	75 - 125	1	20
Cadmium	ND		0.200	0.212		mg/L		106	75 - 125	2	20
Calcium	67.4		10.0	75.07	4	mg/L		76	75 - 125	4	20
Chromium	ND		0.200	0.209		mg/L		103	75 - 125	1	20
Cobalt	ND		0.200	0.214		mg/L		107	75 - 125	2	20
Copper	ND		0.200	0.204		mg/L		102	75 - 125	1	20
Iron	ND		10.0	10.10		mg/L		101	75 - 125	1	20
Lead	ND		0.200	0.198		mg/L		99	75 - 125	0	20
Magnesium	13.4		10.0	23.11		mg/L		98	75 - 125	2	20
Manganese	2.2		0.200	2.31	4	mg/L		51	75 - 125	1	20
Nickel	ND		0.200	0.203		mg/L		101	75 - 125	1	20
Potassium	2.7		10.0	13.05		mg/L		104	75 - 125	0	20
Selenium	ND		0.200	0.209		mg/L		104	75 - 125	0	20
Silver	ND		0.0500	0.0517		mg/L		103	75 - 125	1	20
Sodium	108		10.0	124.7	4	mg/L		168	75 - 125	8	20
Thallium	ND		0.200	0.203		mg/L		102	75 - 125	1	20
Vanadium	ND		0.200	0.209		mg/L		104	75 - 125	1	20
Zinc	ND		0.200	0.204		mg/L		100	75 - 125	1	20

TestAmerica Buffalo

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-229122/1-C
Matrix: Water
Analysis Batch: 229454

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 229368

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		03/06/15 08:40	03/06/15 12:35	1

Lab Sample ID: LCS 480-229122/2-C
Matrix: Water
Analysis Batch: 229454

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 229368

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00652		mg/L		98	80 - 120

Lab Sample ID: 480-76055-3 MS
Matrix: Water
Analysis Batch: 229454

Client Sample ID: TMW-02
Prep Type: Dissolved
Prep Batch: 229368

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00667	0.00673		mg/L		101	80 - 120

Lab Sample ID: 480-76055-3 MSD
Matrix: Water
Analysis Batch: 229454

Client Sample ID: TMW-02
Prep Type: Dissolved
Prep Batch: 229368

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00667	0.00685		mg/L		103	80 - 120	2	20

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

GC/MS VOA

Analysis Batch: 229120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	8260C	
480-76055-2	BLIND DUP	Total/NA	Water	8260C	
480-76055-3	TMW-02	Total/NA	Water	8260C	
480-76055-4	TMW-03	Total/NA	Water	8260C	
480-76055-5	TMW-04	Total/NA	Water	8260C	
480-76055-6	TMW-05	Total/NA	Water	8260C	
480-76055-7	TMW-06	Total/NA	Water	8260C	
LCS 480-229120/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-229120/8	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 229234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-8	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-229234/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-229234/37	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-229234/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 229535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-3 MS	TMW-02	Total/NA	Water	8260C	
480-76055-3 MSD	TMW-02	Total/NA	Water	8260C	
LCS 480-229535/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-229535/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 229070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1 - DL	TMW-01	Total/NA	Water	3510C	
480-76055-1	TMW-01	Total/NA	Water	3510C	
480-76055-2	BLIND DUP	Total/NA	Water	3510C	
480-76055-2 - DL	BLIND DUP	Total/NA	Water	3510C	
480-76055-3 - DL	TMW-02	Total/NA	Water	3510C	
480-76055-3	TMW-02	Total/NA	Water	3510C	
480-76055-3 MS	TMW-02	Total/NA	Water	3510C	
480-76055-3 MSD	TMW-02	Total/NA	Water	3510C	
480-76055-4	TMW-03	Total/NA	Water	3510C	
480-76055-4 - DL	TMW-03	Total/NA	Water	3510C	
480-76055-5	TMW-04	Total/NA	Water	3510C	
480-76055-5 - DL	TMW-04	Total/NA	Water	3510C	
480-76055-6 - DL	TMW-05	Total/NA	Water	3510C	
480-76055-6	TMW-05	Total/NA	Water	3510C	
480-76055-7 - DL	TMW-06	Total/NA	Water	3510C	
480-76055-7	TMW-06	Total/NA	Water	3510C	
LCS 480-229070/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-229070/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 229267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	8270D	229070

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

GC/MS Semi VOA (Continued)

