Remedial Investigation/ Alternatives Analysis Report

990 Niagara Street Site
BCP Site No. C915313
Buffalo, New York

February 2019 B0462-018-001

Prepared For:

990 NIAGARA LLC



Prepared By:

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In Association With:

TURNKEY
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RI/AA REPORT

990 Niagara Street Site

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Certification

I, Thomas H. Forbes, certify that I am currently a NYS registered professional engineer as defined in 6NYCRR Part 375 and this Remedial Investigation/Alternatives Analysis (RI/AA) Report was prepared in general accordance with applicable statutes and regulations and in general conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10); and activities were performed in general accordance with the DER-approved work plan and any DER-approved modifications.

7-22-19
Date:

SEAL:



1.0 INTRODUCTION

This Remedial Investigation/Alternatives Analysis (RI/AA) Report has been prepared on behalf of 990 Niagara LLC for the 990 Niagara Street Site located in the City of Buffalo, Erie County, New York (Site, see Figures 1 and 2).

990 Niagara LLC has elected to pursue cleanup and redevelopment of the Site under the New York State Brownfield Cleanup Program (BCP). A Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) was executed (BCP Site No. C915313). On January 17, 2018, the Remedial Investigation Work Plan was approved by the NYSDEC with concurrence from the New York State Department of Health (NYSDOH). Benchmark Environmental Engineering & Science, PLLC, in association with TurnKey Environmental Restoration, LLC (Benchmark-TurnKey), performed RI field activities at the Site between August 2018 and November 2018.

1.1 Purpose and Scope

This RI/AA Report has been prepared on behalf of 990 Niagara LLC to describe and present the findings of the 2018 RI activities and evaluate remedial alternatives for the Site. This report contains the following sections:

- Section 1.0 presents a description of the Site and a summary of the Site's environmental history.
- Section 2.0 describes the Site's natural physical characteristics and remaining infrastructure.
- Section 3.0 presents a discussion of the RI sampling and methodology.
- Section 4.0 presents the RI findings.
- Section 5.0 describes potential chemical constituent migration pathways.
- Section 6.0 provides a qualitative human health exposure assessment, and fish and wildlife resources impact assessment.
- Section 7.0 develops remedial action objectives; evaluates the future use of the Site; provides an estimate of contaminant volume; develops and screens remedial alternatives; and presents the preferred remedial alternative for the Site.
- Section 8.0 includes the RI/AAR summary and conclusions.
- Section 9.0 lists the cited references.

1.2 Background

1.2.1 Property and Site Description

The BCP property, located at 990 Niagara Street (Tax ID No. 90.13-1-11), is situated in a residential, commercial and industrial zoned area of the City of Buffalo, Erie County, New York. The Site is currently developed with one vacant industrial building (see Figure 2) reportedly built in 1923 and measuring 50,000 square feet. The Site consists of one parcel measuring 1.05 acres, which includes approximately 0.4 acres of vacant land on the northern portion of the Site, a small approximate 0.03-acre area of vacant land west adjacent to the building, and the remainder of the approximate 0.60 acres developed with the building. Former Site occupants include Hewitt Rubber, Buffalo Niagara Hudson Company, Buffalo General Electric Company, International Railway Co., Power House and Converter Station, Merchandising Export and Distributors, Trico Products Corp, and Multiform Desiccants. Historic Site uses included manufacturing, an automotive garage and repair.

1.2.2 Previous Investigations

The following assessments and investigations have occurred at the Site:

1.2.2.1 Phase I Environmental Site Assessment – November 1997

Acres International Corporation (Acres) completed a Phase I Environmental Site Assessment (ESA) for the Site in November 1997. That Phase I ESA identified the following RECs:

- Two "suspected" underground storage tanks (USTs); the first tank was identified as an off-site gasoline UST located in the driveway of the south adjacent Niagara Mohawk substation and the second tank was identified as a fuel oil UST located west of the existing building. [Acres indicated that the tank information was from City of Buffalo records and information from a former occupant, Multisorb Technologies.]
- On-Site transformers with the potential for polychlorinated biphenyl (PCB) fluids [Note that subsequent to completion of the Phase I, a transformer was vandalized, see below for additional information.]
- The Site was identified as a Resource Conservation and Recovery Act Large Quantity Generator (RCRA LQG) of hazardous waste; waste streams included ignitable hazardous wastes, corrosive hazardous wastes, chromium, lead, silver and nitrobenzene; and,

- Former Site occupants including Hewitt Rubber, Buffalo Niagara Hudson Company, Buffalo General Electric Company, International Railway Co., Power House and Converter Station, Merchandising Export and Distributors, and Multiform Desiccants.

1.2.2.2 Subsurface Soil Investigation – November 2016

Benchmark-TurnKey completed a Phase II Environmental Investigation on the 990 Niagara Street Site and documented the findings in a report dated November 2016. Benchmark-TurnKey's Phase II consisted of 12 soil borings (SB-1 through SB-12) and collection of four surface soil samples (SS-1 through SS-4) and three near surface samples (AR-1, AR-2 and TR-1). Investigation activities were completed in interior and exterior areas.

A transformer room with a capacitor and four transformers (apparently privately-owned) exists within the northern portion of the building. Vandalism of one transformer and a capacitor resulted in a transformer oil release to the concrete ground surface, including areas proximate to cracks in concrete flooring. As required by law, the spill was reported to the NYSDEC. An oil sample was collected directly from the transformer spill floor area and placed directly into a laboratory supplied container for PCB analysis.

Findings of the Limited Phase II investigation are detailed below:

- Black staining was noted to earthen ground surfaces west of the building.
- Elevated photoionization detector (PID) readings were identified during the work with the highest PID reading of 38 ppm identified at SB-5 on the northern exterior portion of the Site. Petroleum-like odors were also noted at SB-5. The second highest PID reading of 18.7 ppm was noted in soil/fill beneath the building foundation proximate to the transformer room (TR-1).
- Vandalism and scrapping of a transformer and capacitor appeared to result in an oil release to the concrete ground surfaces within the transformer room, including areas proximate to cracks in the interior concrete flooring. Concrete and underlying soils/materials appear to have been impacted by this release. Analytical results of the transformer oil indicate a PCB concentration of 8.46 mg/kg indicating that the vandalized transformer is a non-PCB transformer (per United States Environmental Protection Agency (USEPA) 40 CFR 761) and as the PCB concentration is well below the USEPA PCB Contaminated Threshold of 50 mg/kg.
- Elevated polycyclic aromatic hydrocarbons (PAHs) and metals were detected at concentrations above NYSDEC 6NYCRR Part 375 Soil Cleanup Objectives (SCOs), including Commercial SCOs (CSCOs), in soil/fill samples collected from interior and exterior areas.

- Chlorinated volatile organic compounds (VOCs) were detected in a soil/fill sample collected at SB-5; however, concentrations do not exceed NYSDEC 6NYCRR Part 375 Unrestricted Use SCOs (USCOs).

2.0 SITE PHYSICAL CHARACTERISTICS

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

2.1 Site Topography and Drainage

Based on a topographic map (see Figure 1), the Site slopes from a high point along the east side of the property to a low point on the steep bank along the western portion of the Site. The difference in elevation is 25 feet with a range between 628 and 603 feet above mean sea level. Currently, approximately 40 percent of the Site is vegetated or gravel and the remaining 60 percent is covered by an impervious structure.

Precipitation (i.e., rain or melting snow) moves to the storm drains located along Niagara Street via overland flow. Surface water infiltration and shallow groundwater flow are likely impacted by various cycles of development and filling, as well as utility lines and foundations.

2.2 Site Geology and Hydrogeology

Based on observations during the historic investigation and RI, the typical subsurface profile on the Site consists of:

- Fill with brick and glass fragments, slag, sand, gravel, cinders and/or black fines was noted in the northern vacant land area at depths ranging between 0 feet below ground surface (fbgs) and 3 fbgs. Similar fill material was observed beneath the building within the building footprint at depths ranging between 0.25 fbgs and 6.5 fbgs at certain investigation locations. Minimal or no fill materials were identified within the existing building footprint at the following investigation locations: SB-8, SB-9, SB-11, SB-13, SB-14, and MW-5.
- Native soil consisting of very tight sandy lean clay was noted across the Site to top of bedrock encountered as deep as 27 fbgs during the RI.
- Bedrock was encountered at three RI locations MW-1, MW-2 and MW-3 at depths ranging between 24 fbgs and 27 fbgs.

In accordance with the RI Work Plan, a total of six soil borings (three interior and three exterior) were converted into monitoring wells. Static groundwater levels measured in wells MW-1, MW-3, and MW-5 were 25.4 feet below top of riser (fbTOR), 25.2 fbTOR and 12.5 fbTOR, respectively. The static groundwater level at MW-2 was 10.13 fbTOR; MW-2

was installed differently than the other wells as MW-2 was advanced into bedrock for geotechnical purposes then grouted back to the bedrock/overburden interface so well MW-2 sits on the top of bedrock. The other wells were installed to a depth above the bedrock interface. Therefore, TurnKey suspects that the elevated groundwater level at MW-2 when compared to the other on-Site wells is representative of an artesian effect, which provides a water level not representative of overburden groundwater. Interior wells MW-4 and MW-6 were dry at the time of development and sampling activities thus MW-4 and MW-6 could not be sampled.

Figure 4 depicts the overburden groundwater isopotential map for the RI; groundwater at the Site generally flows in a northwesterly direction. Due to the suspected artesian effect at MW-2, the groundwater elevation data associated with MW-2 was not used in preparation of the groundwater isopotential map. Table 3 summarizes the groundwater elevation data.

3.0 INVESTIGATION APPROACH

The purpose of the RI field activities was to define the nature and extent of contamination on the BCP Site, and to collect data of sufficient quantity and quality to perform the remedial alternatives evaluation. The RI was completed across the BCP Site in interior and exterior areas to supplement previous environmental data and to delineate or identify areas requiring remediation. On-site field activities included soil boring advancement; test pit excavations; surface soil/fill sampling; overburden monitoring well installation; and groundwater quality sample collection. Field activities also included a gamma walkover of the slag materials noted on the northern exterior portion of the Site.

Field team personnel collected environmental samples in accordance with the rationale and protocols described in the Field Sampling Plan (FSP) presented in the Quality Assurance Project Plan (QAPP). USEPA and NYSDEC-approved sample collection and handling techniques were used.

Representative samples were placed in pre-cleaned laboratory provided sample bottles, cooled to 4ºC in the field, and transported under chain-of-custody command to Test America Laboratory (TestAmerica), located in Amherst, New York, a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified analytical laboratory. Samples for chemical analysis were analyzed in accordance with USEPA SW-846 methodology with equivalent Category B (Level IV) deliverables to allow for independent third-party data usability assessment.

The RI sampling activities and analyses described below are summarized on Table 1. Figure 3 shows the RI and historic (Phase II) sample locations. Appendix A contains photographs of field activities.

3.1 Soil/Fill Investigation

As further detailed below, field activities included soil boring advancement; test pit excavations; surface and subsurface soil/fill sampling and a gamma walkover. Appendix B includes field borehole logs.

3.1.1 Surface Soil/Fill Investigation

Benchmark previously collected four surface soil samples (SS-1 through SS-4) from the Site as part of the Phase II Environmental Investigation. The RI included collection of

five additional surface soil/fill samples (SS-5 through SS-9) across the Site in the locations shown on Figure 3. A dedicated stainless-steel hand trowel or stainless-steel spoon was used to collect a representative aliquot of soil/fill at each grab sample location. If the area was vegetated, the sod/vegetation was removed prior to sample collection. Representative samples were described in the field by qualified Benchmark-TurnKey personnel, scanned for total volatile organic vapors with a calibrated MiniRae 2000 PID equipped with a 10.6 eV lamp (or equivalent), and characterized for impacts via visual and/or olfactory observations. Samples were transferred to laboratory supplied, pre-cleaned sample containers for analysis. RI surface soil samples were analyzed for Target Compound List (TCL) semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals (all samples), PCBs, pesticides, and herbicides (select samples). No surface soil samples were analyzed for TCL VOCs since PID readings were below 5 ppm.

3.1.2 Subsurface Soil/Fill Investigation

3.1.2.1 Test Pit Excavation

As shown on Figure 3, five test pits (TP-1 through TP-5) were excavated across the northern exterior vacant land portion of the Site during the RI activities. An excavator with an approximate 12-foot reach was used to complete the test pits. RI test pits TP-1 through TP-5 were excavated to a maximum depth of 12 fbgs. A Benchmark-TurnKey field geologist observed the excavations and created a field log (including photographs) for each test pit location. Real time air and particulate monitoring was conducted while the excavations were open using a PID and a particulate monitor. Soil samples were collected at 2-foot intervals to the bottom of the investigation locations for observation, classification, and field (PID) screening. Select samples were collected for analytical testing based on visual and olfactory observations, PID screening, and engineering judgment. Excavated soil/fill was returned to the investigation location in the general order that it was excavated.

RI subsurface soil/fill samples from TP-1 through TP-5 were analyzed for TCL SVOCs and TAL metals (all samples), and TCL plus Commissioner Policy-51 (CP-51) VOCs, PCBs, pesticides, and herbicides (select samples).

3.1.2.2 Gamma Walkover

A gamma walkover was performed concurrently with the Test Pit investigation by a qualified radiological technician on the northern exterior portion of the Site in areas where

slag was identified to determine background gamma concentrations of on-Site slag material and to assess whether gamma concentrations associated with the slag exist above background concentrations and/or typical concentrations found in Western New York. The gamma walkover was completed using a radiation detector. For comparative purposes, additional readings were collected off-site at a nearby park (Front Park) located at 121 Porter Avenue, Buffalo, New York.

3.1.2.3 Soil Boring Advancement

A previous Phase II involved completion of 12 soil borings and three hand-auger borings on-Site. Eleven additional soil borings (MW-1 through MW-6) and SB-13 through SB-17) were completed across the Site in interior and exterior areas. The exterior soil borings were advanced through the overburden soil/fill to bedrock equipment refusal using a rotary drill rig with 4¼ inch inside diameter (I.D.) hollow stem augers (HSAs). Soil/fill samples were obtained by driving a $1^3/_8$-inch I.D. by 24-inch long split spoon sampler 24 inches ahead of the lead cutting shoe of the HSA, in general accordance with ASTM D1586. Soil samples were collected at approximate 2-foot intervals to the bottom of the boring for classification and screening with the PID equipment. Drilling fluids were not used while advancing the HSA, so overburden groundwater could be identified.

Due to limited interior access, as indicated in the approved RI Work Plan, interior borings were completed using a truck-mounted Geoprobe. Each boring was advanced to equipment refusal encountered between 4 fbgs and 18 fbgs. The direct-push borings were advanced using a 1.5-inch diameter macrocore samplers that are four feet in length. Continuous four-foot sample cores were retrieved from the boring location in clear PVC sleeves to allow for field characterization of the subsurface lithology and collection of soil samples by TurnKey's Environmental Scientist. Select samples were collected for analytical testing based on visual and olfactory observations, field (PID) screening, and engineering judgment.

RI subsurface soil/fill samples from the borings were analyzed for TCL SVOCs and TAL metals (all samples), and TCL plus CP-51 VOCs, PCBs, pesticides, and herbicides (select samples).

3.2 Transformer Oil Sampling

As indicated above, a transformer room with a capacitor and four transformers (apparently privately-owned) exists within the building. Vandalism of one transformer and a capacitor resulted in a transformer oil release to the concrete ground surface. As part of the 2016 Phase II, Benchmark-TurnKey collected an oil sample directly from the transformer spill floor area and placed directly into a laboratory supplied container for laboratory analysis by Alpha Analytical (Alpha).

3.3 Groundwater Investigation

The RI included installation of six overburden groundwater monitoring wells (MW-1 through MW-6) across the Site in interior and exterior areas to investigate groundwater flow and quality. Interior wells MW-4 and MW-6 were dry at the time of development and sampling and the wells remained dry when gauged during supplemental RI activities thus MW-4 and MW-6 could not be sampled.

3.3.1 Monitoring Well Installation

Exterior groundwater monitoring wells MW-1 through MW-3 were constructed of 2-inch I.D. flush coupled PVC riser and screen. Each exterior well was installed at or near the top of bedrock. The screened intervals of exterior wells were 20-foot long sections of machine slotted pipe.

Interior monitoring wells MW-4 through MW-6 were constructed of one-inch diameter Schedule 40 PVC well screen and riser. The screened intervals of interior wells ranged between 10-foot and 15-foot long sections of machine slotted pipe.

At each well location, a sand filter was placed in the boring around the annulus space of the well screen such that the sand extends a minimum of one foot above the top of the screen. A bentonite-chip layer was placed above the sand filter and cement grout was placed above the bentonite-chip layer to ground surface. The newly installed monitoring wells were completed with stick-up casings over the riser, and lockable J-plugs with keyed–alike locks. Table 2 summarizes the monitoring well construction details. Appendix B includes the monitoring well completion logs.

3.3.2 Monitoring Well Development

After installation, the monitoring wells were developed in accordance with the approved work plan as well as Benchmark-TurnKey and NYSDEC protocols. Development of the monitoring wells was completed with dedicated disposable polyethylene bailers via surge and purge methodology. Field parameters including pH, temperature, turbidity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductance were measured during development until they became relatively stable. Stability was defined as variation between measurements of approximately 10 percent or less with no overall upward or downward trend in the measurements; or a minimum of three well volumes. However, MW-1, MW-2, MW-3, and MW-5 were purged dry during development activities. As such, well development was considered complete when field parameters stabilized and groundwater levels reached static conditions after recharging indicating true groundwater conditions, as discussed with NYSDEC.

3.3.3 Groundwater Sample Collection

Prior to sample collection, static water levels were measured to interpret groundwater flow direction within the overburden soil/fill. Table 3 summarizes the overburden groundwater elevations.

A minimum of three well volumes were evacuated from each overburden well prior to sample collection. Field measurements for pH, ORP, specific conductance, temperature, turbidity, DO, and water level were periodically monitored for stabilization. Visual and olfactory field observations were also recorded. MW-1, MW-2, MW-3, and MW-5 were purged dry during sampling activities. Purging was considered complete when pH, specific conductivity, and temperature stabilized, when static groundwater levels were reached. Upon stabilization of field parameters, groundwater samples were collected using dedicated bailers.

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 TestAmerica for laboratory analysis. MW-4 and MW-6 have been dry to-date and therefore have not been sampled.

3.3.4 Groundwater Sample Analyses

Groundwater samples collected from monitoring wells MW-1 through MW-3 were analyzed for TCL + CP-51 VOCs, TCL SVOCs, TAL metals (dissolved), pesticides,

herbicides, and PCBs. Regarding MW-5, after several groundwater gauging events, it was determined that sufficient water had accumulated in the well to collect a sample. Due to the very slow recharge from the tight formation at MW-5, a groundwater sample was collected from MW-5 during one sampling event for TCL + CP-51 VOCs and after additional recharge, an additional groundwater sample was collected from MW-5 for PCB analysis. All samples were collected and analyzed in accordance with USEPA SW-846 methodology with equivalent NYSDEC Category B deliverables to allow for independent third-party data usability assessment.

3.4 Emerging Contaminants

In accordance with the email correspondence between TurnKey and the NYSDEC dated November 9, 2018, monitoring wells MW-1 (down-gradient), MW-2 (down-gradient) and MW-3 (up-gradient) were sampled for 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS) via Method 8270 Selective Ion Monitoring (SIM) mode and Method 537, respectively. All samples were collected and analyzed in accordance with USEPA SW-846 methodology with equivalent NYSDEC Category B deliverables to allow for independent third-party data usability assessment.