Analysis Batch: 229267 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-2	BLIND DUP	Total/NA	Water	8270D	229070
480-76055-3	TMW-02	Total/NA	Water	8270D	229070
480-76055-4	TMW-03	Total/NA	Water	8270D	229070
480-76055-5	TMW-04	Total/NA	Water	8270D	229070
480-76055-6	TMW-05	Total/NA	Water	8270D	229070
480-76055-7	TMW-06	Total/NA	Water	8270D	229070
LCS 480-229070/2-A	Lab Control Sample	Total/NA	Water	8270D	229070
MB 480-229070/1-A	Method Blank	Total/NA	Water	8270D	229070

Analysis Batch: 229894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1 - DL	TMW-01	Total/NA	Water	8270D	229070
480-76055-2 - DL	BLIND DUP	Total/NA	Water	8270D	229070
480-76055-3 - DL	TMW-02	Total/NA	Water	8270D	229070
480-76055-3 MS	TMW-02	Total/NA	Water	8270D	229070
480-76055-3 MSD	TMW-02	Total/NA	Water	8270D	229070
480-76055-4 - DL	TMW-03	Total/NA	Water	8270D	229070
480-76055-5 - DL	TMW-04	Total/NA	Water	8270D	229070
480-76055-6 - DL	TMW-05	Total/NA	Water	8270D	229070
480-76055-7 - DL	TMW-06	Total/NA	Water	8270D	229070

GC Semi VOA

Prep Batch: 229073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	3510C	
480-76055-2	BLIND DUP	Total/NA	Water	3510C	
480-76055-3	TMW-02	Total/NA	Water	3510C	
480-76055-3 MS	TMW-02	Total/NA	Water	3510C	
480-76055-3 MSD	TMW-02	Total/NA	Water	3510C	
480-76055-4	TMW-03	Total/NA	Water	3510C	
480-76055-5	TMW-04	Total/NA	Water	3510C	
480-76055-6	TMW-05	Total/NA	Water	3510C	
480-76055-7	TMW-06	Total/NA	Water	3510C	
LCS 480-229073/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-229073/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 229074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	3510C	
480-76055-2	BLIND DUP	Total/NA	Water	3510C	
480-76055-3	TMW-02	Total/NA	Water	3510C	
480-76055-3 MS	TMW-02	Total/NA	Water	3510C	
480-76055-3 MSD	TMW-02	Total/NA	Water	3510C	
480-76055-4	TMW-03	Total/NA	Water	3510C	
480-76055-6	TMW-05	Total/NA	Water	3510C	
480-76055-7	TMW-06	Total/NA	Water	3510C	
LCS 480-229074/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-229074/1-A	Method Blank	Total/NA	Water	3510C	

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

GC Semi VOA (Continued)

Prep Batch: 229080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	8151A	
480-76055-2	BLIND DUP	Total/NA	Water	8151A	
480-76055-4	TMW-03	Total/NA	Water	8151A	
480-76055-6	TMW-05	Total/NA	Water	8151A	
480-76055-7	TMW-06	Total/NA	Water	8151A	
LCS 480-229080/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 480-229080/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 480-229080/1-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 229082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	8081B	229074
480-76055-2	BLIND DUP	Total/NA	Water	8081B	229074
480-76055-3	TMW-02	Total/NA	Water	8081B	229074
480-76055-3 MS	TMW-02	Total/NA	Water	8081B	229074
480-76055-3 MSD	TMW-02	Total/NA	Water	8081B	229074
480-76055-4	TMW-03	Total/NA	Water	8081B	229074
480-76055-6	TMW-05	Total/NA	Water	8081B	229074
480-76055-7	TMW-06	Total/NA	Water	8081B	229074
LCS 480-229074/2-A	Lab Control Sample	Total/NA	Water	8081B	229074
MB 480-229074/1-A	Method Blank	Total/NA	Water	8081B	229074

Analysis Batch: 229149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	8082A	229073
480-76055-2	BLIND DUP	Total/NA	Water	8082A	229073
480-76055-3	TMW-02	Total/NA	Water	8082A	229073
480-76055-3 MS	TMW-02	Total/NA	Water	8082A	229073
480-76055-3 MSD	TMW-02	Total/NA	Water	8082A	229073
480-76055-4	TMW-03	Total/NA	Water	8082A	229073
480-76055-5	TMW-04	Total/NA	Water	8082A	229073
480-76055-6	TMW-05	Total/NA	Water	8082A	229073
480-76055-7	TMW-06	Total/NA	Water	8082A	229073
LCS 480-229073/2-A	Lab Control Sample	Total/NA	Water	8082A	229073
MB 480-229073/1-A	Method Blank	Total/NA	Water	8082A	229073