3.5 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 (see Table 1) and analyzed to ensure the reliability of the generated data and to support the required third-party data usability assessment effort. Site-specific QA/QC samples include matrix spikes, matrix spike duplicates, and blind duplicates in accordance with the NYSDEC-approved RI Work Plan. A Category B (Level IV) deliverable package was provided for all samples collected to allow third-party data validation and provide defensible data.

3.6 Site Mapping

A Site map was developed during the RI. Benchmark-TurnKey personnel employed a Trimble GeoXH handheld GPS unit to identify the locations of all soil borings, test pits, sample points, and newly installed monitoring wells relative to State planar grid coordinates. Monitoring well elevations were measured by Benchmark-TurnKey's surveyor. An isopotential map showing the general direction of overburden groundwater flow was

prepared based on water level measurements relative to United States Geological Survey (USGS) vertical datum (see Figure 4).

4.0 INVESTIGATION RESULTS BY MEDIA

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

The soil 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 SW-846 analytical methods and protocols. Appendix C contains laboratory analytical data packages for samples analyzed from the RI. Tabulated analytical data discussed in this section includes results from prior investigations as well as the RI data collected by Benchmark-TurnKey personnel. Tabulated analytical results are shown only for those parameters for which a value greater than the laboratory method detection limit was detected at a minimum of one (1) sample location.

Figure 3 shows the RI and previous investigation sampling locations. Table 1 summarizes the sampling and analytical program employed under RI.

4.1 Surface Soil/Fill

Table 4 presents a comparison of the nine surface soil sample results to the Part 375 USCOs and Restricted Residential SCOs (RRSCOs). Figure 5 illustrates the samples that exceed their respective 6NYCRR Part 375 SCOs.

4.1.1 Field Observations

Surface soils consisted of fill materials. No PID readings above background (0.0 ppm) were identified.

4.1.2 Volatile Organic Compounds

Surface soil/fill was not analyzed for VOCs.

4.1.3 Semi-Volatile Organic Compounds

Multiple individual SVOC concentrations exceeded Part 375 USCOs and/or RRSCOs at six of nine surface soil sample locations. The highest total SVOC concentration 3,701 mg/kg at SS-4 collected in the vacant land area west adjacent to the existing building.

4.1.4 Inorganic Compounds

One or more individual metals were detected at concentrations exceeding USCOs and/or RRSCOs at six of the nine surface soil sample locations. Specifically, individual concentrations of cadmium, arsenic, lead, zinc and mercury exceed their respective Part 375 USCOs at certain sample locations. RRSCO exceedances include cadmium at SS-1 and SS-3, lead at SS-2 and mercury at SS-4. Remaining metal concentrations were either non-detect or below USCOs.

4.1.5 Pesticides, Herbicides, and Polychlorinated Biphenyls

Herbicides and PCBs were non-detect. Pesticides 4,4'-DDT and endrin exceed their respective USCOs at SS-5.

4.1.6 Surface Soil/Fill Summary

As described above, the surface soil/fill is impacted by SVOCS and metals exceeding RRSCOs at six of nine surface soil/fill sample locations. The highest total SVOC concentration of 3,701 mg/kg was identified at SS-4 collected in the small vacant land area west adjacent to the existing building. Individual concentrations of cadmium, arsenic, lead, zinc and mercury exceed their respective Part 375 USCOs at certain sample locations. Metals RRSCO exceedances include cadmium at SS-1 and SS-3, lead at SS-2 and mercury at SS-4. Herbicides and PCBs were non-detect. Pesticides 4,4'-DDT and endrin exceed their respective USCOs at SS-5.

4.2 Subsurface Soil/Fill

Table 5 summarizes the subsurface analytical results from across the Site. Figure 5 illustrates sample locations, including the samples that exceed their respective USCOs and RRSCOs. A RI test pit summary table is provided as Table 9.

4.2.1 Field Observations

Fill materials were encountered across the Site at varying depths between 0 fbgs (surface) and 6.5 fbgs. Fill material intermingled with slag was identified at varying depth intervals at test pits TP-1 (between 0.5 fbgs and 1 fbgs) and TP-2 (between 0.5 fbgs and 1 fbgs). No elevated PID readings above background (0.0 ppm) and/or odors were identified at any RI sample location.

Elevated PID readings and/or odors were identified at certain Phase II investigation locations, as further described below:

- SB-5 completed on the northern portion of the Site: elevated PID reading of 37.8 ppm identified at one fbgs with petroleum-like odors noted between one fbgs and two fbgs.
- TR-1 completed proximate to the transformer room spill incident: elevated PID reading of 18.7 ppm identified in soil/fill beneath the building foundation at 1.5 fbgs.

4.2.2 Volatile Organic Compounds

No individual VOCs were detected above USCOs in subsurface soil samples from the RI and 2016 Phase II.

4.2.3 Semi-Volatile Organic Compounds

One individual SVOC (benzo(b)fluoranthene)s exceeded its RRSCO at 1 of the 16 RI sample locations in MW-2 (0-2 fbgs) and several SVOCs exceeded RRSCOs in 3 of the 11 2016 Phase II sample locations at SB-10 (8-12 fbgs), AR-1 (14-20"), and AR-2 (16-18").

4.2.4 Inorganic Compounds

Lead was identified at a concentration of 150 mg/kg exceeding its USCO during the 2016 Phase II at SB-10 (8 fbgs to 12 fbgs). Cadmium was detected at a concentration of 3.8 mg/kg exceeding its USCO at MW-2 (0-2 fbgs). Additional metals exceeding USCOs during the RI and 2016 Phase II included zinc at MW-2 (0-2') and MW-6 (2-4') and mercury at SB-10 (8-12') as well as AR-1 (14-20").

Arsenic exceeded its RRSCO of 16 mg/kg during the 2016 Phase II at TR-1 (8-14") with a concentration of 45 mg/kg.

4.2.5 Pesticides, Herbicides and Polychlorinated Biphenyls

Pesticides and herbicides were reported as non-detect or at trace (estimated) concentrations below USCOs during the RI. PCBs were reported as non-detect during the RI. Sample TR-1 (8-14") collected during the 2016 Phase II from within the transformer room exhibited a total PCB concentration of 0.282 mg/kg exceeding its USCO but not its RRSCO.

4.2.6 Subsurface Soil/Fill Summary

As described above, no odors or elevated PID readings were identified during the RI. The highest PID reading identified during the 2016 Phase II was 37.8 ppm at SB-5 at one fbgs; petroleum-like odors were also identified at SB-5 at depths ranging between one fbgs and two fbgs. The second highest PID reading of 18.7 ppm was identified during the 2016 Phase II proximate to the transformer room spill incident at TR-1.

VOCs were either non-detect or at concentrations significantly below USCOs in soil/fill samples collected as part of the historic Phase II and RI activities completed at the Site.

One individual SVOC (benzo(b)fluoranthene) exceeded its RRSCO at 1 of the 16 RI sample locations in MW-2 (0-2 fbgs) and several SVOCs exceeded RRSCOs in 3 of the 11 2016 Phase II sample locations at SB-10 (8-12 fbgs), AR-1 (14-20"), and AR-2 (16-18").Metals exceeding their respective USCOs include lead at SB-10 (8 fbgs to 12 fbgs), cadmium at MW-2 (0-2 fbgs), zinc at MW-2 (0-2') and MW-6 (2-4') and mercury at SB-10 (8-12') and AR-1 (14-20"). Arsenic exceeded its RRSCO of 16 mg/kg during the 2016 Phase II at TR-1 (8-14") with a concentration of 45 mg/kg.

Pesticides and herbicides were reported as non-detect or at trace (estimated) concentrations below USCOs during the RI. PCBs were reported as non-detect during the RI. Sample TR-1 (8-14") collected during the 2016 Phase II from within the transformer room exhibited a total PCB concentration exceeding its respective USCO but not its RRSCO.

4.3 Transformer Oil Sampling

As shown on Table 6, analytical results of the transformer oil identified a PCB concentration of 8.46 mg/kg indicating that as the PCB concentration is well below the USEPA PCB Contaminated Threshold of 50 mg/kg; the vandalized transformer is a non-PCB transformer/release (per USEPA 40 CFR 761).

4.4 Groundwater

Table 7 presents a comparison of the detected groundwater concentrations in the four overburden groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) to the Class GA Groundwater Quality Standards/Guidance Values (GWQS/GVs) 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). Table 8 presents a summary of the Emergent Contaminants groundwater sampling for 1,4-dioxane and PFAS.

4.4.1 Field Observations

No visual or olfactory concerns were identified during groundwater development or sampling of the monitoring wells on-Site Appendix D includes the groundwater development and sampling field logs.

4.4.2 Groundwater Flow Direction

As shown on Figure 4, overburden groundwater generally flows in a northwesterly direction.

4.4.3 Volatile Organic Compounds

VOCs were either non-detect or at concentrations significantly below GWQS/GV.

4.4.4 Semi-Volatile Organic Compounds

SVOCs were either non-detect or at concentrations significantly below GWQS/GV.

4.4.5 Inorganic Compounds

Metals were either non-detect or at concentrations significantly below GWQS/GV.

4.4.6 Pesticides, Herbicides and Polychlorinated Biphenyls

Herbicides were reported as non-detect. Pesticides were either non-detect or at concentrations below GWQS/GVs. PCBs were non-detect at MW-1, MW-2 and MW-3. A total PCB concentration of 0.67 micrograms per liter (ug/L)(estimated) was detected at MW-5, which slightly exceeds its respective GWQS/GV of 0.09 ug/L.

4.4.7 Emergent Contaminants

1,4- dioxane was detected in groundwater samples MW-1 through MW-3 and in the laboratory blank at a similar concentration. Due to the external contamination, 1,4- dioxane at MW-1 through MW-3 was qualified as non-detect by the third-party data validator. PFAs were detected at low level (e.g., totals between 16.74 ng/L and 18.81 ng/L), concentrations including estimated concentrations, in MW-1 through MW-3.

4.4.8 Groundwater Summary

As described above, VOCs, SVOCs, metals, pesticides, and herbicides were either non-detect or at concentrations below GWQS/GV. PCBs were non-detect except for an estimated concentration of 0.67 ug/L at MW-5 (located proximate to the transformer room) that slightly exceeds its respective GWQS/GV of 0.09 ug/L.

1,4- dioxane was detected in groundwater samples MW-1 through MW-3 and in the laboratory blank at a similar concentration. Due to the external contamination, 1,4- dioxane at MW-1 through MW-3 was qualified as non-detect by the third-party data validator. Low level (e.g., totals between 16.74 ng/L and 18.81 ng/L) mostly estimated concentrations of PFAs were detected in the overburden groundwater samples collected from groundwater wells MW-1 through MW-3.

Overburden groundwater flows in a northwesterly direction.

4.5 Radiological Screening Results

Table 9 includes a summary of the radiological survey results from the Site in counts per minute (cpm). Field screening gamma concentrations at exterior test pits where slag was observed ranged between 8,200 cpm to 11,750 cpm. Benchmark's surface screening of the site walkover generally fell within the same range.

For comparison purposes, Benchmark completed a radiological screening at a nearby Front Park addressed at 121 Porter Avenue in Buffalo, NY; field screening concentrations ranged between 7,500 cpm to 8,538 cpm at the park. While there is no current published radiological guidance, based on Benchmark's experience at similar properties in WNY, NYSDEC typically compares Site concentrations to 1.5x background, which in this case, using the park, would range between 11,250 cpm and 12,807 cpm. Therefore, gamma concentrations identified at the Site are within range or below 1.5x background.

4.6 Data Usability Summary

In accordance with the RI/AA Work Plan, the laboratory analytical data from this investigation was assessed and, as required, submitted for independent review. Data Validation Services located in North Creek, New York performed the data usability summary assessment, 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 Report (DUSR), included as Appendix E, was prepared using guidance from the USEPA Region 2 validation Standard Operating Procedures, USEPA National Functional Guidelines for Data Review, and professional judgment.

The RI sample analyses were primarily conducted in compliance with the required analytical protocols. In general, most sample results are usable either as reported or with minor qualification or edit. Data completeness, representativeness, accuracy, reproducibility, sensitivity, and comparability are acceptable except for the result for 3,3'-dichlorobenzidine in one sample that was rejected and not usable due to an apparent matrix effect. Analytical results were edited or qualified per the DUSR with changes reflected on the summary tables. The findings of the DUSR do not significantly affect the analytical data for the Site.

4.7 Constituents of Concern (COCs)

Based on the historic use of the Site as well as results of the Phase II investigation and RI activities, the COCs are presented below:

- ***Soil/Fill:*** SVOCs, metals and PCBs (TR-1 area).
- ***Groundwater:*** PCBs (MW-5 area)

5.0 FATE AND TRANSPORT OF COCS

The surface and subsurface soil/fill and groundwater analytical results were incorporated with the physical characterization of the Site to evaluate the fate and transport of the 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

Chemicals present in soil/fill can be released to ambient air because of fugitive dust generation. Impacted fill material is present on-Site and, as such, fugitive dust generation during intrusive activities related to remediation and redevelopment is considered a relevant potential short-term migration pathway.

Particulate monitoring in accordance with the approved Community Air Monitoring Plan (CAMP) will be completed during intrusive activities and, if required, dust mitigation measures will be employed during future remediation and redevelopment.

5.2 Volatilization

Volatile chemicals present in soil/fill and groundwater may be released to ambient or indoor air through volatilization either from or through the soil/fill underlying building structures. Volatile chemicals typically have a low organic-carbon partition coefficient (K_{oc}), low molecular weight, and a high Henry's Law constant.

In relation to the Site, VOCs in soil/fill were generally non-detect or at concentrations below 6NYCRR Part 375 USCOs. Groundwater samples generally yielded non-detect or trace levels of VOCs at or below Class GA GWQS/GVs. Accordingly, VOCs are not a concern for the Site and therefore volatilization is not considered a pathway of concern.

5.3 Surface Water Runoff and Transport

Under the current use scenario, the potential for soil particle transport with surface water runoff is low as the Site is mostly flat lying with well-drained soil/fill and covered by a building and vegetation.

Under the reasonably anticipated future commercial use scenario, the Site will be substantially covered by hardscape (asphalt, buildings, etc.) mitigating transport of

subsurface (i.e., covered) soil/fill via storm water runoff. Although storm water runoff during excavation activities is possible, erosion controls are typical construction practice and would be implemented in strict accordance with an Erosion Control Plan for remedial activities. A portion of the redevelopment will likely include the installation of a storm water management system (i.e., parking lot and/or roof drainage), which will tie into the City of Buffalo's combined storm and sanitary sewer systems. Therefore, surface water runoff is not a relevant pathway.

5.4 Leaching

Leaching refers to chemicals present in soil/fill migrating downward to groundwater because of infiltration of precipitation. Groundwater samples generally yielded non-detect or trace levels of VOCs. SVOCs were generally non-detect or at trace levels in groundwater samples collected from the Site. Dissolved metals were detected at concentrations below Class GA GWQS/ GVs. In some areas, SVOCs and metals are present in subsurface soil/fill above the RRSCOs. Groundwater samples collected from the Site exhibited low concentrations of SVOCs and dissolved metals below GWQS/GV indicating that these compounds likely exist in soil/fill in their insoluble forms and, as such, are relatively immobile. During the historic Phase II, total PCBs were identified in soil/fill at TR-1 proximate to the transformer room at a concentration exceeding its respective USCO. During the RI, a groundwater sample collected proximate to the transformer room at MW-5 yielded an estimated PCB concentration slightly exceeding its respective GWQS/GV. PCBs have low solubility in groundwater and PCBs were non-detect in the down-gradient and cross-gradient monitoring wells indicating that PCBs leaching into groundwater does not pose a concern. Therefore, under the current and future use scenarios, the chemical migration via leaching pathway not significantly affecting groundwater quality and is not a relevant pathway.

5.5 Groundwater Transport

Overburden groundwater underlying the Site primarily migrates to the northwest, as illustrated by Figure 4. The results of the overburden groundwater samples collected as part of the RI did not indicate exceedances of GWQS/GV for VOCs, SVOCs, metals, pesticides, or herbicides. PCBs were non-detect except for one estimated PCB concentration slightly exceeding its respective GWQS/GV at MW-5 proximate to the transformer room. Due to

the lack of groundwater contamination at the Site, as PCBs are relatively immobile and are limited to the transformer room area, groundwater transport is not considered a pathway of concern.

5.6 Exposure Pathways

Based on this chemical fate and transport analysis, the pathways through which Site contaminants could potentially migrate to other areas or media are fugitive dust emissions via physical disturbance during intrusive activities. However, given the NYSDEC/ NYSDOH requirements for dust monitoring and controls during intrusive activities at remedial program construction sites, it is unlikely that site-related contaminants would reach off-site receptors at significant exposure point concentrations. Moreover, the planned remediation will remove impacted soil/fill.

6.0 QUALITATIVE RISK ASSESSMENT

6.1 Human Health Exposure Assessment

A qualitative exposure assessment consists of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying exposure pathways, and evaluating chemical fate and transport.

An exposure pathway describes how an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements:

- A receptor population
- A contaminant source
- A contaminant release and transport mechanism
- A point of exposure
- A route of exposure

The *receptor population* is the people who are or may be exposed to contaminants at a point of exposure. The *contaminant source* is defined as either the source of contaminant release to the environment (such as a waste disposal area or point of discharge) or the impacted environmental medium (soil, air, biota, water) at the point of exposure. *Contaminant release and transport mechanisms* carry contaminants from the source to points where people may be exposed. The *point of exposure* is a location where actual or potential human contact with a contaminated medium may occur. The *route of exposure* is the way a contaminant enters or contacts the body (i.e., ingestion, inhalation, dermal absorption).

An exposure pathway is *complete* when all five elements listed above are documented. A *potential* exposure pathway exists when one or more of the five elements comprising an exposure pathway is not documented but could reasonably occur. An exposure pathway may be *eliminated* from further evaluation when any one of the five elements comprising an exposure pathway does not exist in the present and will not exist in the future.

6.1.1 Receptor Population

The receptor population includes the people who are or may be exposed to contaminants at a point of exposure. The identification of potential human receptors is based on the characteristics of the Site, the surrounding land uses, and the probable future land uses. The Site is presently unoccupied with a building and vacant land. Under current

Site use conditions, receptors would be limited to trespassers who may traverse the Site (although the building is locked, and a fence is located along the entire vacant land perimeter of the Site) and construction workers that may access the Site during remediation or to service utilities or similar duties. Off-site receptors associated with surrounding land uses include pedestrians.

The reasonably anticipated future use of the Site is for restricted residential/commercial land use, which is consistent with surrounding property use and zoning. The receptors to be considered under the future use scenario may be comprised of indoor occupants/workers, outdoor workers (e.g., groundskeepers or maintenance staff), and construction workers who may be employed at or perform work on the property. Off-site receptors associated with surrounding land uses include pedestrians. Site visitors/customers may also be considered receptors; however, their exposure would be similar to that of the indoor worker but at a lesser frequency and duration. Therefore, consideration of the indoor worker is conservatively protective of the site visitor.

6.1.2 Contaminant Sources

The source of contamination is defined as either the source of contaminant release to the environment (such as a waste disposal area or point of discharge) or the impacted environmental medium (soil, air, biota, water) at the point of exposure. Section 4.7 discusses the COCs present in unremediated Site media at elevated concentrations. Areas containing SVOCs, PCBs and metals above USCOs in soil/fill remain.

6.1.3 Contaminant Release and Transport Mechanisms

Contaminant release and transport mechanisms carry contaminants from the source to points where people may be exposed and are specific to the type of contaminant and site use. For the non-volatile COCs present in Site soil/fill, contaminant release and transport mechanisms will generally be limited to fugitive dust migration and direct contact during future planned intrusive work/remedial activities since the Site is currently covered by vegetation, gravel roadways/parking areas, and a building.