Analysis Batch: 229216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Total/NA	Water	8151A	229080
480-76055-2	BLIND DUP	Total/NA	Water	8151A	229080
480-76055-4	TMW-03	Total/NA	Water	8151A	229080
480-76055-6	TMW-05	Total/NA	Water	8151A	229080
480-76055-7	TMW-06	Total/NA	Water	8151A	229080
LCS 480-229080/2-A	Lab Control Sample	Total/NA	Water	8151A	229080
LCSD 480-229080/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	229080
MB 480-229080/1-A	Method Blank	Total/NA	Water	8151A	229080

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Metals

Filtration Batch: 229122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Dissolved	Water	FILTRATION	
480-76055-2	BLIND DUP	Dissolved	Water	FILTRATION	
480-76055-3	TMW-02	Dissolved	Water	FILTRATION	
480-76055-3 MS	TMW-02	Dissolved	Water	FILTRATION	
480-76055-3 MSD	TMW-02	Dissolved	Water	FILTRATION	
480-76055-4	TMW-03	Dissolved	Water	FILTRATION	
480-76055-5	TMW-04	Dissolved	Water	FILTRATION	
480-76055-6	TMW-05	Dissolved	Water	FILTRATION	
480-76055-7	TMW-06	Dissolved	Water	FILTRATION	
LCS 480-229122/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 480-229122/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	
MB 480-229122/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 480-229122/1-C	Method Blank	Dissolved	Water	FILTRATION	

Prep Batch: 229294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Dissolved	Water	3005A	229122
480-76055-2	BLIND DUP	Dissolved	Water	3005A	229122
480-76055-3	TMW-02	Dissolved	Water	3005A	229122
480-76055-3 MS	TMW-02	Dissolved	Water	3005A	229122
480-76055-3 MSD	TMW-02	Dissolved	Water	3005A	229122
480-76055-4	TMW-03	Dissolved	Water	3005A	229122
480-76055-5	TMW-04	Dissolved	Water	3005A	229122
480-76055-6	TMW-05	Dissolved	Water	3005A	229122
480-76055-7	TMW-06	Dissolved	Water	3005A	229122
LCS 480-229122/2-B	Lab Control Sample	Dissolved	Water	3005A	229122
MB 480-229122/1-B	Method Blank	Dissolved	Water	3005A	229122

Prep Batch: 229368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Dissolved	Water	7470A	229122
480-76055-2	BLIND DUP	Dissolved	Water	7470A	229122
480-76055-3	TMW-02	Dissolved	Water	7470A	229122
480-76055-3 MS	TMW-02	Dissolved	Water	7470A	229122
480-76055-3 MSD	TMW-02	Dissolved	Water	7470A	229122
480-76055-4	TMW-03	Dissolved	Water	7470A	229122
480-76055-5	TMW-04	Dissolved	Water	7470A	229122
480-76055-6	TMW-05	Dissolved	Water	7470A	229122
480-76055-7	TMW-06	Dissolved	Water	7470A	229122
LCS 480-229122/2-C	Lab Control Sample	Dissolved	Water	7470A	229122
MB 480-229122/1-C	Method Blank	Dissolved	Water	7470A	229122

Analysis Batch: 229454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Dissolved	Water	7470A	229368
480-76055-2	BLIND DUP	Dissolved	Water	7470A	229368
480-76055-3	TMW-02	Dissolved	Water	7470A	229368
480-76055-3 MS	TMW-02	Dissolved	Water	7470A	229368
480-76055-3 MSD	TMW-02	Dissolved	Water	7470A	229368
480-76055-4	TMW-03	Dissolved	Water	7470A	229368
480-76055-5	TMW-04	Dissolved	Water	7470A	229368

TestAmerica Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Metals (Continued)

Analysis Batch: 229454 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-6	TMW-05	Dissolved	Water	7470A	229368
480-76055-7	TMW-06	Dissolved	Water	7470A	229368
LCS 480-229122/2-C	Lab Control Sample	Dissolved	Water	7470A	229368
MB 480-229122/1-C	Method Blank	Dissolved	Water	7470A	229368

Analysis Batch: 229582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-76055-1	TMW-01	Dissolved	Water	6010C	229294
480-76055-2	BLIND DUP	Dissolved	Water	6010C	229294
480-76055-3	TMW-02	Dissolved	Water	6010C	229294
480-76055-3 MS	TMW-02	Dissolved	Water	6010C	229294
480-76055-3 MSD	TMW-02	Dissolved	Water	6010C	229294
480-76055-4	TMW-03	Dissolved	Water	6010C	229294
480-76055-5	TMW-04	Dissolved	Water	6010C	229294
480-76055-6	TMW-05	Dissolved	Water	6010C	229294
480-76055-7	TMW-06	Dissolved	Water	6010C	229294
LCS 480-229122/2-B	Lab Control Sample	Dissolved	Water	6010C	229294
MB 480-229122/1-B	Method Blank	Dissolved	Water	6010C	229294

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-01

Date Collected: 02/27/15 15:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 17:22	LCH	TAL BUF
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 20:25	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	20	229894	03/11/15 10:56	PJQ	TAL BUF
Total/NA	Prep	3510C			229074	03/04/15 08:06	TRG	TAL BUF
Total/NA	Analysis	8081B		1	229082	03/04/15 16:53	MAN	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 14:50	KS	TAL BUF
Total/NA	Prep	8151A			229080	03/04/15 08:15	TRG	TAL BUF
Total/NA	Analysis	8151A		1	229216	03/05/15 15:29	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 13:50	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:38	LRK	TAL BUF

Client Sample ID: BLIND DUP

Date Collected: 02/27/15 08:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 17:50	LCH	TAL BUF
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 20:49	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	200	229894	03/11/15 11:21	PJQ	TAL BUF
Total/NA	Prep	3510C			229074	03/04/15 08:06	TRG	TAL BUF
Total/NA	Analysis	8081B		1	229082	03/04/15 17:11	MAN	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 15:05	KS	TAL BUF
Total/NA	Prep	8151A			229080	03/04/15 08:15	TRG	TAL BUF
Total/NA	Analysis	8151A		1	229216	03/05/15 15:59	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 13:53	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:43	LRK	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-02

Lab Sample ID: 480-76055-3

Date Collected: 02/27/15 15:30

Matrix: Water

Date Received: 03/03/15 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 18:18	LCH	TAL BUF
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 21:14	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	200	229894	03/11/15 11:47	PJQ	TAL BUF
Total/NA	Prep	3510C			229074	03/04/15 08:06	TRG	TAL BUF
Total/NA	Analysis	8081B		1	229082	03/04/15 17:29	MAN	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 15:20	KS	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 13:56	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:44	LRK	TAL BUF

Client Sample ID: TMW-03

Lab Sample ID: 480-76055-4

Date Collected: 02/27/15 12:00

Matrix: Water

Date Received: 03/03/15 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 18:47	LCH	TAL BUF
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 21:39	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	100	229894	03/11/15 12:12	PJQ	TAL BUF
Total/NA	Prep	3510C			229074	03/04/15 08:06	TRG	TAL BUF
Total/NA	Analysis	8081B		1	229082	03/04/15 17:46	MAN	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 15:34	KS	TAL BUF
Total/NA	Prep	8151A			229080	03/04/15 08:15	TRG	TAL BUF
Total/NA	Analysis	8151A		1	229216	03/05/15 16:28	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 14:18	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:51	LRK	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-04

Lab Sample ID: 480-76055-5

Date Collected: 02/27/15 13:00

Matrix: Water

Date Received: 03/03/15 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 19:15	LCH	TAL BUF
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 22:04	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	100	229894	03/11/15 12:37	PJQ	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 15:49	KS	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 14:21	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:53	LRK	TAL BUF

Client Sample ID: TMW-05

Lab Sample ID: 480-76055-6

Date Collected: 02/27/15 09:30

Matrix: Water

Date Received: 03/03/15 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 19:43	LCH	TAL BUF
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 22:28	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	100	229894	03/11/15 13:02	PJQ	TAL BUF
Total/NA	Prep	3510C			229074	03/04/15 08:06	TRG	TAL BUF
Total/NA	Analysis	8081B		1	229082	03/04/15 18:04	MAN	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 16:04	KS	TAL BUF
Total/NA	Prep	8151A			229080	03/04/15 08:15	TRG	TAL BUF
Total/NA	Analysis	8151A		1	229216	03/05/15 16:58	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 14:24	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:55	LRK	TAL BUF

Client Sample ID: TMW-06

Lab Sample ID: 480-76055-7

Date Collected: 02/27/15 10:00

Matrix: Water

Date Received: 03/03/15 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229120	03/04/15 20:11	LCH	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Client Sample ID: TMW-06