6.1.4 Point of Exposure

The point of exposure is a location where actual or potential human contact with a contaminated medium may occur before and/or after remedial activities. For the current and

future use scenarios, direct contact with impacted fill is the point of exposure. For both the current and future use scenarios, groundwater is not considered a relevant mechanism for exposure due to the absence of significant groundwater impacts; availability of a local municipal potable water source; depth to groundwater (greater than 4.5 feet, which is the standard depth of utilities and foundation footers); and groundwater use restrictions in the City of Buffalo.

6.1.5 Route of Exposure

The route of exposure is the manner in which a contaminant actually enters or contacts the body (i.e., ingestion, inhalation, dermal absorption). Based on the types of receptors and points of exposure identified above, potential routes of exposure are listed below:

Current Use Scenario

- Environmental, Construction, and Outdoor Workers and/or Trespasser – skin contact, inhalation, and incidental ingestion

Unremediated Future Use Scenario

- Construction and Outdoor Workers and/or Trespassers – skin contact, inhalation, and incidental ingestion

6.1.6 Exposure Assessment Summary

Based on the above assessment, the potential exposure pathways for the current and future use conditions are listed below.

Current Use Scenario

- Construction Worker/Environmental Personnel and Trespasser – direct contact, incidental ingestion, and inhalation of non-volatile COCs present in soil/fill.

Unremediated Future Use Scenario

- Construction and Outdoor Worker and/or Trespasser – direct contact, incidental ingestion and inhalation of non-volatile COCs present in soil/fill.

In most instances, these exposures can be readily mitigated through the use of personal protective equipment (PPE); proper soil/fill management during intrusive activities; engineering controls including placement of asphalt, building, fencing and/or landscape cover.

6.2 Fish and Wildlife Impact Assessment (FWIA)

The historical use of the Site has eliminated most native species. The Site is mainly populated by low-lying vegetation (grasses, weeds, and shrubs). There are no important plant habitats or endangered species identified for the area encompassing the Site.

The redevelopment plan for the Site includes buildings and/or maintained ornamental landscaping that will substantially limit availability of suitable cover type for reestablishment of biota.

As such, based on the Fish and Wildlife Resource Impact Analysis Decision Key included as Appendix F (NYSDEC DER-10 Appendix 3C), further fish and wildlife resources impact analysis is not warranted.

6.3 Qualitative Off-Site Exposure Assessment

During the RI, soil borings (for installation of monitoring wells) and test pits were advanced on-Site, including areas proximate to Site property boundaries. These sampling locations were used in conjunction with previously collected data to complete this qualitative off-site exposure assessment and evaluate potential remedial measures to address Site contamination.

No sheen, odor, or visual indication of impact were noted in any overburden groundwater monitoring wells.

As discussed in Section 5.0, contaminants in on-Site soil/fill could potentially migrate off-site as fugitive dust emissions during intrusive activities; however, given the NYSDEC/ NYSDOH requirements for dust monitoring and controls during intrusive activities at remedial program construction sites, it is unlikely that site-related contaminants would reach off-site receptors at significant exposure point concentrations. Once impacted soil/fill is removed from the Site, any potential off-site exposure will be eliminated.

Based on the urban nature of the Site, it is expected that the constituents present in on-Site soil/fill are also present off-site at similar concentrations. However, these reflect widespread fill placement and not an off-site migration issue. Pavement and roadways to the

south and east of the Site along with a railroad west of the Site preclude off-site exposure from direct contact with fill materials and pathways associated with wind erosion or incidental ingestion. Fill materials that may be present north of the Site pose similar exposure risks as those described above for the construction worker/trespasser 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 two 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 4, 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 Track 4 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 4 cleanup are described below.

Based on the intended future use of the Site, a Track 4 Restricted-Residential use cleanup is the required cleanup; however, the objective is to obtain a Track 1 Unrestricted Use cleanup. The current redevelopment plan calls for the existing building to remain, with the ground floor likely to be used as a vehicle parking garage, and a new building planned for mixed commercial and residential uses to be developed on the northern vacant land portion of the Site.

7.1 Standards, Criteria, and Guidance

According to DER-10 Section 1.3(b)71, standards, criteria, and guidance (SCGs) refers to: "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 CP-51 on Soil Cleanup Guidance.

Additional discussions concerning the specific chemical-, action-, and location-specific SCGs that may be applicable, relevant, or appropriate to remedy selection for the Site are presented below. In each case, the identified SCGs are generally limited to regulations or technical guidance in lieu of the environmental laws from which they are authorized, as the laws are typically less prescriptive in nature and inherently considered in the regulatory and guidance evaluations. Table 10 summarizes the SCGs by media that may be applicable or relevant and appropriate to the Site.

7.1.1 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.

Previous sampling events during Phase II and RI activities included the collection and analysis of surface soil/fill, subsurface soil/fill, and groundwater samples (see Tables 4 through 8).

7.1.2 Location-Specific SCGs

Location-specific SCGs are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they are in a specific location. Some examples of these unique locations include floodplains, wetlands, historic places, and sensitive ecosystems or habitats. The location of the site is a fundamental determinant of its impact on human health and the environment.

7.1.3 Action-Specific SCGs

Action-specific SCGs are restrictions placed on particular treatment or disposal technologies. Examples of action-specific SCGs are effluent discharge limits and hazardous waste manifest requirements.

7.2 Remedial Action Objectives

The remedial actions for the 990 Niagara Street Site must satisfy Remedial Action Objectives (RAOs). RAOs are site-specific statements that convey the goals for minimizing substantial risks to public health and the environment. For the 990 Niagara Street Site, appropriate RAOs have been defined as:

Soil/Fill RAOs

- Remove soil/fill from areas of concern (i.e., soil/fill deemed unacceptable to remain on-Site, even under a Track 4 approach) as necessary to protect public health and the environment.
- Prevent ingestion/direct contact with contaminated soil/fill.

7.3 General Response Actions

General Response Actions (GRAs) are broad classes of actions that are developed to achieve the RAOs and form the foundation for the identification and screening of remedial technologies and alternatives.

7.3.1 Soil/Fill

The GRAs available to address the RAOs for soil/fill include:

- Institutional controls (ICs) (e.g., Site Management Plan, Environmental Easement)
- Engineering controls (ECs) (e.g., cover system)
- Treatment (e.g., in-situ or ex-situ)
- Excavation and off-site disposal

7.4 Evaluation of Alternatives

NYSDEC's Brownfield Cleanup Program calls for remedy evaluation in accordance with DER-10 Technical Guidance for Site Investigation and Remediation. In addition to achieving RAOs, the remedial alternatives are evaluated against the following criteria consistent with 6NYCRR Part 375-1.8(f):

- **Overall Protectiveness 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 of Contamination through Treatment**. This criterion evaluates the remedy's ability to reduce the toxicity, mobility, and volume of Site contamination. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the contamination at the Site.
- **Short-Term Impacts and Effectiveness**. This criterion 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.

- **Implementability**. The implementability 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-Effectiveness**. Capital, operation, maintenance, and monitoring costs are estimated for each remedial alternative and presented on a present worth basis. A remedy is cost effective if the costs are proportional to the overall effectiveness.
- **Community Acceptance**. This criterion evaluates the public's comments, concerns, and overall perception of the remedy. Therefore, 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, including a public comment period for the AAR.
- **Land Use**. In addition to the above criteria, 6NYCRR Part 375-1 specifies that the criterion of Land Use (i.e., the current, intended, and reasonably anticipated future land uses of the Site and its surroundings) be considered in the selection of the remedy. The reasonably anticipated future use of the Site, as initially submitted to the NYSDEC via the BCP application, is a residential and commercial capacity with development of a new mixed-use residential and commercial building and use of the existing building as a vehicle parking garage.

7.5 Anticipated Future Land Use Evaluation

In developing and screening remedial alternatives, NYSDEC's Part 375 regulations require that the reasonableness of the anticipated future land be factored into the evaluation of remedial alternatives. The regulations identify 16 criteria that must be considered. These criteria and the resultant outcome for the 990 Niagara Street Site are presented below:

1. *Current use and historical and/or recent development patterns:* The Site is currently unoccupied and includes vacant land with one existing building. The Site has a commercial and industrial past. The Site is located in a highly developed mixed-use area of the City of Buffalo. Per the City of Buffalo Green Code Unified Development Ordinance Zoning Map (October 12, 2016), the anticipated zoning for the Site is primarily classified as Urban Core (N-1). Urban Core areas are described as mixed-use centers of high intensity in strategic locations on the edges of downtown or proximate light rail and often featuring mid-rise buildings. The Site is identified as N-1C – Mixed Use Core. **Accordingly, residential/commercial development would be consistent with the planned future use of the Site.**

2. *Applicable zoning laws and maps:* Per the City of Buffalo Future Land Use Map, the proposed future use of the Site is a transition from predominantly commercial/residential zoned area to a mixed-use neighborhood (Urban Center) described as compact neighborhood centers either within or on the edge of intense-mixed use commercial and residential areas. **Use in a commercial/ residential capacity is therefore consistent with future zoning.**
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 Tonawanda Street 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:* The Site is located in a NYS-designated environmental zone (or EN-Zone) Type B, which is indicative of the economic conditions of the surrounding area. Type B EN-Zones include a poverty rate of at least double the Erie County poverty rate. The City of Buffalo adopted a Comprehensive Plan in February 2006 and created a Future Land Use Plan in September 2016. **The proposed residential/commercial redevelopment will be a productive use of currently unoccupied idle property.**
5. *Proximity to real property currently used for residential use, and to urban, commercial, industrial, agricultural, and recreational areas:* **The adjacent land is mixed use; therefore, the redevelopment plan is consistent with surrounding property.**
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, either for or against the proposed residential/commercial use of the property.**
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 actively used in a mixed use residential, commercial and industrial capacity. **Use of the Site in a mixed residential/commercial use capacity does not pose environmental justice issues.**
8. *Federal or State land use designations:* The property is currently vacant. **Reuse in a restricted capacity (commercial and residential) is consistent with the future land use designation.**

9. *Population growth patterns and projections:* The City of Buffalo, encompassing 40.38 square miles, has a population of 261,310 (2010 US Census), a decrease of 10.7% from the 2000 US Census (population of 292,648). The Site is located within Census Tract 170, a mixed use area of the City of Buffalo. **Redevelopment of the unoccupied idle Site for commercial and residential uses would provide positive opportunities for growth.**
10. *Accessibility to existing infrastructure:* Access to the Site is from Fillmore Avenue. The Site has access to all major public and private utilities, including potable water, sanitary and storm sewers, electric, and natural gas. **Existing infrastructure supports reuse in commercial and 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:* There are no State or Federal wetlands located on or near the Site. The Niagara River is located 0.03 miles west of the Site. The closest regulated wetland, identified as BU-3, is located approximately two miles southeast of the Site. According to the NYSDEC's EnviroMapper the important plant habitat and species listed for the area encompassing the Site, include:

    - Lake Sturgeon listed as threatened animal species under NYS Protection Status.

    The Site does not include a water body. As such, the absence of significant ecological resources on or adjacent to the Site indicates that cleanup to unrestricted 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:* Currently, there are no known deed restrictions on the use of groundwater at the Site or groundwater supply wells on the Site. Municipal potable water service is provided to the Site and surrounding areas by Buffalo/Erie County Water. **Therefore, remediating the Site for use in a residential/commercial capacity will not pose a drinking water threat.**
14. *Proximity to flood plains:* The Site is not located within the limits of a flood plain. **As such, remediating the Site for use in a residential/commercial capacity does not pose a threat to surface water.**

15. *Geography and geology:* The Site is located within the Lake Erie-Niagara River major drainage basin, which is typified by little topographic relief, except in the immediate vicinity of major drainage ways. In the Erie-Niagara Basin, the major areas of groundwater are within coarser overburden deposits and limestone and shale bedrock. The overburden soils across the Site consist of fill material and native tight sandy lean clay**. Geography and geology are consistent with a residential/commercial re-use.**
16. *Current institutional controls applicable to the site:* **No institutional controls are currently present that would affect redevelopment options.**

Based on the above analysis, residential/commercial reuse of the Site is consistent with planned development and zoning on-site and within the vicinity of the Site and does not pose additional environmental or public health risk.

7.6 Volume, Nature, and Extent of Contamination

Estimation of the volume, nature, and extent of media that may require remediation to satisfy the RAOs or that needs to be quantified to facilitate evaluation of remedial alternatives is presented in this section. For the unrestricted use scenario, the cleanup goal would involve achieving USCOs. The volume and extent of media requiring cleanup under these scenarios is presented in Sections 7.6.1 and 7.6.2. In all instances, these volume estimates (and associated cost estimates presented later in this AAR) are projected based on data collected and observations made during the Phase II and RI activities.

7.6.1 Comparison to Unrestricted SCOs (Track 1 Cleanup)

Exceedances of the USCOs were noted in various soil/fill samples collected across the Site, primarily for SVOCs and metals. In addition, PCBs were identified in soil/fill at concentrations exceeding USCOs proximate to the transformer room in the vicinity of a historic release. Elevated PID readings and odors were noted in soil/fill in the SB-5 and transformer room areas. Due to the ubiquitous nature of the constituents observed in Site soil/fill and the extent to which they exceed the USCOs, the entire exterior northern portion of the Site, the western vacant land portion of the Site and certain interior areas define the Track 1 Cleanup area. The depth of fill material and soil/fill impacts vary significantly across the Site. Fill material in current vacant undeveloped portions of the Site was noted to at least two fbgs with USCO exceedances noted up to 2 fbgs. Fill materials within the building

footprint were noted to depths of at least 6.5 fbgs with USCO exceedances noted as deep as 8 fbgs to 12 fbgs at certain locations. Thus, the volume of impacted soil/fill requiring remediation under the unrestricted use scenario is estimated at approximately 6,060 tons.

A slight PCB exceedance of its respective GWQS was identified at MW-5 located proximate to the transformer room. Based on removal of all source areas, as groundwater impacts are limited to a slight PCB exceedance proximate to the transformer room, groundwater remediation and monitoring would not be necessary as PCB concentrations would be expected to decrease significantly after removal of impacted soil. Furthermore, there is a restriction on groundwater use within the City of Buffalo.

7.6.2 Comparison to Restricted Residential SCOs (Track 4 Cleanup)

The soil/fill data indicates certain areas with exceedances of the Part 375 RRSCOs for several ubiquitous constituents. Specifically, the SS-5/MW-2 and SS-9 areas on the northern exterior portions of the Site, SS-1 through SS-4 areas on the western vacant land area, and the transformer room (TR-1), SB-10, AR-1 and AR-2 locations within the building. The SB-5 area is also included due to the field evidence of impacts observed. The volume of impacted soil/fill requiring remediation under the Track 4 RRSCO is estimated at approximately 2,850 tons.

Based on removal of all source areas, as groundwater impacts are limited to a slight PCB exceedance proximate to the transformer room, groundwater remediation and monitoring would not be necessary as PCB concentrations would be expected to decrease significantly after removal of impacted soil.

7.7 Alternatives Evaluation

The following remedial alternatives have been developed in accordance with the RAOs, GRAs and NYSDEC regulation and policy:

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

7.7.1 Alternative 1 – No Further Action

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

Overall Protection of Public Health and the Environment – The Site is not protective of human health and the environment, due to the presence of contamination remaining on-site above SCGs; the absence of engineering controls (e.g., cover system); and the absence of institutional controls to prevent more restrictive forms of future site use (e.g., unrestricted, residential, and restricted residential) or the export of Site soils to uncontrolled off-site locations. Accordingly, no further action is not protective of public health and does not satisfy the RAOs.

Compliance with SCGs – Under the current and reasonably anticipated future use scenario (residential/commercial), the contamination detected in on-site soil/fill and groundwater does not comply with applicable SCGs.

Long-Term Effectiveness and Permanence – The no further action alternative involves no remedial activities, equipment, institutional controls, or facilities subject to maintenance, and provides no long-term effectiveness or permanence toward achieving the RAOs.

Reduction of Toxicity, Mobility, or Volume of Contamination through Treatment – The no action alternative does not reduce the toxicity, mobility, or volume of contamination beyond natural degradation/attenuation and, therefore, this alternative is not protective of public health and does not satisfy any of the RAOs.

Short-Term Impacts and Effectiveness – The contamination on-site does pose short-term risks to on-site workers and the environment. Therefore, implementation of the no further action alternative does not satisfy the RAOs.

Implementability – No technical or administrative implementability issues are associated with the no further action alternative.

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

Community Acceptance – Community acceptance will be evaluated based on comments received from the public in response to Fact Sheets and other planned citizen participation activities, including a public comment period for the RI/AA Report.

7.7.2 Alternative 2 – Restricted Residential Use (Track 4) Cleanup

Under Alternative 2, the Site would be cleaned up to facilitate reasonably anticipated residential or commercial use, including:

- Excavation and off-site disposal of SVOCs- and metal-impacted soil/fill exceeding RRSCOs. Additional excavation and off-site disposal will be completed in areas exhibiting field evidence of impact including the transformer release and SB-5 areas.
- Performing verification sampling and analysis.
- Managing groundwater if encountered during remedial activities.
- Backfilling and compaction of clean imported material approved by the Department.
- Removal of the capacitor and four apparently privately-owned inactive transformers from the northern portion of the building.

Overall Protection of Public Health and the Environment – This alternative meets NYSDEC requirements for a Track 4 cleanup under the BCP regulations and is protective of public health and the environment. The RAOs for the Site would be satisfied through the planned remedial activities, including: removal and off-site disposal of impacted soil/fill; installation of cover systems (soil and impervious) across the Site; and the use of IC/ECs to prevent potential future exposure and limit the future Site use to restricted residential and commercial.

Compliance with SCGs – The planned remedial activities will be performed in accordance with applicable, relevant, and appropriate SCGs including NYSDEC DER-10. The SMP will include an EC/IC Plan that describes the procedures for the implementation and management of all EC/ICs at the Site; a Site Monitoring Plan that describes the measures for evaluating the performance and effectiveness of the remedy to reduce or

mitigate contamination at the site, including the soil cover system and all affected site media; an Excavation Work Plan to address any impacted soil/fill encountered during post-development intrusive and/or maintenance activities; and, a Site-wide inspection program to assure that the EC/ICs placed on the Site have not been altered and remain effective.

Long-Term Effectiveness and Permanence – Removal of impacted soil/fill as well as construction of a cover system will prevent direct contact with soil/fill exceeding RRSCOs. A SMP will address any impacted soil/fill encountered during future Site intrusive/ maintenance activities and provides a mechanism to assure that the EC/ICs placed on the Site have not been altered and remain effective. Furthermore, an Environmental Easement for the Site will be filed with Erie County, which will limit future Site use to commercial uses, restrict groundwater use, and reference the Department-approved SMP. As such, this alternative will provide long-term effectiveness and permanence.

Reduction of Toxicity, Mobility, or Volume of Contamination through Treatment – Removal of impacted soil/fill to meet RRSCOs followed by placement of a cover system will permanently and significantly reduce the toxicity, mobility, and volume of the soil/fill that could potentially be contacted or produce localized areas of environmental impact at the Site. Accordingly, this alternative satisfies this criterion.