Date Collected: 02/27/15 10:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D		1	229267	03/05/15 22:53	PJQ	TAL BUF
Total/NA	Prep	3510C	DL		229070	03/04/15 07:58	JLS	TAL BUF
Total/NA	Analysis	8270D	DL	200	229894	03/11/15 13:26	PJQ	TAL BUF
Total/NA	Prep	3510C			229074	03/04/15 08:06	TRG	TAL BUF
Total/NA	Analysis	8081B		1	229082	03/04/15 18:21	MAN	TAL BUF
Total/NA	Prep	3510C			229073	03/04/15 08:03	JLS	TAL BUF
Total/NA	Analysis	8082A		1	229149	03/04/15 16:49	KS	TAL BUF
Total/NA	Prep	8151A			229080	03/04/15 08:15	TRG	TAL BUF
Total/NA	Analysis	8151A		1	229216	03/05/15 17:27	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	3005A			229294	03/06/15 08:40	KJ1	TAL BUF
Dissolved	Analysis	6010C		1	229582	03/06/15 14:26	JRK	TAL BUF
Dissolved	Filtration	FILTRATION			229122	03/04/15 10:29	KJ1	TAL BUF
Dissolved	Prep	7470A			229368	03/06/15 08:40	LRK	TAL BUF
Dissolved	Analysis	7470A		1	229454	03/06/15 12:56	LRK	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 02/27/15 08:00

Date Received: 03/03/15 13:45

Lab Sample ID: 480-76055-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	229234	03/05/15 13:12	LJF	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-15 *

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8081B	Organochlorine Pesticides (GC)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
8151A	Herbicides (GC)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7470A	Mercury (CVAA)	SW846	TAL BUF

Protocol References:

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 441 Ohio St.

TestAmerica Job ID: 480-76055-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-76055-1	TMW-01	Water	02/27/15 15:00	03/03/15 13:45
480-76055-2	BLIND DUP	Water	02/27/15 08:00	03/03/15 13:45
480-76055-3	TMW-02	Water	02/27/15 15:30	03/03/15 13:45
480-76055-4	TMW-03	Water	02/27/15 12:00	03/03/15 13:45
480-76055-5	TMW-04	Water	02/27/15 13:00	03/03/15 13:45
480-76055-6	TMW-05	Water	02/27/15 09:30	03/03/15 13:45
480-76055-7	TMW-06	Water	02/27/15 10:00	03/03/15 13:45
480-76055-8	TRIP BLANK	Water	02/27/15 08:00	03/03/15 13:45



Te

Temperature on Receipt _____
Drinking Water? Yes ☐ No ☒

480-76055 Chain of Custody

THE

Chain of Custody Record

TAL-4124 (1007)

Client Turnkey Project Manager Nate Munkley Date 2-27-15 Chain of Custody Number 275812

Address 2558 Hamburg Turnpike Telephone Number (Area Code/Fax Number) (716) 856-0583 Lab Number 1 of 1

City Buffalo State NY Zip Code 14218 Site Contact Paul W. Weather Lab Contact B. Fisk

Project Name and Location (State) 441 OHIO ST Site Carrier/Maybill Number _____

Contract/Purchase Order/Quote No. 0292-013-001

City		State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)										Special Instructions/ Conditions of Receipt	
Buffalo		NY	14218	Paul W. Weathers	B. Fiskos	TLC+CRS1 VOC	TLC SVOC	Dissolved Metals	TLC Pestic	TLC Herb	TLC PCBs						
Project Name and Location (State)				Carrier/Waybill Number		Matrix				Containers & Preservatives							
Contract/Purchase Order/Quote No.				Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		
0292-013-001				2-27-15	1500		X	X	X	X		X	X	X	X	X	For Dissolved Metals
Blind Dup				2-27-15	800		X	X	X	X		X	X	X	X	X	Please filter in Lab
TMW-02 (MS(MSD))				2-27-15	1530		X	X	X	X		X	X	X	X	X	limited water, quantity
TMW-03				2-27-15	1200		X	X	X	X		X	X	X	X	X	
TMW-04				2-27-15	1300		X	X	X	X		X	X	X	X	X	Limit water
TMW-05				2-27-15	930		X	X	X	X		X	X	X	X	X	
TMW-06				2-27-15	1000		X	X	X	X		X	X	X	X	X	
Trip Blank				2-27-15	800		X	X	X	X		X	X	X	X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months _____ Months _____ Months

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other standard

1. Relinquished By [Signature] Date 2-27-15 Time 16:30 Received By [Signature] Date 3-3-15 Time 12:10

2. Relinquished By [Signature] Date 3-3-15 Time 13:45 Received By [Signature] Date 3-3-15 Time 13:45

3. Relinquished By [Signature] Date _____ Time _____ Received By _____ Date _____ Time _____

Comments 3.5 hr

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-76055-1

Login Number: 76055

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	BMTK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

APPENDIX E

DATA USABILITY SUMMARY REPORTS (DUSRs)

Data Validation Services

120 Cobble Creek Road P.O. Box 208
North Creek, NY 12853

Phone 518-251-4429
harry@frontiernet.net

April 18, 2015

Nathan Munley
Turnkey Environmental Restoration
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218

RE: Validation of the 441 Ohio Street Site Sample Analytical Data Packages
TAL SDG Nos. 480-76055-1 and 480-75578-1

Dear Mr. Munley:

Review has been completed for the data packages generated by Test America Laboratories, Inc that pertain to samples collected between 02/17/15 and 02/27/15 at the 441 Ohio Street site. Four soil samples, four aqueous samples, and field duplicates of each matrix were processed for TCL and CP-51 volatiles, TCL semivolatiles, TCL pesticides, TCL herbicides, TCL PCBs, and TAL metals. The aqueous sample metals analyses were performed on filtered (dissolved) fractions. Sixteen soil samples and a field duplicate were processed for TCL semivolatiles, TCL PCBs, and TAL Metals. Two of these were also processed for TCL and CP-51 volatiles. Two soil samples were processed for TCL semivolatiles, TCL pesticides, TCL herbicides, TCL PCBs, and TAL metals. One aqueous sample was processed for TCL and CP-51 volatiles, TCL semivolatiles, TCL pesticides, TCL PCBs, and dissolved TAL metals, and one aqueous sample was processed for TCL and CP-51 volatiles, TCL semivolatiles, TCL PCBs, and dissolved TAL metals. A trip blank was also processed. The analytical methodologies are those of the USEPA SW846.

The data package submitted by the laboratory contains full deliverables for validation, but this usability report is generated from review of the QC summary form information, with full review of sample raw data and limited review of associated QC raw data. The reported QC summary forms and sample raw data have been reviewed for application of validation qualifiers, in accordance with the project QAPP, with guidance from the USEPA national and regional validation documents, and in consideration for the specific requirements of the analytical methodology. The following items were reviewed:

- * Data Completeness
- * Case Narrative
- * Custody Documentation
- * Holding Times
- * Surrogate and Internal Standard Recoveries
- * Trip/Method Blanks
- * Laboratory Control Sample (LCS)
- * Field Duplicate Correlations
- * Matrix Spike Recoveries and Duplicate Correlations
- * Field Duplicate Correlations
- * Instrumental Tunes

- * Calibration Standards
- * ICP Serial Dilution Evaluations
- * ICP Interference Check Samples
- * Method Compliance
- * Sample Result Verification

The data review includes evaluation of the specific items noted in The NYS DER-10 Appendix B section 2.0 (c). The items listed above that show deficiencies are discussed within the text of this narrative. The laboratory QC forms illustrating the excursions can be found within the laboratory data package.

In summary, most results are usable either as reported or with minor qualification or edit. The following issues are noted:

- the results for fourteen semivolatile acid compounds (phenols) in each of four samples are not usable due to an apparent matrix effect
- the metals fraction in the soil samples show significant poor field duplicate precision
- metals results in the aqueous samples are all qualified as estimated due to delayed filtration and preservation
- many of the (properly) reported pesticide detections are interference responses, and have been qualified/edited to non-detection

Data completeness, comparability, and representativeness are generally acceptable. Accuracy other than the aqueous semivolatile phenolic data noted above are generally good. Laboratory precision is good. Field duplicate evaluations indicate that there is evidence of a non-homogeneous soil matrix.

Copies of the client sample identifications laboratory summaries are attached to this text. Also included in this submission are the client results tables, with recommended qualifiers/edits applied in red to the analytes listed on those tables.

Chain-of-Custody/Sample Receipt

The preservation of the aqueous samples was not denoted on the custody form. pHs were confirmed elsewhere in the data package.

The aqueous samples were received four days after collection. The temperature at laboratory receipt was acceptable, and technical holding times were met.

The date and time were not included in the initial relinquish entry on the first page of the custody associated with the soil samples. The second page of the custody shows an incorrect year on the initial relinquish entry.

Field Duplicate Correlations

Blind field duplicates were collected at locations TMW-01, SB-104(0-4), and SB-110(4-10). The following correlations fall outside validation guidelines, and results for those analytes in the indicated parent sample and its duplicate have been qualified as estimated:

- methyl cyclohexane ($>2X \pm RL$) in SB-104(0-4)
- caprolactum (160%RPD—an order of magnitude) in TMW-01

- beta-BHC ($>2X \pm RL$) in TMW-01
- aluminum, barium, chromium, copper, iron, potassium, vanadium, mercury, and zinc in SB-110(4-10)
- all metals in SB-104(0-4) except antimony, barium, chromium, copper, potassium, selenium, silver, and thallium

Volatile Analyses by EPA8260C

Due to presence in the associated method blank, the detections of acetone in the soil samples are considered external contamination, and are edited to reflect non-detection.