Short-Term Impacts and Effectiveness – During impacted soil/fill excavation, air monitoring would be performed to assure conformance with community air monitoring action levels. The potential for chemical exposures and physical injuries would be reduced through safe work practices; proper personal protection equipment; environmental monitoring; establishment of work zones and Site control; and appropriate decontamination procedures. Soil/fill remediation would be completed within an approximate 1-month period thereby limiting short-term adverse effects. Remedial activities will be performed in accordance with an approved RAWP, including a Health and Safety Plan (HASP), CAMP, and soil erosion measures. All the above-mentioned controls will be in place during cover system placement. This alternative achieves the RAOs for the Site.

Implementability – No significant technical or administrative implementability issues are associated with this alternative.

Cost – The remedial cost for implementation of Alternative 2 is estimated at approximately $1.06 million. Table 11 provides a breakdown of the remedial costs.

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

7.7.3 Alternative 3 – Unrestricted Use (Track 1) Cleanup

An unrestricted use alternative would necessitate remediation of all soil/fill where concentrations exceed the USCO per 6NYCRR Part 375. For unrestricted use scenarios, excavation and off-site disposal of impacted soil/fill is generally regarded as the most applicable remedial measure because engineering controls cannot be used to supplement the remedy. As such, the unrestricted use alternative would include:

- Excavation and off-site disposal of SVOCs-, metals- and PCB-impacted soil/fill exceeding USCOs. Additional excavation and off-site disposal will be completed in areas exhibiting field evidence of impact including the transformer release and SB-5 areas.
- Performing verification sampling and analysis.
- Managing groundwater if encountered during remedial activities
- Backfilling and compaction of clean imported material approved by the Department.
- Removal of the capacitor and four apparently inactive transformers from the northern portion of the building.

Overall Protection of Public Health and the Environment – Excavation and off-site disposal to USCOs would be protective of public health under any reuse scenario.

Compliance with SCGs – The excavation and off-site disposal would need to be performed in accordance with applicable, relevant, and appropriate SCGs. Soil excavation

activities would necessitate preparation of and adherence to a CAMP in accordance with Appendices 1A and 1B of DER-10.

Long-Term Effectiveness and Permanence – This alternative would remove all impacted soil/fill and therefore provide long-term effectiveness and permanence.

Reduction of Toxicity, Mobility, or Volume of Contamination through Treatment – Through removal of all impacted soil/fill, this alternative would permanently and significantly reduce the toxicity, mobility, and volume of contamination on the Site. However, since this alternative transfers Site soil/fill from one environment to another, an overall reduction of toxicity and volume would not occur, although mobility of soluble constituents would be reduced in a permitted commercial landfill with an engineered liner, leachate collection, and a cover system.

Short-Term Impacts and Effectiveness – The principal advantage of 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 include risk of injury to Site workers due to increased use of heavy equipment and potential accidents from heavy truck traffic, as the excavation work would require removal of approximately 360 truckloads of soil/fill. Dust control methods would be required to limit the release of particulates during excavation. Disruption of the neighboring community would occur due to material transport and deliveries and noise from heavy equipment used to construct the remedy; however, the RAOs would be achieved once the soil/fill is removed from the Site and backfill material is in place (est. 1 month).

Implementability – No significant technical implementability issues would be encountered in construction of this unrestricted use alternative. Traffic coordination for trucks entering and exiting the Site would be required. There are no administrative implementability issues associated with this alternative.

Cost-Effectiveness – The remedial cost for implementing the unrestricted use alternative is estimated at approximately $1.56 million. Table 12 provides a detailed breakdown of these costs.

Community Acceptance – Since this alternative is protective of public health and the environment, the community would likely accept the unrestricted use alternative. The short-term disruption may of concern to some neighbors; however, most neighbors will likely see that the benefits of remediating and redeveloping the Site outweigh the temporary inconveniences.

Figure 5 shows the preferred cleanup remedy (Unrestricted Use - Track 1) for the Site. The remedial measures will be described in greater detail in a Remedial Action Work Plan (RAWP) submitted to NYSDEC for approval.

7.8 Comparison of Remedial Alternatives

The previous sections describe remedial alternatives for the 990 Niagara Street Site and evaluate these alternatives against the screening criteria. Table 13 provides a comparison of the alternatives to identify remedial measures that will achieve the RAOs for the Site.

7.9 Preferred Remedial Alternative

Based on the alternatives analysis evaluation, *Alternative 3 – Unrestricted Use (Track 1) Cleanup* is the recommended final remedial approach for the 990 Niagara Street Site because it is fully protective of public health and the environment, leaves no contamination in-place which is advantageous over the other remedies, and satisfies all the RAOs for the Site. In summary, Alternative 3 would involve:

- Excavation and off-site disposal of SVOCs- and metals-impacted soil/fill exceeding USCOs. Additional excavation and off-site disposal will be completed in areas exhibiting field evidence of impact including the transformer release and SB-5 areas.
- Performing verification sampling and analysis.
- Managing groundwater if encountered during remedial activities.
- Backfilling and compaction of clean imported material approved by the Department.
- Removal of the capacitor and four apparently inactive transformers from the northern portion of the building.

The components and details of the tasks will be more fully described in an RAWP.

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:

Soil

The 1.05 acre Site is a historic industrial property with impacted fill materials from unknown sources. Soil impacts apparently from historic operations and a transformer release are also present on-Site. SVOCs, PCBs and/or metals were identified at concentrations exceeding USCOs across vacant land portions of the Site as well as beneath the building slab in certain interior portions of the building. Field evidence of impact (odors and elevated PID readings) were identified at SB-5 and within the transformer room where a historic transformer release occurred.

Groundwater

No significant groundwater impacts were identified. A slight PCB exceedance of its respective GWQS was identified in groundwater in MW-5 located proximate to the transformer room and release area.

Selected Remedy

Based on the alternatives analysis evaluation, *Alternative 3 – Unrestricted Use (Track 1) Cleanup* is the recommended final remedial approach for the Site. Alternative 3 includes, but is not limited to, excavation and off-site disposal of soil/fill exceeding USCOs. This remedy is fully protective of public health and the environment and leaves no contamination in-place, which is advantageous over other remedies when evaluated against the remedy selection criteria. In addition, Alternative 3 fully satisfies all the RAOs for the Site. The components and details of the remaining tasks will be more fully described in the RAWP.

9.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10; Technical Guidance for Site Investigation and Remediation.* May 2010.

2. U.S. Climate Data website (www.usclimatedata.com/). Climate Buffalo - New York.

3. Acres International Corporation. *Phase I Environmental Site Assessment, 960 Busti and 990 Niagara Street, Buffalo, New York*. November 1997

4. TurnKey Environmental Restoration, LLC. *Phase II Environmental Investigation Report, 990 Niagara Street Site, Buffalo, New York*. November 2016.

5. Benchmark Environmental Engineering & Science, PLLC, in association with TurnKey Environmental Restoration, LLC. *Brownfield Cleanup Program Application, 990 Niagara Street Site, Buffalo, New York*. December 2016.

6. Benchmark Environmental Engineering & Science, PLLC, in association with TurnKey Environmental Restoration, LLC. *Remedial Investigation Work Plan, 990 Niagara Street Site, Buffalo, New York*. Revised January 2018.

TABLES

TABLE 1
SAMPLING AND ANALYSIS SUMMARY

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Location	Number of Locations	Matrix	Parameter[1]							
			TCL + CP-51 VOCs	TCL SVOCs	TAL Metals	PCBs	Herbicides	Pesticides	PFAs [2]	1,4- Dioxane [3]
Soil/Fill										
Surface Soil	9	Soil/Fill	--	9	9	2	2	2	--	--
Test Pits	5	Soil/Fill	2	5	5	2	2	2	--	--
Soil Borings	26	Soil/Fill	7	22	22	10	6	6	--	--
Blind Duplicate	2	Soil/Fill	1	2	2	2	2	2	--	--
MS/MSD	1	Soil/Fill	1	1	1	1	1	1	--	--
Soil Subtotal			11	39	39	17	13	13	0	0
Groundwater										
Monitoring Well	4	Groundwater	4	3	3	4	3	3	3	3
Blind Duplicate	1	Groundwater	1	1	1	1	1	1	--	--
MS/MSD	1	Groundwater	1	1	1	1	1	1	--	--
Trip Blank	1	Water	1	--	--	--	--	--	--	--
Equipment Blank	1	Water	--	--	--	--	--	--	1	1
Groundwater Subtotal			7	5	5	6	5	5	4	4
Sampling Totals			**18**	**44**	**44**	**23**	**18**	**18**	**4**	**4**

Notes:

1. Analyses performed via USEPA SW-846 methodology with equivalent Category B deliverables package.
2. Analyses performed via method 537 modified (PFC_IDA).
3. Analyses performed via method 8270 selected ion monitoring (SIM).

TABLE 2

MONITORING WELL CONSTRUCTION DETAILS

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Well Identification			Well Elevations				Well Diameter (inches)	Well Screen Data					
Well Number*	Well Type	Date Completed	TOR Elevation (ft)	Ground Elevation (ft)	Total Depth (fbTOR)	Bottom of Well Elevation (fmsl)		Length of Well Screen (feet)	Screen Interval (fmsl)			Screen Interval (fbTOR)		
MW-1	OB	09/13/2018	500.94	498.34	27.10	473.84	2	10	484.04	to	474.04	16.90	to	26.90
MW-2	OB	09/12/2018	501.15	498.70	26.80	474.35	2	10	485.15	to	475.15	16.00	to	26.00
MW-3	OB	09/11/2018	503.68	501.13	27.00	476.68	2	20	496.88	to	476.88	6.80	to	26.80
MW-5	OB	08/29/2018	506.40	502.60	15.00	491.40	1	10	501.40	to	491.40	5.00	to	15.00

Abbreviations:

DTW = depth to water
fmsl = feet above mean sea level
fbgs = feet below ground surface
OB = Indicates a well completed in shallow unconsolidated overburden
fbTOR = feet below top of riser
TOR = top of riser

*MW-4 and MW-6 have been dry to-date. All well surveys based on site specific elevation of 500' set at electric manhole east of the Site along Niagara Street.

TABLE 3

SUMMARY OF GROUNDWATER ELEVATIONS

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Location	Date	Grade	TOR Elevation [1] (ft)	DTP (if present) (fbTOR)	DTW (fbTOR)	Product Thickness (ft)	Groundwater Elevation [2] (ft)
MW-1	10/11/2018	498.34	500.94	NP	25.50	NP	475.44
MW-2	10/11/2018	498.70	501.15	NP	11.00	NP	490.15
MW-3	10/11/2018	501.13	503.68	NP	26.30	NP	477.38
MW-4	10/11/2018	502.80	505.90	NP	> 18.00	NP	< 484.80
MW-5	10/11/2018	502.60	506.40	NP	14.20	NP	492.20
MW-6	10/11/2018	503.14	506.84	NP	>17.00	NP	< 486.10

Notes:

1. Overburden Wells surveyed on October 11, 2018.
2. All elevations are feet relative to Site datum of 500 set at electric manhole on Niagara Street.

TOR = Top of riser
DTP = Depth to product
DTW = Depth to water
fb = feet below

TABLE 4

SUMMARY OF SURFACE SOIL ANALYTICAL DATA (RI AND HISTORIC PHASE II)

990 NIAGARA STREET SITE

BUFFALO, NEW YORK

PARAMETER [1]	Unrestricted Use SCOs [2]	Restricted Residential Use SCOs [2]	SURFACE SOIL SAMPLE LOCATION (DEPTH)								
			SS-1 (0-6")	SS-2 (0-6")	SS-3 (0-6")	SS-4 (0-6")	SS-5 (0-2")	SS-6 (0-2")	SS-7 (0-2")	SS-8 (0-2")	SS-9 (0-2")
SAMPLE DATE			10/6/2016				8/27/2018				
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [3]											
2-Methylnaphthalene	--	--	--	--	--	--	1.2 J	ND	ND	ND	ND
Acenaphthene	20	100	0.87	0.66 J	5.2	100	4.2	ND	ND	ND	0.22
Acenaphthylene	100	100	--	--	--	--	0.65 J	ND	ND	ND	0.038 J
Anthracene	100	100	1.8	1.6	12	240	10	ND	ND	ND	0.45
Benzo(a)anthracene	1	1	3	3.6	19	260	18	ND	ND	0.29	2.2
Benzo(a)pyrene	1	1	2.8	3.2	17	230	13	ND	ND	0.33	2.5
Benzo(b)fluoranthene	1	1	3.6	4.3	22	280	15	ND	ND	0.53	3.4
Benzo(ghi)perylene	100	100	1.5	2	9.1	120	7.4	ND	ND	0.43	3
Benzo(k)fluoranthene	0.8	3.9	1.2	1.4	6.9	61	7.6	ND	ND	ND	1.6
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	ND	ND	ND	0.12 J	0.6
Carbazole	--	--	--	--	--	--	3.8 J	ND	ND	ND	0.34
Chrysene	1	3.9	3	3.8	18	240	16	ND	ND	0.35	2.7
Dibenzo(a,h)anthracene	0.33	0.33	0.41	0.57	2.6	26	3.1	ND	ND	ND	0.66
Dibenzofuran	7	59	--	--	--	--	2.7 J	ND	ND	ND	0.086 J
Fluoranthene	100	100	6.9	7.9	45	620	38	ND	ND	0.45	5.4
Fluorene	30	100	0.93	0.77 J	5.8	120	3.7 J	ND	ND	ND	0.18
Indeno(1,2,3-cd)pyrene	0.5	0.5	1.7	2.1	10	140	6.7	ND	ND	0.34	2.3
Naphthalene	12	100	0.49	0.22 J	2.7	74	ND	ND	ND	ND	ND
Phenanthrene	100	100	6.9	6.9	44	690	34	ND	ND	0.15 J	2.4
Pyrene	100	100	5.5	6.8	36	500	26	ND	ND	0.42	4.2
		Total SVOCs	40.6	45.82	255.3	3701	211.05 J	0	0	3.41	32.274
Pesticides and Herbicides - mg/kg [3]											
Endrin ketone	--	--	--	--	--	--	0.054	--	--	--	ND
Metals - mg/Kg											
Aluminum	--	--	--	--	--	--	13300 B	6850 B	6000 B	14100 B	7970 B
Antimony	--	--	--	--	--	--	1.3 J	0.51 J	0.49 J	0.87 J	ND
Arsenic	13	16	6.3	14	6.9	9.2	5.7	4.8	2.7	4.6	2.6
Barium	350	400	63	170	83	140	92.9	69.1	54.3	179	86.7
Beryllium	7.2	72	--	--	--	--	0.72	0.44	0.48	3.8	1.3
Cadmium	2.5	4.3	30	0.78	53	3.2	0.38	0.33	0.3	0.098 J	0.3
Calcium	--	--	--	--	--	--	37400 B	166000 B	185000 B	166000 B	160000 B
Chromium	30	180	12	6.4	13	12	16.6	13.9	11.2	6.1	9.7
Cobalt	--	--	--	--	--	--	7.1	3.3	2.7	2.4	1.7
Copper	50	270	--	--	--	--	33.2	16.6	13.7	10.8	12.9
Iron	--	--	--	--	--	--	17900	9040	6630	21200	5360
Lead	63	400	58	560	79	310	312	53.6	66.3	55.1	41.7
Magnesium	--	--	--	--	--	--	17800 B	30000 B	11300 B	8350 B	10800 B
Manganese	1600	2000	--	--	--	--	624 B	495 B	374 B	1360 B	733 B
Mercury	0.18	0.81	0.1	0.16	0.2	1.2	0.44	0.044	0.11	0.023	0.027
Nickel	30	310	--	--	--	--	18	11.8	8.7	5.7	7.4
Potassium	--	--	--	--	--	--	3300	1500	1640	1000	1070
Selenium	3.9	180	ND	ND	ND	ND	ND	ND	ND	1.8	ND
Silver	2	180	ND	ND	ND	0.21 J	ND	ND	ND	ND	ND
Sodium	--	--	--	--	--	--	174	282	246	405	271
Vanadium	--	--	--	--	--	--	25.7	15.9	11.6	7.6	6.4
Zinc	109	10000	--	--	--	--	144	85.8	92.3	70.3	67.6
Polychlorinated biphenyls (PCBs) - mg/Kg											
Total PCBs	0.1	1	--	--	--	--	ND	--	--	--	ND

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 6NYCRR Part 375 Soil Cleanup Objectives (SCOs).
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

Definitions:

ND = Parameter not detected above laboratory detection limit.

"--" = No value available for the parameter. Or parameter not analysed for.

J = Estimated value; result is less than the sample quantitation limit but greater than zero.

B = The compound was found in the blank and sample.

Bold	= Samples collected by Benchmark-TurnKey during Phase II Environmental Investigation (Report dated November 2016).
Bold	= Result exceeds Unrestricted Use SCOs.
Bold	= Result exceeds Restricted Residential Use SCOs.

TABLE 5

SUMMARY OF SUBSURFACE SOIL/FILL ANALYTICAL DATA (RI AND HISTORIC PHASE II)