The matrix spikes of SB-108(1-4) and TMW-02 show acceptable accuracy and precision for the sixteen evaluated compounds. LCS recoveries for those analytes are compliant. The laboratory should have evaluated all target analytes.

Holding times were met. Surrogate and internal standard recoveries are within required ranges. Calibration standards show acceptable responses.

TCL Semivolatiles by EPA8270D

The results for the phenolic compounds in TMW-03, TMW-04, TMW-06, and BLIND DUP are not usable due to recoveries below 10% for surrogate compound d5-phenol. Although the highly diluted dilution analyses report recoveries above 10%, those instrument level responses are below the MDL, and not valid. A matrix effect is suspected, but not confirmed by reextraction. Additionally, although the blind duplicate exhibited this effect, its parent sample TMW-01 did not, putting the matrix effect into question. Base/neutral compounds in the samples are not affected.

The detections of bis(2-ethylhexyl)phthalate and di-n-butylphthalate in the aqueous samples are considered external contamination, and are edited to reflect non-detection, due to presence in the associated method blank.

The following detections are edited to nondetection due to very poor mass spectral quality:

- benzo(k)fluoranthene in SB-102(0-2)
- indeno(1,2,3-cd)pyrene in BLIND DUP (aqueous)
- bis(2-ethylhexyl)phthalate in SB-101(2-7.5)

Results for analytes initially reported with the “E” flag are derived from dilution analyses.

Holding times were met. Internal standard recoveries are within required ranges.

The matrix spikes of SB-112(2-6), SB-108(1-4), and TMW-02 show acceptable recoveries and correlations.

Calibration standards show acceptable responses, with the following exceptions, the results for which are qualified as estimated in the indicated samples:

- benzaldehyde and caprolactum (30%D to 53%D) in the soil samples

- benzaldehyde, hexachlorocyclopentadiene, and pentachlorophenol (23%D to 28%D) in the aqueous samples (unless rejected due to surrogate failure)

Aroclor PCBs, TCL Herbicides, and TCL Pesticides by EPA methods 8081B, 8151, and 8082

Many of the pesticide detections exhibit elevated dual column quantitative correlations. Those detections have been either qualified as estimated, qualified as tentative in identification and estimated in value, or edited to non-detection, depending on the degree of variance and subsequent uncertainty in identification.

The result for Aroclor 1248 in Blind Dup 2 is qualified as estimated due to elevated dual column correlation.

SB-102(0-2) reports detection of three Aroclor mixtures. The quantitative values of each are likely elevated due to contribution to the specific congeners by the other mixtures in the samples.

The detection of endrin aldehyde in TMW-02 is considered external contamination, and edited to reflect non-detection, due to presence in the associated method blank.

The pesticide, Aroclor 1016/1260, and herbicide matrix spikes of SB-108(1-4), the pesticide and herbicide matrix spikes TMW-02, and the Aroclor 1016/1260 matrix spikes of SB-112(2-6), show recoveries and duplicate correlations that are within validation action limits. Although the duplicate correlations reported for TMW-02 were all elevated, they were based on quantitative matrix spike values rather than recovery values. Actual correlations are acceptable.

Some of the pesticide samples were processed at dilution due interference peaks resembling elemental sulfur (which could have been cleaned-up). Reporting limits are therefore proportionally elevated.

Holding times were met, surrogate recoveries are compliant, and blanks show no contamination.

Some of the raw data chromatograms are not properly scaled, and surrogate (and therefore potential target analyte) responses are dwarfed.

TAL Metals Analyses by EPA 6010C, 6020, 7470A, and 7471A

Metals results in the aqueous samples are all qualified as estimated due to delayed filtration and subsequent preservation; they are filtered after laboratory receipt.

The ICP serial dilution evaluations were performed on TMW-02, SB-108(14), and SB-112(2-6). Correlations are within validation guidelines.

Instrument performance is compliant, and blanks show no contamination above the reporting limits.

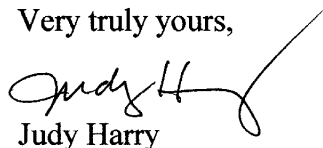
Matrix spikes were performed on TMW-02, SB-108(1-4), and SB-112(2-6). They show the following recoveries or duplicate correlations that are outside the validation action ranges/limits, indicating a matrix effect on analyte recovery from the samples. The results for the listed elements are

qualified as estimated in the indicated parent samples:

<u>SDG Nos.</u>	<u>Parent Sample</u>	<u>Element</u>	<u>Outlying % Recoveries</u>	<u>Outlying %RPD</u>
480-75578-1	SB-112(2-6)	aluminum	266,422	
		antimony	72,59	
		calcium	1752,1191	37
		copper	154,214	
		potassium	144,172	
	SB-108(1-4)	barium	-48,45	52
		copper	-25, -21	
		lead	149,-101	37

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,



Judy Harry

Att: Validation Qualifier Definitions
Client and Laboratory Sample IDs
Qualified Client Results Tables

VALIDATION DATA QUALIFIER DEFINITIONS

U	The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
J-	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
J+	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
UJ	The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NJ	The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
EMPC	The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

CLIENT and LABORATORY SAMPLE IDs

SAMPLE SUMMARY

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-75578-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-75578-1	SB-109 (4-10)	Solid	02/17/2015 1400	02/18/2015 1705
480-75578-2	SB-110 (4-10)	Solid	02/17/2015 1305	02/18/2015 1705
480-75578-3	SB-110 (10-16)	Solid	02/17/2015 1310	02/18/2015 1705
480-75578-4	BLIND DUP 2	Solid	02/17/2015 0800	02/18/2015 1705
480-75578-5	SB-111 (6-9)	Solid	02/17/2015 1210	02/18/2015 1705
480-75578-6	SB-112 (0-2)	Solid	02/17/2015 1110	02/18/2015 1705
480-75578-7	SB-112 (2-6)	Solid	02/17/2015 1115	02/18/2015 1705
480-75578-7MS	SB-112 (2-6)	Solid	02/17/2015 1115	02/18/2015 1705
480-75578-7MSD	SB-112 (2-6)	Solid	02/17/2015 1115	02/18/2015 1705
480-75578-8	SB-113 (2-6)	Solid	02/17/2015 1030	02/18/2015 1705
480-75578-9	SB-106 (4-8)	Solid	02/18/2015 1520	02/18/2015 1705
480-75578-10	SB-106 (8-16)	Solid	02/18/2015 1530	02/18/2015 1705
480-75578-11	SB-107 (0-4)	Solid	02/18/2015 1545	02/18/2015 1705
480-75578-12	SB-107 (4-8)	Solid	02/18/2015 1600	02/18/2015 1705
480-75578-13	SB-101 (2-7.5)	Solid	02/18/2015 1230	02/18/2015 1705
480-75578-14	SB-102 (0-2)	Solid	02/18/2015 1245	02/18/2015 1705
480-75578-15	SB-102 (2-8)	Solid	02/18/2015 1300	02/18/2015 1705
480-75578-16	SB-103 (2-8)	Solid	02/18/2015 1345	02/18/2015 1705
480-75578-17	SB-103 (8-16)	Solid	02/18/2015 1330	02/18/2015 1705
480-75578-18	SB-104 (0-4)	Solid	02/18/2015 1420	02/18/2015 1705
480-75578-19	BLIND DUP	Solid	02/18/2015 0800	02/18/2015 1705
480-75578-20	SB-104 (4-8)	Solid	02/18/2015 1430	02/18/2015 1705
480-75578-21	SB-105 (0-2)	Solid	02/18/2015 1200	02/18/2015 1705
480-75578-22	SB-105 (2-8)	Solid	02/18/2015 1215	02/18/2015 1705
480-75578-23	SB-108 (1-4)	Solid	02/17/2015 1500	02/18/2015 1705
480-75578-23MS	SB-108 (1-4)	Solid	02/17/2015 1500	02/18/2015 1705
480-75578-23MSD	SB-108 (1-4)	Solid	02/17/2015 1500	02/18/2015 1705
480-75578-24	SB-108 (4-16)	Solid	02/17/2015 1515	02/18/2015 1705

SAMPLE SUMMARY

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-76055-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-76055-1	TMW-01	Water	02/27/2015 1500	03/03/2015 1345
480-76055-2	BLIND DUP	Water	02/27/2015 0800	03/03/2015 1345
480-76055-3	TMW-02	Water	02/27/2015 1530	03/03/2015 1345
480-76055-3MS	TMW-02	Water	02/27/2015 1530	03/03/2015 1345
480-76055-3MSD	TMW-02	Water	02/27/2015 1530	03/03/2015 1345
480-76055-4	TMW-03	Water	02/27/2015 1200	03/03/2015 1345
480-76055-5	TMW-04	Water	02/27/2015 1300	03/03/2015 1345
480-76055-6	TMW-05	Water	02/27/2015 0930	03/03/2015 1345
480-76055-7	TMW-06	Water	02/27/2015 1000	03/03/2015 1345
480-76055-8	TRIP BLANK	Water	02/27/2015 0800	03/03/2015 1345

APPENDIX F

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