990 NIAGARA STREET SITE

BUFFALO, NEW YORK

PARAMETER [1]	Unrestricted Use SCOs [2]	Restricted Residential Use SCOs [2]	SOIL/FILL SAMPLE LOCATION (DEPTH)																									
			SB-1 (0-4')	SB-2 (4-8')	SB-5 (0-2')	SB-6 (0-4')	SB-7 (0-4')	SB-9 (0-4')	SB-10 (8-12')	SB-12 (4-8')	SB-13 (8-10')	SB-14 (8-10')	SB-15 (1-3')	SB-16 (10-12')	SB-17 (4-6')	MW-1 (22-24')	MW-2 (0-2')	MW-3 (20-22')	MW-4 (16'18')	MW-5 (0.5-2')	MW-6 (2-4')	TP-1 (5-7')	TP-2 (8-10')	TP-3 (2-4')	TP-4 (1-3')	TP-5 (9-11')	AR-1 (14-20")	AR-2 (16-18")	TR-1 (8-14")
SAMPLE DATE			9/1/2016								8/29/2018		8/30/2018	8/29/2018	8/30/2018	9/12/2018	9/13/2018	9/12/2018	8/30/2018	8/29/2018	8/30/2018	8/27/2018					9/1/2016		
Volatile Organic Compounds (VOCs) - mg/Kg [3]																												
1,1,1-Trichloroethane	**0.68**	**100**	--	--	0.00031 J	--	--	--	--	--	--	--	--	ND	--	ND	--	ND	ND	ND	ND	ND	--	ND	--	--	--	--	--
Acetone	**0.05**	**100**	--	--	ND	--	--	--	--	--	--	--	--	0.006 J	--	0.013 J	--	0.0082 J	0.0081	0.0055 J	0.0091 J	ND	--	ND	--	--	--	--	--
Tetrachloroethene	**1.3**	**19**	--	--	0.00063 J	--	--	--	--	--	--	--	--	ND	--	ND	--	ND	ND	ND	ND	ND	--	ND	--	--	--	--	--
Toluene	**0.7**	**100**	--	--	ND	--	--	--	--	--	--	--	--	ND	--	ND	--	ND	ND	ND	ND	ND	--	0.00033 J	--	--	--	--	--
Trichloroethene	**0.47**	**21**	--	--	0.0095	--	--	--	--	--	--	--	--	ND	--	ND	--	ND	ND	ND	ND	ND	--	ND	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [3]																												
2-Methylnaphthalene	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.049 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	**20**	**100**	ND	ND	ND	ND	ND	ND	0.073 J	0.064 J	ND	ND	ND	0.063 J	0.053 J	ND	0.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	1.1	ND
Acenaphthylene	**100**	**100**	ND	ND	ND	0.079 J	ND	ND	0.15 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	**100**	**100**	ND	ND	ND	0.17	ND	0.4 J	0.31	0.16	ND	ND	0.055 J	0.11 J	0.12 J	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	2.4	ND
Benzo(a)anthracene	**1**	**1**	0.24	0.062 J	ND	0.54	ND	0.1 J	1	0.4	ND	ND	0.16 J	0.4	0.38	0.024 J	0.96	ND	ND	ND	ND	ND	ND	ND	ND	ND	**28**	**4.5**	ND
Benzo(a)pyrene	**1**	**1**	0.23	ND	ND	0.53	ND	0.1 J	1	0.34	ND	ND	0.13 J	0.37	0.33	ND	0.8	ND	ND	ND	ND	ND	ND	ND	ND	0.076 J	**24**	**4.1**	ND
Benzo(b)fluoranthene	**1**	**1**	0.3	0.056 J	ND	0.7	ND	0.11 J	**1.2**	0.42	ND	ND	0.18	0.43	0.38	0.039 J	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	0.1 J	**29**	**5.2**	ND
Benzo(ghi)perylene	**100**	**100**	0.14 J	ND	ND	0.33	ND	0.067 J	0.59	0.16	ND	ND	0.11 J	0.33	0.28	ND	0.51	ND	ND	ND	ND	ND	ND	ND	ND	0.08 J	12	2.2	ND
Benzo(k)fluoranthene	**0.8**	**3.9**	0.13	ND	ND	0.24	ND	0.036 J	0.46	0.15	ND	ND	ND	ND	ND	ND	0.45	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11**	**1.7**	ND
Bis(2-ethylhexyl) phthalate	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23	0.75	ND	0.57	ND	ND	0.46 J	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.045 J	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	**1**	**3.9**	0.24	0.06	ND	0.57	ND	0.1 J	1	0.36	ND	ND	0.14 J	0.44	0.36	ND	0.94	ND	ND	ND	ND	ND	ND	ND	ND	0.055 J	**25**	**4.2**	ND
Dibenzo(a,h)anthracene	**0.33**	**0.33**	0.036 J	ND	ND	0.07 J	ND	0.023 J	0.13	0.049 J	ND	ND	ND	ND	ND	ND	0.14 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.6**	**0.67**	ND
Dibenzofuran	**7**	**59**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.028 J	ND	ND	0.15 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	**100**	**100**	0.37	0.11	ND	1.2	0.026 J	0.17	1.9	0.67	ND	ND	0.25	0.83	0.68	0.048 J	2.3	ND	ND	ND	ND	ND	ND	0.028 J	0.033 J	0.1 J	58	9.4	ND
Fluorene	**30**	**100**	ND	ND	ND	0.074 J	ND	ND	0.096 J	0.063 J	ND	ND	ND	0.032 J	0.043 J	ND	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	1	ND
Indeno(1,2,3-cd)pyrene	**0.5**	**0.5**	0.16	ND	ND	0.36	ND	0.057 J	**0.63**	0.19	ND	ND	0.098 J	0.22	0.24	ND	0.5	ND	ND	ND	ND	ND	ND	ND	0.032 J	0.071 J	**14**	**2.5**	ND
Naphthalene	**12**	**100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.076 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**32**	0.85	ND
Phenanthrene	**100**	**100**	0.13	0.098 J	ND	0.72	ND	0.2	1.3	0.54	ND	ND	0.16	0.74	0.54	0.064 J	2.2	ND	ND	ND	ND	ND	ND	ND	ND	0.03 J	68	8.3	4.7
Pyrene	**100**	**100**	0.32	0.085 J	ND	0.94	0.022 J	0.17	1.9	0.55	ND	ND	0.21	1	0.71	0.045 J	2	ND	ND	ND	ND	ND	ND	ND	0.027 J	0.085 J	45	7	ND
Total PAHs	--	--	2.296 J	0.469 J	0 J	6.523 J	0.048 J	1.533 J	11.739 J	4.116 J	0 J	0 J	1.493 J	4.993 J	4.116 J	ND	13.166	0 J	0 J	0 J	0 J	0 J	0 J	0.028 J	0.092 J	0.597 J	403.6 J	55.12 J	4.7 J
		Total SVOCs	2.296 J	0.469 J	0 J	6.523 J	0.048 J	1.533 J	11.739 J	4.116 J	0 J	0 J	1.493 J	5.268 J	4.866 J	ND	14.036	0 J	0 J	0.46 J	0.2 J	0 J	0 J	0.028 J	0.092 J	0.597 J	403.6 J	55.12 J	4.7 J
Pesticides and Herbicides - mg/Kg [3]																												
4,4'-DDT	**0.0033**	**7.9**	--	--	--	--	--	--	--	--	--	--	--	0.0017 J	--	ND	--	ND	ND	0.00057 J	0.00057 J	ND	--	ND	--	--	--	--	--
Metals - mg/Kg																												
Aluminum	--	--	--	--	--	--	--	--	--	--	11600 B	12100 B	4210 B	10600 B	4020 B	11500 F2	9120	12700 B	12100 B	15500 B	13300 B	12300 B	12100 B	12100 B	15700 B	14000 B	--	--	--
Antimony	--	--	--	--	--	--	--	--	--	--	0.7 J-	1.1 J	0.61 J	0.72 J	0.95 J	1 J	ND	ND	0.84 J	1.3 J	0.74 J	0.61 J	0.7 J	0.61 J	0.89 J	0.9 J	--	--	--
Arsenic	**13**	**16**	--	2.6	2.4	4	1.2	--	10	3.8	2.4	3.1	3.5	2.4	4.3	2.8	2.4	2.3	2.3	3.7	2.4	2.6	2.9	2.8	3.3	3.5	2.8	4.3	**45**
Barium	**350**	**400**	--	38	30	38	120	--	50	20	72.8 J	116	28.4	74.9	39.5	54.7 J	118	96.6	72.6	93	76.7	82.4	79.9	66.2	80.6	98.5	26	36	140
Beryllium	**7.2**	**72**	--	--	--	--	--	--	--	--	0.49	0.5	0.2 J	0.44	0.2 J	0.5	0.43	0.56	0.48	0.64	0.52	0.5	0.51	0.48	0.62	0.65	--	--	--
Cadmium	**2.5**	**4.3**	--	ND	ND	0.06 J	ND	ND	--	0.75	ND	0.15 J	0.14 J	0.12 J	0.12 J	0.14 J	0.16 J	**3.8**	0.14 J	0.12 J	0.11 J	0.15 J	0.15 J	0.11 J	0.12 J	0.06 J	0.12 J	0.31 J	0.26 J	0.76
Calcium	--	--	--	--	--	--	--	--	--	--	67300 J-	63200 B	40600 B	74200 B	49900 B	67600 J	126000	53000 B	70800 B	65300 B	11100 B	72900 B	59500 B	65000 B	40300 B	72000 B	--	--	--
Chromium	**30**	**180**	--	9.1	6.9	5.9	1.1	--	12	4.5	15.8 J-	16.7	5.2	14.3	5.5	14.5	13.8	16.3	15.9	19.3	15.8	16.4	15.5	15.3	18.8	18	6.6	4.4	15
Cobalt	--	--	--	--	--	--	--	--	--	--	7.8	8.5	3	6.2	3.9	7.3	9.4	7.9	7.4	10.6	7.4	6.4	7.4	7.9	10.6	8.4	--	--	--
Copper	**50**	**270**	--	--	--	--	--	--	--	--	27.5 J	15.6	12.8	13.4	24.9	13.9	15.8	14	14	15.8	14.8	12.2	13.4	15.9	18.2	16.5	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	14400 J-	15500 B	8020 B	14200 B	11200 B	14900	11700	16400 B	15000 B	18900 B	14900 B	14100	15000	14700	24500	16900	--	--	--
Lead	**63**	**400**	--	8.3	27	48	2.3	--	**150**	22	14.6	14	31.8	10.7	31	14.6	18.3	12	13.5	16.3	18.8	12.7	12.9	12.9	19.4	16.7	27	23	48
Magnesium	--	--	--	--	--	--	--	--	--	--	29000 B, F2	26300 B	9160 B	31800 B	17600 B	28800 J	22300	27100 B	30400 B	25500 B	7250 B	24100 B	25700 B	25900 B	17300 B	24600 B	--	--	--
Manganese	**1600**	**2000**	--	--	--	--	--	--	--	--	423 J-	437 B	273 B	524 B	355 B	376 B	430	379 B	429 B	487 B	430 B	360 B	398 B	394 B	561 B	427 B	--	--	--
Mercury	**0.18**	**0.81**	--	ND	ND	0.1	ND	--	**0.31**	0.1	0.0098 J	ND	0.072	0.01 J	0.094	0.011 J	ND	ND	0.01 J	0.01 J	0.083	0.011 J	0.015 J	0.033	0.044	0.02 J	**0.27**	0.06 J	0.08 J
Nickel	**30**	**310**	--	--	--	--	--	--	--	--	15.9	17.9	7.9	14.4	9	16.2	18.7	17.6	16	22.8	13.8	15.8	16.7	16.3	24.4	19.9	--	--	--
Potassium	--	--	--	--	--	--	--	--	--	--	3960 J	4170	958	3640	998	4110 J	3390	4560	4240	5170	2520	4270	4150	4310	4410	4690	--	--	--
Selenium	**3.9**	**180**	--	ND	ND	ND	1.1	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	**2**	**180**	--	ND	ND	ND	0.26 J	--	0.14 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	--	--	--	--	--	--	--	--	--	--	301	330	150	293	210	290	325	260	289	391	356	366	247	274	186	331	--	--	--
Thallium	--	--	--	--	--	--	--	--	--	--	ND	0.38 J	0.39 J	ND	ND	ND	ND	ND	ND	0.36 J	ND	0.34 J	0.36 J	ND	ND	ND	--	--	--
Vanadium	--	--	--	--	--	--	--	--	--	--	24.8	27	9.6	23.5	9.7	23.3	17.4	25.4	26.5	31	25.2	24.2	24.3	26	28.3	28.1	--	--	--
Zinc	**109**	**10000**	--	--	--	--	--	--	--	--	52.9 J-	60.2 ^	38 ^	49.8 ^	34.9 ^	51.5 J-	**1020 ^**	54.3 ^	50.7 ^	60.3 ^	**118 ^**	61.6	54.5	54.7	69	60.3	--	--	--
Polychlorinated biphenyls (PCBs) - mg/Kg																												
Total PCBs	**0.1**	**1**	--	--	--	--	--	ND	--	--	--	--	--	ND	--	ND	--	ND	ND	ND	ND	ND	--	ND	--	--	--	--	**0.282**

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 6NYCRR Part 375 Soil Cleanup Objectives (SCOs).
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

Definitions:

ND = Parameter not detected above laboratory detection limit.
"--" = No value available for the parameter. Or parameter not analysed for.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
J- = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
B = The compound was found in the blank and sample.
F2 = MS/MSD RPD exceeds control limits.
^ = Instrument related QC is outside acceptance limit.

Bold = Samples collected by Benchmark-TurnKey during Phase II Environmental Investigation (Report dated November 2016).
Bold = Result exceeds Unrestricted Use SCOs.
Bold = Result exceeds Restricted Residential Use SCOs.

TABLE 6

SUMMARY OF TRANSFORMER OIL ANALYTICAL RESULTS

990 NIAGARA STREET SITE

BUFFALO, NEW YORK

PARAMETER	USEPA PCB CONTAMINATED THRESHOLD [2]	OIL SAMPLE[1]
		OIL-1
SAMPLE DATE		9/1/2016
Polychlorinated biphenyls (PCBs) - mg/kg		
Total PCBs	**50-500 mg/kg**	8.46

Notes:

1. Oil sample collected from floor at vandalized transformer release area during Phase II Environmental Investigation (Report dated November 2016)
2. As the concentration is <50 mg/kg, per the USEPA, the oil/transformer is considered a non-PCB transformer (as per USEPA PCB Inspection Manual-August 2004)

TABLE 7
SUMMARY OF GROUNDWATER ANALYTICAL DATA

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Parameter [1]	NYSDEC Class GA GWQS[2]	MW-1	MW-2	MW-3	MW-5
TCL Volatile Organic Compounds (VOCs) - ug/L					
Acetone	**50**	4.9 J	3.4 J	5.5 J	ND
Carbon disulfide	**60**	0.65 J	0.2 J	0.88 J	0.54 J
Chloroform	**7**	ND	2	ND	ND
Methylcyclohexane	**--**	ND	0.2 J	ND	ND
Methylene Chloride	**5**	ND	ND	ND	1.6 J
TCL Semi-Volatile Organic Compounds[1] (SVOCs) - ug/L					
Caprolactam	**--**	ND	ND	3.7 J	--
TAL Metals - mg/L (Dissolved)					
Barium	**1000**	0.092 J-	0.32 J-	0.2 J-	--
Cadmium	**5**	0.00077 J-	ND	0.00073 J-	--
Calcium	**--**	173 J-	259 J-	76.5 J-	--
Cobalt	**--**	ND	0.0029 J-	ND	--
Copper	**200**	0.003 J-	ND	0.0037 J-	--
Magnesium	**35000**	114 J-	156 J-	144 J-	--
Manganese	**300**	0.1 J-	0.11 J-	0.039 J-	--
Nickel	**100**	0.002 J-	0.009 J-	0.0029 J-	--
Potassium	**--**	12.8 J-	54.6 J-	13.2 J-	--
Sodium	**20000**	121 J-	185 J-	31.5 J-	--
Zinc	**5000**	0.016 J-	ND	0.018 J-	--
Organochlorine Pesticides[1] ug/L					
Endosulfan I	**--**	ND	0.056	ND	--
delta-BHC	**0.04**	ND	ND	0.012 J	--
Herbicides[1] ug/L					
Total Herbicides	**--**	ND	ND	ND	--
Polychlorinated Biphenyls[1] (PCBs) ug/L					
PCB 1254	**--**	ND	ND	ND	0.67 J
Total PCBs	**0.09**	ND	ND	ND	**0.67 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 TOGS 1.1.1 Class GA Groundwater Quality Standards (GWQS).

Definitions:
ND = Parameter not detected above laboratory detection limit.
"--" = No GWQS available or parameter not analyzed for.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
J- = The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high

Exceeds NYSDEC Class GA GWQS

TABLE 8
SUMMARY OF EMERGENT CONTAMINENT GROUNDWATER SAMPLING RESULTS

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Parameter	Monitoring Well		
	MW-1	MW-2	MW-3
Semi-Volatile Organic Compounds by Method 8270 SIM (ng/L)			
1,4 - Dioxane	ND	ND	ND
Perfluorinated Alkyl Acids by Method 537 (ng/L)			
Perfluorobutanoic acid (PFBA)	4.7 B	11 B	7.8 B
Perfluoropentanoic acid (PFPeA)	1.9	1.2	4.4
Perfluorobutanesulfonic acid (PFBS)	1 J	1.2 J	0.72 J
Perfluorohexanoic acid (PFHxA)	1.1 J	0.6 J	2.1
Perfluoroheptanoic acid (PFHpA)	0.84 J	0.41 J	0.42 J
Perfluorohexanesulfonic acid (PFHxS)	ND	0.8 JB	ND
Perfluorooctanoic acid (PFOA)	1.6 B	ND	ND
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2FTS)	5.7 J	3.6 J	1.3
Perfluorooctanesulfonic acid (PFOS)	0.63 J	ND	ND
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ND

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.

Definitions:

SIM = selective ion method
ng/L = nanograms per liter; parts per trillion
J = Estimated value
ND = Indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).
B = Compound was found in laboratory blank sample.

TABLE 9

REMEDIAL INVESTIGATION TEST PIT SUMMARY AND GAMMA WALKOVER RESULTS

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Location	Test Pit Dimensions			Fill Thickness (fbgs)	Peak PID Scan (ppm)	Approximate DTW (fbgs)	Radiological Survey* (cpm)	Depth (fbgs) and Soil Description (ASTM D2488: Visual-Manual Procedure)
	Length (feet)	Width (feet)	Depth (fbgs)					
TP-1	10.0	3.0	11.0	0.0-1.0	0.0	6.0	8500 - 10743	***0.0 - 0.5 Gravel*** *- grey, moist, mostly well sorted gravel ,some fine sand, loose, no odors* ***0.5 - 1.0: Slag*** *- Blue,grey, white, moist ,mostly slag, some subangular gravel, little fill (brick, glass, metal),no odors* ***1.0 - 11.0: Sandy Lean Clay -*** *Brown with grey mottling, moist to wet (6'), mostly medium plasticity fines, little fine sand, few subrounded gravel, very stiff, massive, no odors*
TP-2	10.0	3.0	11.0	0.0-1.0	0.0	8.0	8200-11750	***0.0 - 0.5 Gravel*** *- grey, moist, mostly well sorted gravel ,some fine sand, loose, no odors* ***0.5 - 1.0: Slag*** *- Blue,grey, white, moist ,mostly slag, some subangular gravel, little fill (brick, glass, metal),no odors* ***1.0 - 11.0: Sandy Lean Clay -*** *Brown with grey mottling, moist to wet (8'), mostly medium plasticity fines, little fine sand, few subrounded gravel, very stiff, massive, no odors (clay tile sewer line encountered 2-3 fbgs)*
TP-3	10.0	3.0	12.0	0-1.0	0.0	N/A	No Slag	***0.0 - 0.5 Gravel*** *- grey, moist, mostly well sorted gravel ,some fine sand, loose, no odors* ***0.5 - 1.0: Fill*** *- grey, moist, mostly subangular gravel,little fill (brick, cinders, glass, metal),no odors* ***1.0 - 12.0: Sandy Lean Clay -*** *Brown with grey mottling, moist, mostly medium plasticity fines, little fine sand, few subrounded gravel, very stiff, massive, no odors encountered clay tile pipe at 2-3 fbgs.*
TP-4	10.0	3.0	11.0	0.0-1.5	0.0	N/A	No slag	***0.0 - 0.5 Gravel*** *- grey, moist, mostly well sorted gravel ,some fine sand, loose, no odors* ***0.5 - 1.5: Fine sand with gravel*** *- Tan/ Grey, moist ,mostly fine sand, some large cobles of limestone ,no odors* ***1.5 - 11.0: Sandy Lean Clay -*** *Brown with grey mottling, moist, mostly medium plasticity fines, little fine sand, few subrounded gravel, very stiff, massive, no odors*
TP-5	10.0	3.0	11.0	0.0-0.5	0.0	N/A	No Slag	***0.0 - 0.5 Gravel*** *- grey, moist, mostly well sorted gravel ,some fine sand loose, no odors* ***0.5 - 11.0: Sandy Lean Clay -*** *Brown with grey mottling, moist, mostly medium plasticity fines, little fine sand, few subrounded gravel, very stiff, massive, no odors*

Notes:

1. fbgs = feet below ground surface
2. DTW = depth to water
3. PID = MiniRae photoionization detector equipped with a 10.6 eV lamp
4. ppm = parts per million
5. cpm = counts per minute

*- General Site background readings of suspected slag in exterior areas at the Site ranged between 8,200 cpm and 11,750 cpm. Additional readings taken off-site at a nearby park (Front Park) ranged from 7,500 cpm to 8,

TURNKEY ENVIRONMENTAL RESTORATION, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 10

STANDARDS, CRITERIA, AND GUIDANCE (SCGs)

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Citation	Title	Regulatory Agency
General		
29CFR 1910.120	Hazardous Waste Operations and Emergency Response	US Dept. of Labor, OSHA
29CFR 1910.1000	OSHA General Industry Air Contaminants Standard	US Dept. of Labor, OSHA
29CFR 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
Not Applicable	New York State Stormwater Management Design Manual	NYSDEC
Section 404	Clean Water Act	USACE
Soil/Fill		
6NYCRR Part 375	Environmental Remediation Programs	NYSDEC
DEC Policy CP-51	Soil Cleanup Guidance	NYSDEC
NYSDEC, June 2014	Technical Guidance for Screening Contaminated Sediments: LEL/SEL	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		
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 NY	NYSDOH
Solid Waste		
6NYCRR 360	Solid Waste Management Facilities	NYSDEC
6NYCRR 364	Waste Transporters	NYSDEC

TABLE 11

COST ESTIMATE FOR TRACK 4 RESTRICTED-RESIDENTIAL USE CLEANUP ALTERNATIVE

990 NIAGARA STREET SITE

BUFFALO, NEW YORK

Item	Quantity	Units	Unit Cost	Total Cost
Pre-Removal Work				
General Conditions	1	LS	$ 44,000.00	$ 44,000.00
Remedial Action Work Plan	1	LS	$ 7,500.00	$ 7,500.00
Survey/Stakeout	1	LS	$ 2,785.00	$ 2,785.00
Transformer Removal (assumes non-hazardous)	1	LS	$ 10,000.00	$ 10,000.00
Clearing, Grubbing, Erosion Controls	1	LS	$ 5,000.00	$ 5,000.00
			Subtotal Pre-Removal Work	**$ 69,285.00**
North Exterior Area				
Shoring along west property line	102	LF	$ 562.00	$ 57,324.00
Remove all non-hazardous contaminated soil	1	LS	$ 281,100.00	$ 281,100.00
Underpinning Existing Building North line	180	LF	$ 400.00	$ 72,000.00
Excavation of underpinning material	80	CY	$ 150.00	$ 12,000.00
Structural Backfill	1000	CY	$ 35.00	$ 35,000.00
Waste Profile Sampling and analysis	1	LS	$ 6,000.00	$ 6,000.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	30	LS	$ 600.00	$ 18,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 5,000.00	$ 5,000.00
Sampling and Analysis for backfill Soils	2	LS	$ 920.00	$ 1,840.00
			Subtotal North Exterior Area	**$ 493,264.00**
Transformer Area				
Remove all non-hazardous contaminated soil	1	LS	$ 48,250.00	$ 48,250.00
Waste Profile Sampling and analysis	1	LS	$ 500.00	$ 500.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	10	LS	$ 600.00	$ 6,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 500.00	$ 500.00
Sampling and Analysis for backfill Soils	1	LS	$ 920.00	$ 920.00
Replace Concrete Floors	950	SF	$ 6.00	$ 5,700.00
			Subtotal Transformer Area	**$ 66,870.00**
West Exterior Area				
Remove all non-hazardous contaminated soil	1	LS	$ 45,140.00	$ 45,140.00
Structural Shoring of building for access	1	LS	$ 20,000.00	$ 20,000.00
Remove Current/Former UST's	1	EA	$ 2,400.00	$ 2,400.00
Remove Contaminated soils around the UST's	100	CY	$ 108.75	$ 10,875.00
Import Structural Fill for Backfill	100	CY	$ 33.00	$ 3,300.00
Waste Profile Sampling and analysis	3	LS	$ 4,000.00	$ 12,000.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	10	LS	$ 600.00	$ 6,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 500.00	$ 500.00
Sampling and Analysis for backfill Soils	1	LS	$ 920.00	$ 920.00
			Subtotal West Exterior Area	**$ 106,135.00**
Reporting/Institutional Controls				
Final Engineering Report	1	LS	$ 18,000.00	$ 18,000.00
Environmental Easement	1	LS	$ 10,000.00	$ 10,000.00
Site Management Plan	1	LS	$ 15,000.00	$ 15,000.00
			Subtotal Reporting/Institutional Controls	**$ 43,000.00**
			Subtotal Capital Cost	$ 778,554.00
2% Camp, Health, and Safety				$ 15,571.08
35% Engineering Oversight and Contingency				$ 272,493.90
			Total Capital Cost	**$ 1,066,618.98**

TABLE 12

COST ESTIMATE FOR TRACK 1 UNRESTRICTED USE CLEANUP ALTERNATIVE

990 NIAGARA STREET SITE

BUFFALO, NEW YORK

Item	Quantity	Units	Unit Cost	Total Cost
Pre-Removal Work				
General Conditions	1	LS	$ 66,100.00	$ 66,100.00
Remedial Action Work Plan	1	LS	$ 7,500.00	$ 7,500.00
Survey/Stakeout	1	LS	$ 2,785.00	$ 2,785.00
Transformer Removal (assumes non-hazardous)	1	LS	$ 10,000.00	$ 10,000.00
Clearing, Grubbing, Erosion Controls	1	LS	$ 5,000.00	$ 5,000.00
			Subtotal Pre-Removal Work	**$ 91,385.00**
North Exterior Area				
Shoring along west property line	102	LF	$ 562.00	$ 57,324.00
Remove all non-hazardous contaminated soil	1	LS	$ 281,100.00	$ 281,100.00
Underpinning Existing Building North line	180	LF	$ 400.00	$ 72,000.00
Excavation of underpinning material	80	CY	$ 150.00	$ 12,000.00
Structural Backfill	1000	CY	$ 35.00	$ 35,000.00
Waste Profile Sampling and analysis	1	LS	$ 6,000.00	$ 6,000.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	40	LS	$ 600.00	$ 24,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 5,000.00	$ 5,000.00
Sampling and Analysis for backfill Soils	2	LS	$ 920.00	$ 1,840.00
			Subtotal North Exterior Area	**$ 499,264.00**
Transformer Area				
Remove all non-hazardous contaminated soil	1	LS	$ 48,250.00	$ 48,250.00
Waste Profile Sampling and analysis	1	LS	$ 500.00	$ 500.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	10	LS	$ 600.00	$ 6,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 500.00	$ 500.00
Sampling and Analysis for backfill Soils	1	LS	$ 920.00	$ 920.00
Replace Concrete Floors	950	SF	$ 6.00	$ 5,700.00
			Subtotal Transformer Area	**$ 66,870.00**
SB-10 Area				
Remove all non-hazardous contaminated soil	1	LS	$ 120,000.00	$ 120,000.00
Waste Profile Sampling and analysis	1	LS	$ 2,000.00	$ 2,000.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	10	LS	$ 600.00	$ 6,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 1,500.00	$ 1,500.00
Sampling and Analysis for backfill Soils	2	LS	$ 920.00	$ 1,840.00
Replace Concrete Floors	900	SF	$ 7.00	$ 6,300.00
			Subtotal SB-10 Area	**$ 142,640.00**
West Exterior Area				
Remove all non-hazardous contaminated soil	1	LS	$ 45,140.00	$ 45,140.00
Structural Shoring of building for access	1	LS	$ 20,000.00	$ 20,000.00
Remove Current/Former UST's	1	EA	$ 2,400.00	$ 2,400.00
Remove Contaminated soils around the UST's	100	CY	$ 108.75	$ 10,875.00
Import Structural Fill for Backfill	100	CY	$ 33.00	$ 3,300.00
Waste Profile Sampling and analysis	3	LS	$ 4,000.00	$ 12,000.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	10	LS	$ 600.00	$ 6,000.00
Geotech Testing (Compaction of Backfill)	1	LS	$ 500.00	$ 500.00
Sampling and Analysis for backfill Soils	1	LS	$ 920.00	$ 920.00
			Subtotal West Exterior Area	**$ 106,135.00**
Southern Building Area				
Remove all non-hazardous contaminated soil	1	LS	$ 139,600.00	$ 139,600.00
Structural Shoring of building for access	1	LS	$ 10,000.00	$ 10,000.00
Waste Profile Sampling and analysis	4	LS	$ 4,000.00	$ 16,000.00
Groundwater Management	1	LS	$ 5,000.00	$ 5,000.00
Verification Sampling and Analysis for Impacted Soils	20	LS	$ 600.00	$ 12,000.00
Geotech Testing (Compaction of Backfill)	4	LS	$ 500.00	$ 2,000.00
Sampling and Analysis for backfill Soils	4	LS	$ 920.00	$ 3,680.00
Replace Concrete Floors	4,250	SF	$ 7.00	$ 29,750.00
			Subtotal Southern Building Area	**$ 218,030.00**
Reporting				
Final Engineering Report	1	LS	$ 18,000.00	$ 18,000.00
			Subtotal Final Engineering Report	**$ 18,000.00**
			Subtotal Capital Cost	**$ 1,142,324.00**
2% Camp, Health, and Safety				$ 22,846.48
35% Engineering Oversight and Contingency				$ 399,813.40
			Total Capital Cost	**$ 1,564,983.88**

TABLE 13

COMPARISON OF REMEDIAL ALTERNATIVES

990 NIAGARA STREET SITE
BUFFALO, NEW YORK

Remedial Alternative	NYSDEC DER-10 Evaluation Criteria								
	1. Overall	2. SCGs	3. Eff & Perm	4. Reduction	5. Imp & Eff	6. Implement	7. Cost Eff	8. Community	9. Land Use
Alternative 1 - No Further Action						✓	$0	TBE	
Alternative 2 - Track 4 Cleanup	✓	✓			✓	✓	$1.06 million	TBE	✓
Alternative 3 - Track 1 Cleanup	✓	✓	✓	✓	✓	✓	$1.56 million	TBE	✓

Notes:

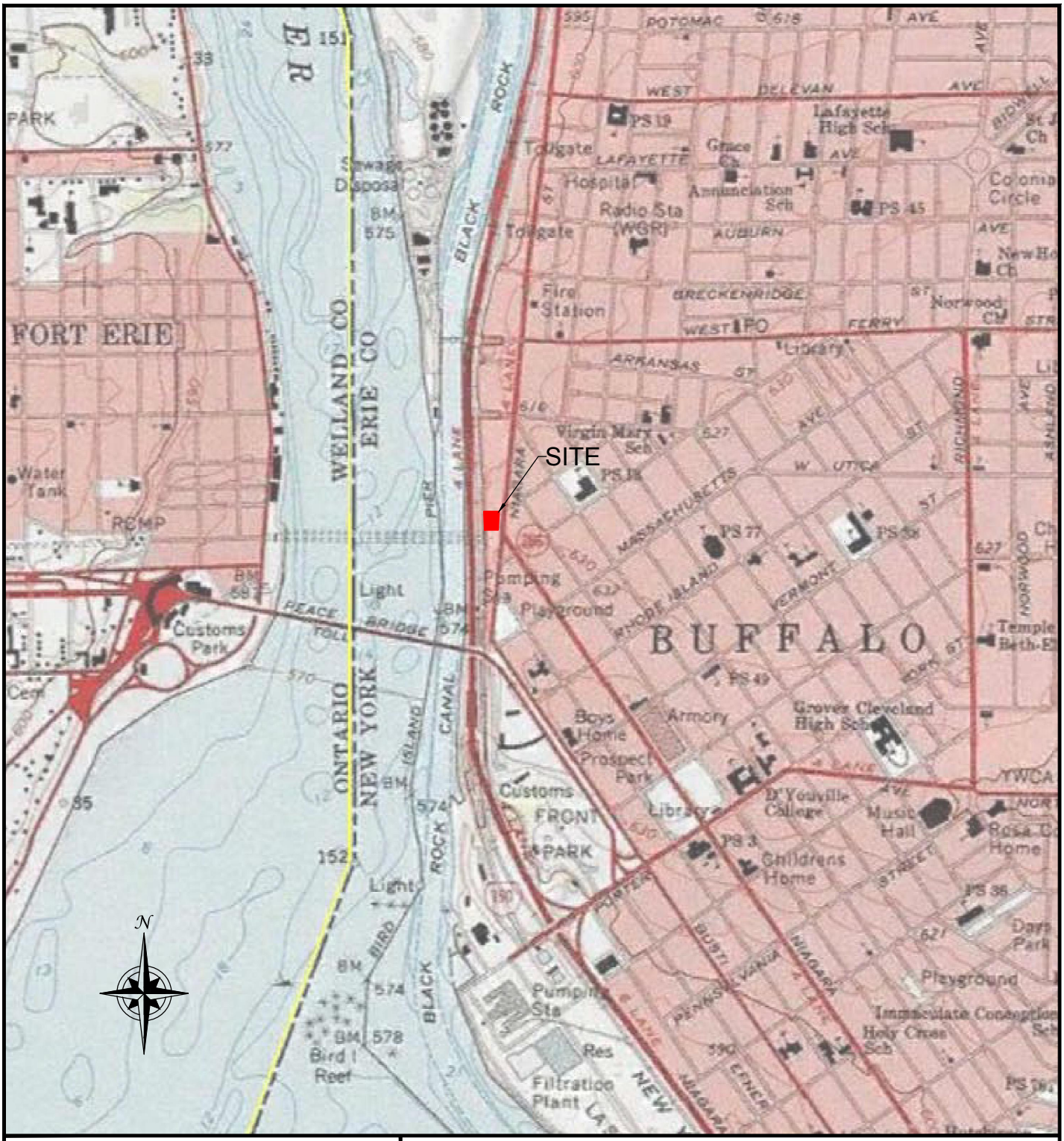
1. Overall Protectiveness of Public Health and the Environment
2. Compliance with Standards, Criteria, and Guidance (SCGs)
3. Long-Term Effectiveness and Permanence
4. Reduction of Toxicity, Mobility, or Volume of Contamination
5. Short-Term Impacts and Effectiveness
6. Implementability (Technical and Administrative)
7. Cost Effectiveness
8. Community Acceptance
9. Land Use

✓ = Alternative satisfies criterion
TBE = To be evaluated following public comment period

FIGURES

F:\CAD\Benchmark\990 Niagara LLC\990 Niagara Street\RI\Figure 1; Site Location and Vicinity Map.dwg, DWG To PDF.pc3

FIGURE 1



SITE LOCATION AND VICINITY MAP

REMEDIAL INVESTIGATION/ALTERNATIVE ANALYSIS REPORT

990 NIAGARA STREET

BUFFALO, NEW YORK

PREPARED FOR

990 NIAGARA LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

IN ASSOCIATION WITH

TURNKEY ENVIRONMENTAL RESTORATION, LLC

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

PROJECT NO.: 0395-016-002

DATE: DECEMBER 2018

DRAFTED BY: RFL/CCB

DISCLAIMER: ***PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC*** *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 & TURNKEY ENVIRONMENTAL RESTORATION, LLC.*

F:\CAD\Benchmark\990 Niagara LLC\990 Niagara Street\RI\Figure 2; Site Plan Aerial.dwg

FIGURE 2



LEGEND:

BCP SITE BOUNDARY

PARCEL BOUNDARY

80' 0' 80' 160'

N

SCALE: 1 INCH = 80 FEET
SCALE IN FEET
(approximate)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
IN ASSOCIATION WITH
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0395-016-002

DATE: DECEMBER 2018

DRAFTED BY: RFL/CCB

SITE PLAN (AERIAL)

REMEDIAL INVESTIGATION/ALTERNATIVE ANALYSIS REPORT

990 NIAGARA STREET
BUFFALO, NEW YORK

PREPARED FOR
990 NIAGARA LLC

DISCLAIMER: ***PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC*** *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 & TURNKEY ENVIRONMENTAL RESTORATION, LLC.*

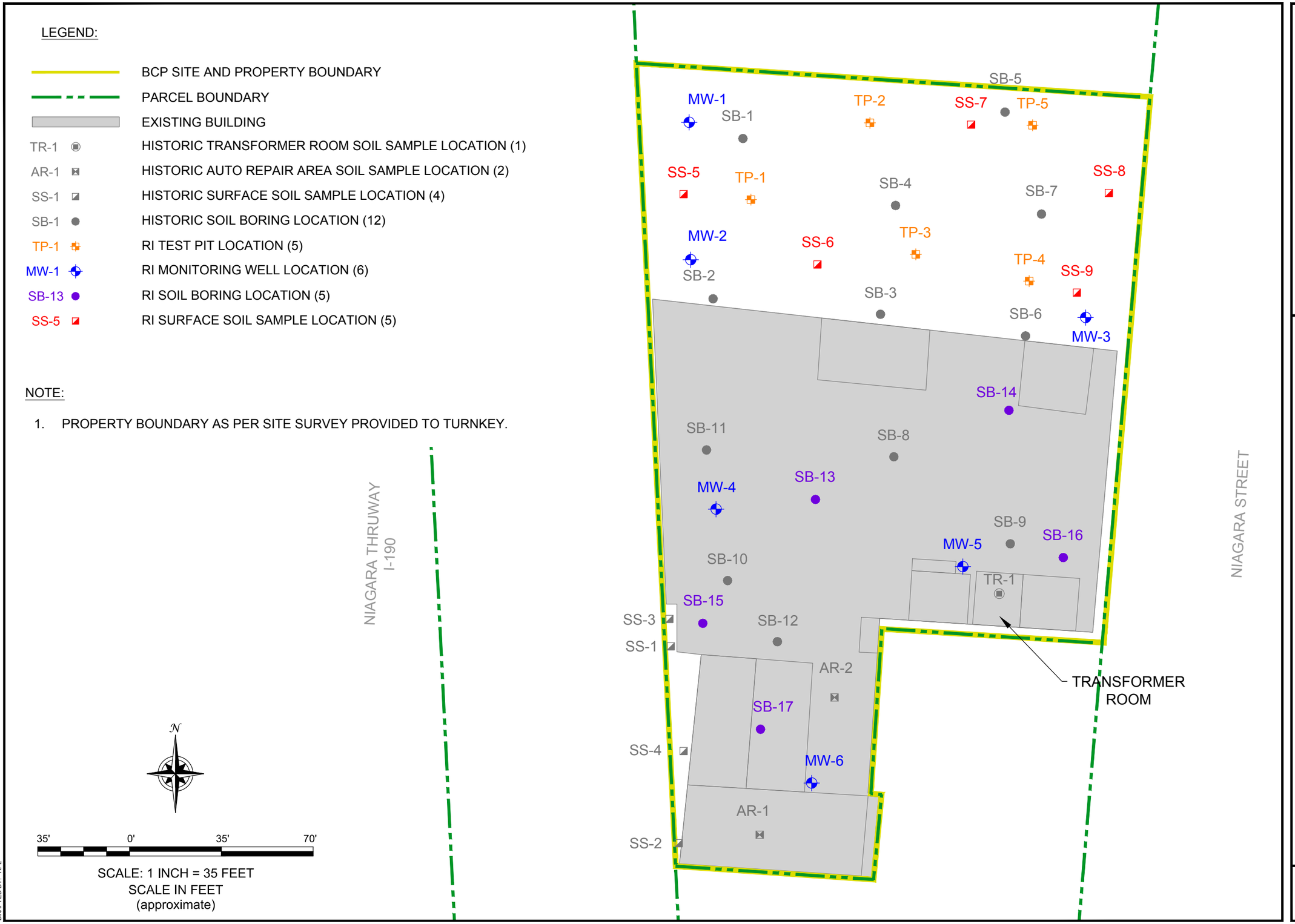
F:\CAD\Benchmark\990 Niagara LLC\990 Niagara Street\RI\Figure 3; Remedial Investigation Sample Locations.dwg

LEGEND:

	BCP SITE AND PROPERTY BOUNDARY
	PARCEL BOUNDARY
	EXISTING BUILDING
TR-1	HISTORIC TRANSFORMER ROOM SOIL SAMPLE LOCATION (1)
AR-1	HISTORIC AUTO REPAIR AREA SOIL SAMPLE LOCATION (2)
SS-1	HISTORIC SURFACE SOIL SAMPLE LOCATION (4)
SB-1	HISTORIC SOIL BORING LOCATION (12)
TP-1	RI TEST PIT LOCATION (5)
MW-1	RI MONITORING WELL LOCATION (6)
SB-13	RI SOIL BORING LOCATION (5)
SS-5	RI SURFACE SOIL SAMPLE LOCATION (5)

NOTE:

1. PROPERTY BOUNDARY AS PER SITE SURVEY PROVIDED TO TURNKEY.



SCALE: 1 INCH = 35 FEET
SCALE IN FEET
(approximate)

DATE: DECEMBER 2018
DRAFTED BY: RFL

TURNKEY ENVIRONMENTAL RESTORATION, LLC
IN ASSOCIATION WITH
BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0395-016-001

REMEDIAL INVESTIGATION SAMPLE LOCATIONS

REMEDIAL INVESTIGATION/ ALTERNATIVE ANALYSIS REPORT

990 NIAGARA STREET
BUFFALO, NEW YORK

PREPARED FOR
990 NIAGARA LLC

FIGURE 3

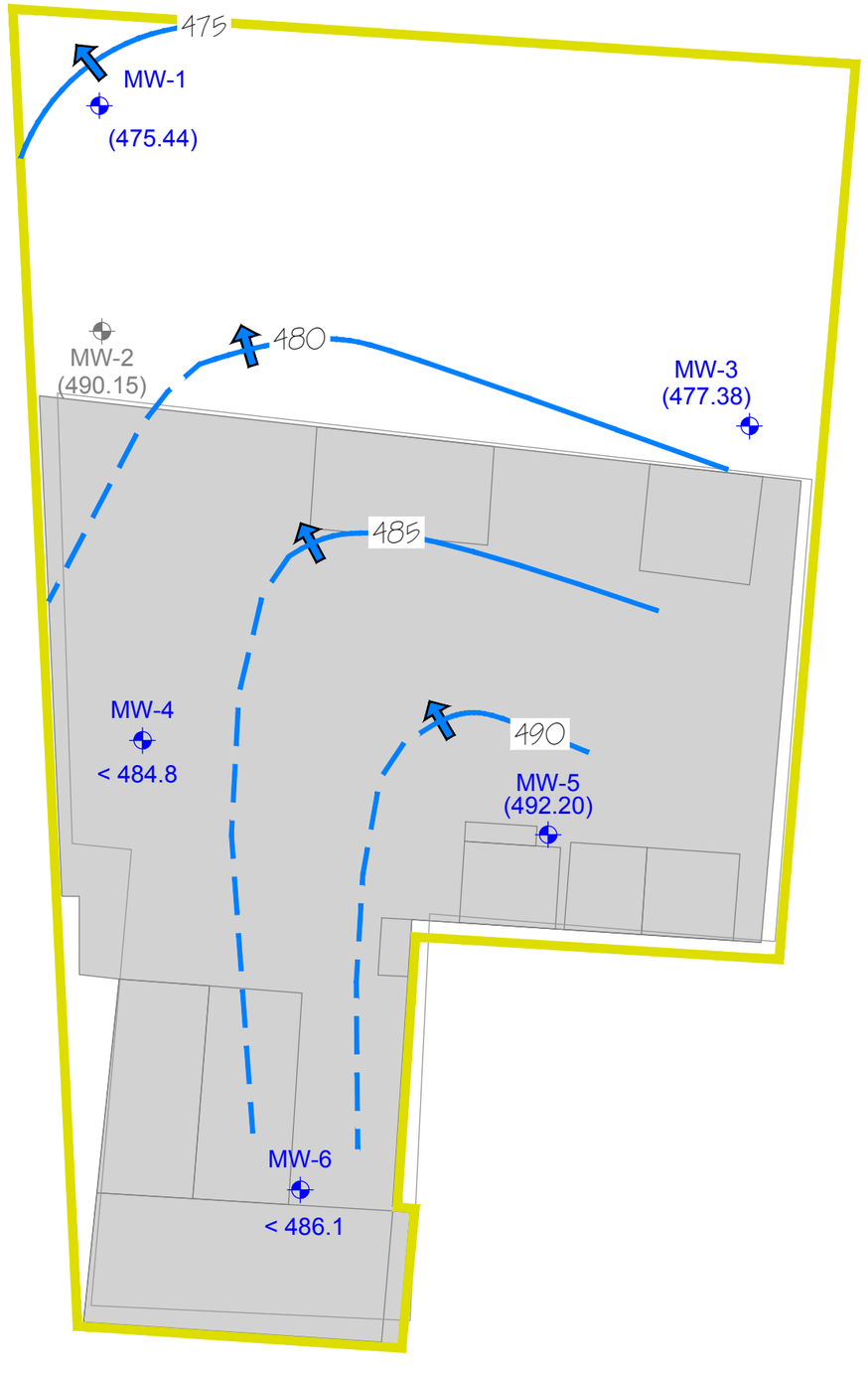
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LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- EXISTING BUILDING
- MW-1 — MONITORING WELL LOCATION
- MW-2 — GROUNDWATER ELEVATION DATA ANOMALOUS & NOT USED.
- 583 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

NOTES:

1. GROUNDWATER WAS NOT PRESENT IN WELLS MW-4 AND MW-6. GROUNDWATER LEVELS AT THESE WELLS BELOW THE ELEVATION INDICATED.



N

35' 0' 35' 70'

SCALE: 1 INCH = 35 FEET
SCALE IN FEET
(approximate)

DATE: DECEMBER 2018
DRAFTED BY: CCB

TURNKEY ENVIRONMENTAL RESTORATION, LLC
IN ASSOCIATION WITH
BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0395-016-001

GROUNDWATER ISOPOTENTIAL MAP

REMEDIAL INVESTIGATION/ ALTERNATIVE ANALYSIS REPORT

990 NIAGARA STREET
BUFFALO, NEW YORK

PREPARED FOR
990 NIAGARA LLC

FIGURE 4

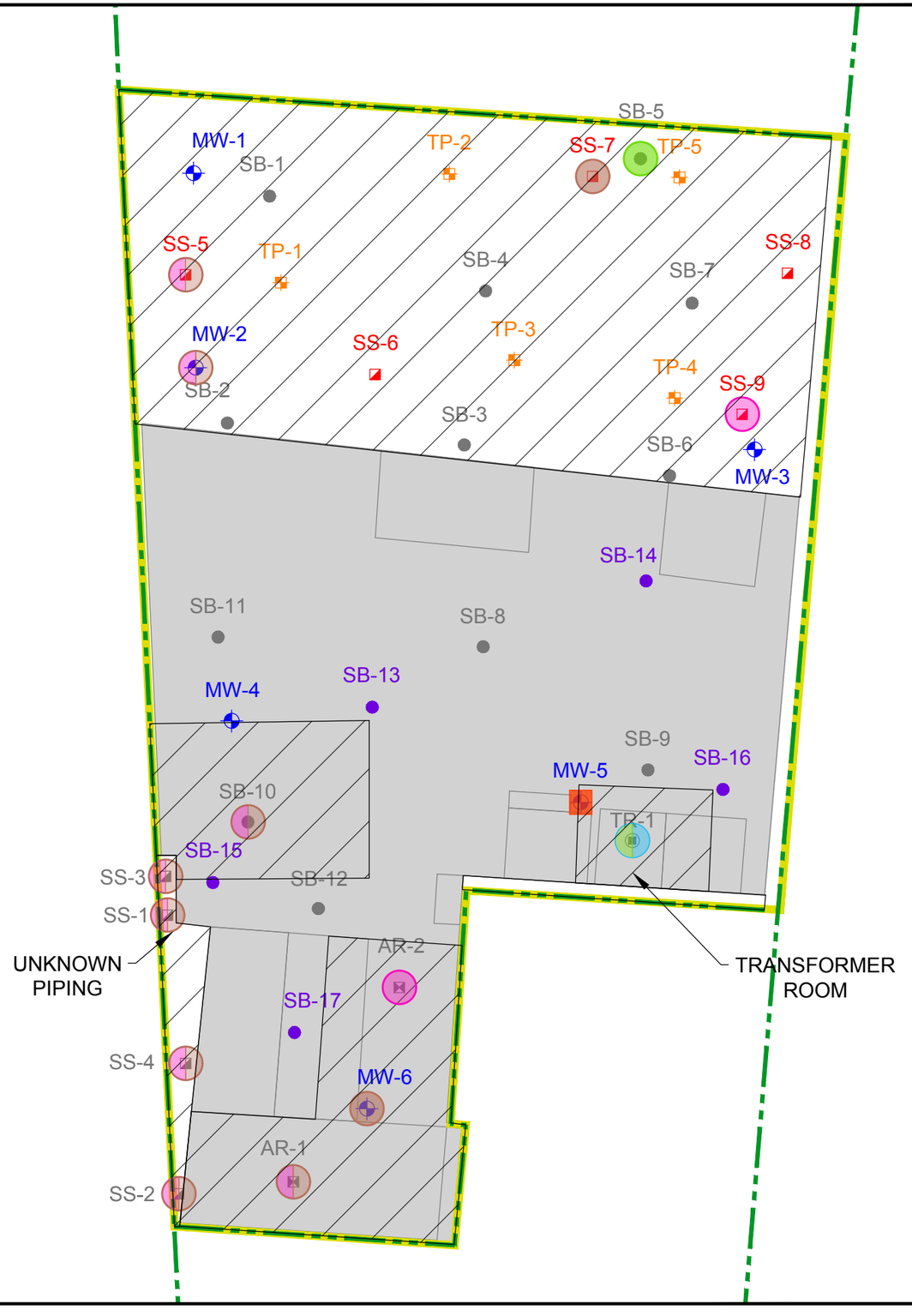
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F:\CAD\Benchmark\990 Niagara LLC\990 Niagara Street\R\Figure 5; Preferred Alter UR rev.dwg

LEGEND:

- BCP SITE AND PROPERTY BOUNDARY
- PARCEL BOUNDARY
- EXISTING BUILDING
- TR-1 HISTORIC TRANSFORMER ROOM SOIL SAMPLE LOCATION
- AR-1 HISTORIC AUTO REPAIR AREA SOIL SAMPLE LOCATION
- SS-1 HISTORIC SURFACE SOIL SAMPLE LOCATION
- SB-1 HISTORIC SOIL BORING LOCATION
- TP-1 TEST PIT LOCATION
- MW-1 MONITORING WELL LOCATION
- SB-13 SOIL BORING LOCATION
- SS-5 SURFACE SOIL SAMPLE LOCATION
- GROUNDWATER QUALITY EXCEEDANCE - PCBs ONLY
- ELEVATED PID READINGS IN SOIL
- PCBS EXCEEDING USCO AND GCS
- METALS EXCEEDING USCO
- SVOCs EXCEEDING USCOS
- SVOCs AND METALS EXCEEDING USCOS
- PROPOSED REMEDIAL EXCAVATION AREA

NOTES:
1. USCOs MEANS NYSDEC PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVE.
2. SVOCs MEANS SEMIVOLATILE ORGANIC COMPOUNDS.
3. PID MEANS PHOTOIONIZATION DETECTOR READING FROM FIELD SCREENING OF SOIL SAMPLES.



N

35' 0' 35' 70'

SCALE: 1 INCH = 35 FEET
SCALE IN FEET
(approximate)

DATE: DECEMBER 2018
DRAFTED BY: RFL

TURNKEY ENVIRONMENTAL RESTORATION, LLC
IN ASSOCIATION WITH
BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0395-016-001

PREFERRED REMEDY ALTERNATIVE 3 UNRESTRICTED USE (TRACK 1) CLEANUP

REMEDIAL INVESTIGATION/ ALTERNATIVE ANALYSIS REPORT

990 NIAGARA STREET
BUFFALO, NEW YORK

PREPARED FOR
990 NIAGARA LLC

FIGURE 5

DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC 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 & TURNKEY ENVIRONMENTAL RESTORATION, LLC.

APPENDIX A

PROJECT PHOTOGRAPHIC LOG

SITE PHOTOGRAPHS

Photo 1:



Photo 2:



Photo 3:



Photo 4:



Photo 1: View of TP-1.

Photo 2: View of TP-2.

Photo 3: View of TP-4.

Photo 4: View of TP-5.

990 Niagara Street Photo Date: September 2018	BENCHMARK

SITE PHOTOGRAPHS

Photo 5:



Photo 6:



Photo 7:



Photo 8:



Photo 5: View of fill material noted in exterior areas.

Photo 6,7,8: Additional fill materials noted in exterior areas.

SITE PHOTOGRAPHS

Photo 9:



Photo 10:

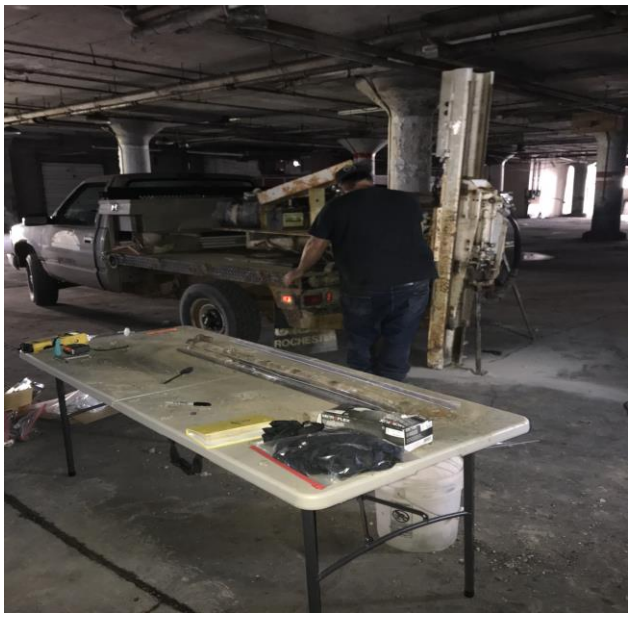


Photo 11:

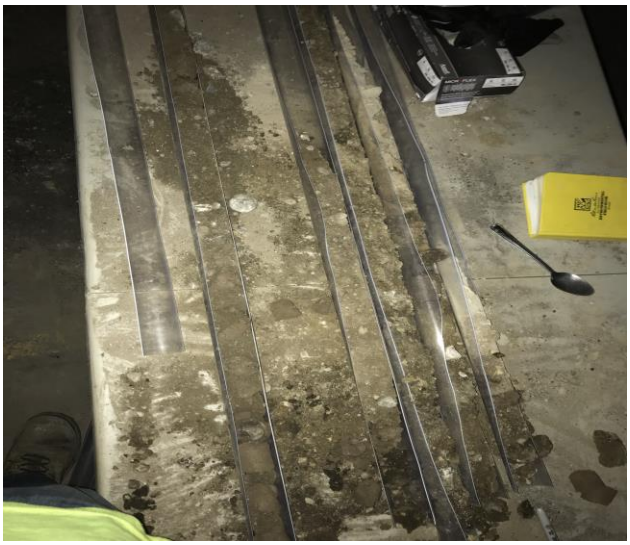


Photo 12:



Photo 9,10: View of the interior soil boring drilling.

Photo 11: View of the typical soils noted beneath the existing building.

Photo 12: View of the 1" monitoring wells installed within the existing building.

SITE PHOTOGRAPHS

Photo 13:



Photo 14:



Photo 15:



Photo 13,14: View of the exterior monitoring well drilling and installation activities.

Photo 15: View of the typical clay soils encountered during the exterior monitoring well drilling.

APPENDIX B

FIELD BOREHOLE AND MONITORING WELL COMPLETION LOGS

Project No: T0395-016-001

Borehole Number: AR-1

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.9								
	0.9	***Gravel Subbase*** Grey, mostly angular gravel, few fine sands, no odors	1				0.2	Sampled (1-1.75')	
		Fill Brown, moist, mostly medium silty sand, few brick, slag, cinders, no odors							
		End of Borehole							
5.0									
10.0									
15.0									
20.0									

Drilled By: TurnKey Environmental Restoration
Drill Rig Type: NA
Drill Method: Hand Auger
Comments:
Drill Date(s): 10-6-2016

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

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: AR-2

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.7 / 0.7	***Gravel Subbase*** Grey, mostly angular gravel, few fine sands, no odors	1				0.5	Sampled (1-1.75')	
	-1.5 / 1.5	***Fill*** Brown, moist, mostly medium silty sand, few brick, slag, cinders, no odors							
		End of Borehole							
5.0									
10.0									
15.0									
20.0									

Drilled By: TurnKey Environmental Restoration
Drill Rig Type: NA
Drill Method: Hand Auger
Comments:
Drill Date(s): 10-6-2016

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

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: TR-1

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.5								
	0.5	***Gravel Subbase*** Grey, mostly angular gravel, few fine sands, no odors	1				18.7	Sampled (.5-1.5')	
	-1.5								
	1.5	***Fill*** Black, moist, mostly medium silty sand, few brick, slag, cinders, gravel, oil-like odors							
		End of Borehole							
5.0									
10.0									
15.0									
20.0									

Drilled By: TurnKey Environmental Restoration
Drill Rig Type: NA
Drill Method: Hand Auger
Comments:
Drill Date(s): 10-6-2016

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

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: MW-1

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
-2.0									
	0.0	Ground Surface							
	0.0	***Fill***							
	-1.0	Dark brown/grey, moist, mostlysubrounded gravel, little fill (brick, cinders, slag), some fine sand, no odors	1	14	2		0.0		
	1.0	***Sandy Lean clay***							
3.0		Reddish brown with grey mottling, moist to damp (14'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	2	28	2		0.0		
			3	22	1.5		0.0		
			4	22	2		0.0		
8.0			5	9	2		0.0		
			6	28	2		0.0		
			7	27	2		0.0		
13.0			8	17	2		0.0		
			9	9	2		0.0		
			10	8	2		0.0		
18.0			11	12	2		0.0		
			12	17	2		0.0	Sampled (22-24')	
23.0			13	15	2		0.0		
	-27.0								
	27.0	***Bedrock***							
28.0									

Drilled By: SJB
Drill Rig Type: Track Mounted Drill Rig
Drill Method: 4.25-inch HSA w/ Continuous 2' split spoon
Comments:
Drill Date(s): 9/12/2018

Hole Size: 8.5- inch
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: MW-2

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
-1.0	0.0	Ground Surface							
	0.0	***Asphalt***							
		Fill Dark brown/ black, moist, mostly fill (brick, cinders, concrete), some fine sand, no odors	1	14	2		0.0	Sampled (0-2')	
		Sandy Lean clay Reddish brown with grey mottling, moist to damp (20'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	2	28	2		0.0		
4.0			3	22	1.5		0.0		
			4	22	2		0.0		
			5	9	2		0.0		
9.0			6	28	2		0.0		
			7	27	2		0.0		
			8	17	2		0.0		
14.0			9	9	2		0.0		
			10	8	2		0.0		
19.0			11	12	2		0.0		
			12	17	2		0.0		
24.0	-25.0		13	15	2		0.0		
	25.0	***Bedrock*** End of Borehole							
29.0									

Drilled By: SJB
Drill Rig Type: Track Mounted Drill Rig
Drill Method: 4.25-inch HSA w/ Continuous 2' split spoon
Comments:
Drill Date(s): 9/12/2018

Hole Size: 8.5- inch
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: MW-3

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
-1.0	0.0	Ground Surface							
	0.0	***Asphalt***							
		Fill Dark brown/ black, moist, mostly fill (brick, cinders, concrete), some fine sand, no odors	1	14	2		0.0		
		Sandy Lean clay Reddish brown with grey mottling, moist to damp (20'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	2	28	2		0.0		
4.0			3	22	1.5		0.0		
			4	22	2		0.0		
9.0			5	9	2		0.0		
			6	28	2		0.0		
			7	27	2		0.0		
14.0			8	17	2		0.0		
			9	9	2		0.0		
19.0			10	8	2		0.0		
			11	12	2		0.0	Sampled (20-22')	
			12	17	2		0.0		
24.0			13	15	2		0.0		
	-26.0								
	26.0	***Bedrock***							
29.0									

Drilled By: SJB
Drill Rig Type: Track Mounted Drill Rig
Drill Method: 4.25-inch HSA w/ Continuous 2' split spoon
Comments:
Drill Date(s): 9/11/2018

Hole Size: 8.5- inch
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: MW-4

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
-3.0									
	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.8 / 0.8	***Fill*** Dark brown/ black, moist, mostly fill (brick, cinders, concrete, slag), some fine sand, no odors	1		1		0.0		
2.0		***Silty Sand*** Brownish black, moist, mostly fine sand, little silt, few subrounded gravel, no odors					0.0		
							0.0		
	-5.0 / 5.0	***Sandy Lean clay*** Reddish brown with grey mottling, moist to damp (16'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	2		4		0.0		
7.0							0.0		
							0.0		
			3		4		0.0		
							0.0		
							0.0		
12.0			4		4				
			5		4			Sampled (16-18')	
17.0	-18.0 / 18.0	End of Borehole							

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 8/30/18

Hole Size: 1.5"
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: MW-5

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
-3.0									
	0.0	Ground Surface							
	0.0	***Concrete/ asphalt***							
		Sandy Lean clay Reddish brown with grey mottling, moist to damp (7.5'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	1		1		0.0	Sampled (.5-2')	
2.0							0.0		
							0.0		
			2		4		0.0		
							0.0		
7.0							0.0		
							0.0		
			3		4		0.0		
							0.0		
12.0	-12.0	***Geoprobe Refusal***					0.0		
	12.0	End of Borehole							
17.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments: Geoprobe refusal at 12'
Drill Date(s): 8/29/18

Hole Size: 1.5"
Stick-up: 3'
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: MW-6

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
-3.0									
	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.5 / 0.5	***Fill*** Dark brown/ black, moist, mostly fill (brick, cinders, concrete, slag), some fine sand, no odors							
2.0	-2.0 / 2.0	***Silty Sand*** Brownish black, moist, mostly fine sand, little silt, few subrounded gravel, no odors	1		1		0.0	Sampled (2-4')	
			2		4		0.0		
7.0	-7.0 / 7.0	***Sandy Lean clay*** Reddish brown with grey mottling, minimul moisture, mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	3		4		0.0		
12.0			4		4		0.0		
			5		1				
17.0	-17.0 / 17.0	***Geoprobe Refusal*** End of Borehole							

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments: Refusal at 17 fbgs.
Drill Date(s): 8/30/18

Hole Size: 1.5"
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-1

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Silty Sand*** Reddish brown, moist, mostly medium plasticity fines, some fine sands, trace subangular gravel, stiff, massive, grey mottling, no odors					0.0		
	-1.5 / 1.5	***Sandy Lean clay*** Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	1		3		0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
			3		4		0.0		
10.0							0.0		
	-12.0 / 12.0	***Sandy Lean Clay*** As above, wet, no odors	4		4		0.0		
15.0							0.0		
	-16.0 / 16.0	End of Borehole							
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-2

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface							
		Silty Sand Reddish brown, moist, mostly medium plasticity fines, some fine sands, trace subangular gravel, stiff, massive, grey mottling, no odors					0.0		
	-1.5 / 1.5	***Sandy Lean clay*** Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	1		3		0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
			3		4		0.0		
10.0							0.0		
	-12.0 / 12.0	End of Borehole							
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-3

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5 0.5	***Silty Sand*** Grey, moist, mostly silty sands, some brick, gravel, no odors					0.0		
		Sandy Lean clay Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	1		3		0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
	-8.0 8.0	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-4

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5 0.5	***Silty Sand*** Grey, moist, mostly silty sands, some brick, gravel, few slag, no odors							
		Sandy Lean clay Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	1		3		0.0 0.0 0.0		
5.0			2		4		0.0 0.0		
			3		4		0.0 0.0		
10.0	-12.0 12.0	End of Borehole					0.0		
15.0									
20.0									

PID VOCs: 0 – 50 – 100 ppm

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-5

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt***							
	-1.0 1.0	***Gravel***							
	-2.0 2.0	***Silty Sand*** Orangeish tan, moist mostly silty sands, some gravel, slight petroleum-like odors	1		3		37.8, 0.8		
		Well graded sand Tan, moist, mostly well graded sands, few gravel, slight petroleum-like odors					0.0		
5.0		***Sandy Lean clay*** Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	2		4		0.0, 0.0		
10.0			3		4		0.0, 0.0, 0.0		
	-12.0 12.0	End of Borehole							
15.0									
20.0									

PID VOCs: 0 – 50 – 100 ppm

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-6

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt***							
		Gravel							
	-1.8	***Silty Sand***							
	1.8	Tan, moist mostly silty sands, some gravel, no odors	1		3		0.0, 0.0, 0.0		
		Silty sand with fill Greyish black, moist, mostly silty sands, few subangular gravel, few slag, no odors							
		Sandy Lean clay Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	2		4		0.0, 0.0		
5.0	-8.0								
	8.0	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-7

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5 0.5	***Silty Sand with fill*** tannish grey, moist, mostly silty sands, few brick, gravel,glass no odors					0.0		
		Sandy Lean clay Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, trace cinders, stiff, massive, grey mottling, no odors	1		3		0.0 0.0		
5.0			2		4		0.0 0.0		
	-8.0 8.0	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-8

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5	***Concrete***					0.2		
	0.5 -1.0	***Silty Sand*** Brownish black, moist, mostly silty sands, few gravel, no odors					0.0		
	1.0	***Sandy Lean clay*** Reddish brown, moist to wet (8'), mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	1		3		0.0		
5.0			2		4		0.0		
							0.0		
	-8.0 8.0	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-9

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5	***Concrete***							
	0.5 -1.0	***Gravel sub base*** Mostly gravel, some fine sand, no odors							
	1.0	***Sandy Lean clay*** Reddish brown, moist, mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors	1		3		0.0 0.0 0.0		
5.0			2		4		0.0 0.0		
	-8.0 8.0	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-10

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5	***Concrete***							
	0.5 -1.0	***Gravel sub base***							
	1.0	Tan and black, mostly gravel, some fine sand, few medium plasticity fine, organic odor							
		Sandy Lean clay	1		3		0.0		
		Reddish brown, moist, mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors					0.0		
							0.0		
5.0			2		4		0.6		
							1.0		
			3		4		1.0		
10.0									
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-11

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.5								
	0.5	***Gravel sub base***							
	-1.0	Grey, mostly gravel, some fine sand,loose when disturbed, no odors							
	1.0	***Sandy Lean clay***	1		.5		0.5, 0.0, 0.0		
		Reddish brown, moist, mostly medium plasticity fines, some fine sands, stiff, massive, grey mottling, no odors							
			2		1		0.7		
5.0	-5.0								
	5.0	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments: Refusal at 5 fbgs
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-12

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***					0.0		
	-0.5 0.5	***Silty sand with fill*** Greyish Brown, moist, mostly silty sands, few cement, slag, brick no odors	1		3		0.7		
							0.7		
5.0			2		2.5		0.7		
	-6.5 6.5	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments: Refusal at 6.5 fbgs.
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: SB-13

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 50 – 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5	***Concrete***							
	0.5 -1.0	***Silty Sand*** Brownish black, moist, mostly fine sand, little silt, few subrounded gravel, no odors							
	1.0	***Sandy Lean clay*** Reddish brown with grey mottling, moist to damp (8'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	1		1		0.0 0.0 0.0		
5.0			2		4		0.0 0.0 0.0 0.0		
10.0			3		4		0.0 0.0 0.0 0.0	Sampled (8-10')	
	-12.0 12.0	End of Borehole							
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 8/29/18

Hole Size: 1.5"
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: SB-14

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
		Silty Sand Tan, moist, mostly fine sand, few subrounded gravel, no odors							
	-1.5 1.5	***Sandy Lean clay*** Reddish brown with grey mottling, moist to damp (8'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	1		1		0.0		
							0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
			3		4		0.0	Sampled (8-10')	
							0.0		
10.0	-10.0 10.0	***Geoprobe refusal*** End of Borehole							
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments: Geoprobe refusal at 10 fbgs
Drill Date(s): 8/29/18

Hole Size: 1.5"
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: T0395-016-001

Borehole Number: SB-15

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0 -0.5	***Concrete***							
	0.5	***Silty sand with fill*** Greyish brown/black, moist, mostly silty sands, little fill (cement slag, brick), few subronded gravel, no odors	1		2		0.0 0.0 0.0	Sampled (1-3')	
5.0			2		2		0.0		
	-6.0 6.0 -6.5	***Geoprobe refusal***							
	6.5	End of Borehole							
10.0									
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments: Refusal at 6 fbgs.
Drill Date(s): 9-1-2016

Hole Size: 1.5"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: SB-16

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
		Silty Sand Brownish black, moist, mostly fine sand, some pea gravel, little silt, few cinders, no odors							
	-1.5 / 1.5	***Sandy Lean clay*** Reddish brown with grey mottling, moist to damp (8'), mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	1		1		0.0		
							0.0		
							0.0		
5.0			2		4		0.0		
							0.0		
							0.0		
							0.0		
10.0			3		4		0.0		
							0.0	Sampled (10-12')	
	-12.0 / 12.0	End of Borehole					0.0		
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 8/29/18

Hole Size: 1.5"
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

Project No: B0462-018-001

Borehole Number: SB-17

Project: 990 Niagara Street Site

A.K.A.:

Client: 990 Niagara LLC

Logged By: NAS

Site Location: 990 Niagara Street, Buffalo

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (ftbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 50 / 100)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete***							
	-0.5 / 0.5	***Fill*** Dark brown/ black, moist, mostly fill (brick, cinders, concrete, slag), some fine sand, no odors	1		1		0.0		
	-4.0 / 4.0	***Silty Sand*** Brownish black, moist, mostly fine sand, little silt, few subrounded gravel, no odors	2		4		0.0	Sampled (4-6')	
5.0	-7.0 / 7.0	***Sandy Lean clay*** Reddish brown with grey mottling, minimul moisture, mostly medium plasticity fines, little fine sand, very stiff, massive, no odors	3		4		0.0		
10.0	-12.0 / 12.0	End of Borehole							
15.0									
20.0									

Drilled By: Nature's Way Environmental
Drill Rig Type: Truck mounted geoprobe
Drill Method: Direct push
Comments:
Drill Date(s): 8/30/18

Hole Size: 1.5"
Stick-up: NA
Datum: NAVD 88

Sheet: 1 of 1

APPENDIX C

LABORATORY ANALYTICAL DATA PACKAGES

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: 480-140944-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Authorized for release by:
9/12/2018 3:34:32 PM

Brian Fischer, Manager of Project Management
(716)504-9835
brian.fischer@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and 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.

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.
X	Surrogate is outside control limits

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-140944-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-140944-1

Comments
No additional comments.

Receipt
The samples were received on 8/28/2018 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
Method(s) 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 480-431879 and analytical batch 480-431892 recovered outside control limits for the following analyte: Chloroethane. The individual analyte spike recoveries met acceptance criteria. The following samples are impacted: TP-1 (5-7) (480-140944-1) and TP-3 (2-4) (480-140944-3).

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 following samples were diluted due to color, appearance and viscosity: SS-5 (480-140944-6), SS-6 (480-140944-7) and SS-7 (480-140944-8). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The following samples required a dilution due to the nature of the sample matrix: SS-5 (480-140944-6), SS-6 (480-140944-7) and SS-7 (480-140944-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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: SS-5 (480-140944-6), SS-9 (480-140944-10) and BD (480-140944-11). As such, surrogate recoveries are below the calibration range, estimated and not representative. Elevated reporting limits (RLs) are provided.

Method(s) 8081B: 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) 8081B: All primary data for analytical batch 432367 is reported from the RTX-CLPI column.

Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-432212/32) that had recoveries for the surrogate Decachlorobiphenyl that were below acceptance limits: TP-1 (5-7) (480-140944-1), TP-3 (2-4) (480-140944-3), SS-5 (480-140944-6), SS-9 (480-140944-10) and BD (480-140944-11). The secondary surrogate Tetrachloro-m-xylene is within limits. Therefore, the data has been reported.

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) 8082A: All primary data for analytical batch 432212 is reported from the ZB-5 column.

Method(s) 8082A: The continuing calibration verification (CCV 480-432212/7) associated with analytical batch 480-432212 recovered above the upper control limit for PCB-1221. The samples associated with this CCV was non-detect for this analyte; therefore, the data have been reported. The following samples are impacted: TP-1 (5-7) (480-140944-1), TP-3 (2-4) (480-140944-3), SS-5 (480-140944-6), SS-9 (480-140944-10) and BD (480-140944-11).

Method(s) 8151A: All primary data for analytical batch 433270 is reported from the RTX-CLPI column.

Job ID: 480-140944-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010C: The following samples were diluted due to the presence of Total Sulfur which interferes with Lead: SS-7 (480-140944-8), SS-8 (480-140944-9), SS-9 (480-140944-10) and BD (480-140944-11). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The following sample was diluted due to the presence of Total Calcium which interferes with Copper: SS-6 (480-140944-7). 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.

Organic Prep

Method(s) 3550C: Due to the matrix, the following samples could not be concentrated to the final method required volume: SS-6 (480-140944-7) and SS-7 (480-140944-8). The reporting limits (RLs) are elevated proportionately.

Method(s) 3550C: The following samples required a Florisil clean-up, via EPA Method 3620C, to reduce matrix interferences: TP-3 (2-4) (480-140944-3), SS-5 (480-140944-6), SS-9 (480-140944-10) and BD (480-140944-11).

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 - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-1 (5-7) — Lab Sample ID: 480-140944-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	12300	B	11.5	5.1	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.61	J	17.2	0.46	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.6		2.3	0.46	mg/Kg	1	☼	6010C	Total/NA
Barium	82.4		0.57	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.50		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J	0.23	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	72900	B	57.4	3.8	mg/Kg	1	☼	6010C	Total/NA
Chromium	16.4		0.57	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	6.4		0.57	0.057	mg/Kg	1	☼	6010C	Total/NA
Copper	12.2		1.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Iron	14100		11.5	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	12.7		1.1	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	24100	B	23.0	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	360	B	0.23	0.037	mg/Kg	1	☼	6010C	Total/NA
Nickel	15.8		5.7	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	4270		34.5	23.0	mg/Kg	1	☼	6010C	Total/NA
Sodium	366		161	14.9	mg/Kg	1	☼	6010C	Total/NA
Thallium	0.34	J	6.9	0.34	mg/Kg	1	☼	6010C	Total/NA
Vanadium	24.2		0.57	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	61.6		2.3	0.73	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.011	J	0.023	0.0094	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-2 (8-10) — Lab Sample ID: 480-140944-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	12100	B	11.3	5.0	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.70	J	16.9	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.9		2.3	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	79.9		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.51		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.11	J	0.23	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	59500	B	56.3	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	15.5		0.56	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.4		0.56	0.056	mg/Kg	1	☼	6010C	Total/NA
Copper	13.4		1.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Iron	15000		11.3	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	12.9		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	25700	B	22.5	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	398	B	0.23	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	16.7		5.6	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	4150		33.8	22.5	mg/Kg	1	☼	6010C	Total/NA
Sodium	247		158	14.6	mg/Kg	1	☼	6010C	Total/NA
Thallium	0.36	J	6.8	0.34	mg/Kg	1	☼	6010C	Total/NA
Vanadium	24.3		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	54.5		2.3	0.72	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.015	J	0.022	0.0089	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-3 (2-4) — Lab Sample ID: 480-140944-3

This Detection Summary does not include radiochemical test results.

Client Sample ID: TP-3 (2-4) (Continued)

Lab Sample ID: 480-140944-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.33	J	4.4	0.33	ug/Kg	1	☼	8260C	Total/NA
Fluoranthene	28	J	190	20	ug/Kg	1	☼	8270D	Total/NA
Aluminum	12100	B	10.9	4.8	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.61	J	16.3	0.43	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.8		2.2	0.43	mg/Kg	1	☼	6010C	Total/NA
Barium	66.2		0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.48		0.22	0.030	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.12	J	0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Calcium	65000	B	54.3	3.6	mg/Kg	1	☼	6010C	Total/NA
Chromium	15.3		0.54	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.9		0.54	0.054	mg/Kg	1	☼	6010C	Total/NA
Copper	15.9		1.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	14700		10.9	3.8	mg/Kg	1	☼	6010C	Total/NA
Lead	12.9		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Magnesium	25900	B	21.7	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	394	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	16.3		5.4	0.25	mg/Kg	1	☼	6010C	Total/NA
Potassium	4310		32.6	21.7	mg/Kg	1	☼	6010C	Total/NA
Sodium	274		152	14.1	mg/Kg	1	☼	6010C	Total/NA
Vanadium	26.0		0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	54.7		2.2	0.69	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.033		0.023	0.0093	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TP-4 (1-3)

Lab Sample ID: 480-140944-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	33	J	190	20	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	32	J	190	24	ug/Kg	1	☼	8270D	Total/NA
Pyrene	27	J	190	23	ug/Kg	1	☼	8270D	Total/NA
Aluminum	15700	B	11.1	4.9	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.89	J	16.6	0.44	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.3		2.2	0.44	mg/Kg	1	☼	6010C	Total/NA
Barium	80.6		0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.62		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.060	J	0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Calcium	40300	B	55.5	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	18.8		0.55	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	10.6		0.55	0.055	mg/Kg	1	☼	6010C	Total/NA
Copper	18.2		1.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	24500		11.1	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	19.4		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	17300	B	22.2	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	561	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	24.4		5.5	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	4410		33.3	22.2	mg/Kg	1	☼	6010C	Total/NA
Sodium	186		155	14.4	mg/Kg	1	☼	6010C	Total/NA
Vanadium	28.3		0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	69.0		2.2	0.71	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.044		0.023	0.0093	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-5 (9-11)

Lab Sample ID: 480-140944-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	76	J	190	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	100	J	190	30	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	80	J	190	20	ug/Kg	1	☼	8270D	Total/NA
Chrysene	55	J	190	42	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	100	J	190	20	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	71	J	190	23	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	30	J	190	28	ug/Kg	1	☼	8270D	Total/NA
Pyrene	85	J	190	22	ug/Kg	1	☼	8270D	Total/NA
Aluminum	14000	B	11.2	4.9	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.90	J	16.9	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.5		2.2	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	98.5		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.65		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.12	J	0.22	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	72000	B	56.2	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	18.0		0.56	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	8.4		0.56	0.056	mg/Kg	1	☼	6010C	Total/NA
Copper	16.5		1.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Iron	16900		11.2	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	16.7		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	24600	B	22.5	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	427	B	0.22	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	19.9		5.6	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	4690		33.7	22.5	mg/Kg	1	☼	6010C	Total/NA
Sodium	331		157	14.6	mg/Kg	1	☼	6010C	Total/NA
Vanadium	28.1		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	60.3		2.2	0.72	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.020	J	0.023	0.0095	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SS-5

Lab Sample ID: 480-140944-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	1200	J	4100	820	ug/Kg	20	☼	8270D	Total/NA
Acenaphthene	4200		4100	600	ug/Kg	20	☼	8270D	Total/NA
Acenaphthylene	650	J	4100	530	ug/Kg	20	☼	8270D	Total/NA
Anthracene	10000		4100	1000	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]anthracene	18000		4100	410	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]pyrene	13000		4100	600	ug/Kg	20	☼	8270D	Total/NA
Benzo[b]fluoranthene	15000		4100	650	ug/Kg	20	☼	8270D	Total/NA
Benzo[g,h,i]perylene	7400		4100	430	ug/Kg	20	☼	8270D	Total/NA
Benzo[k]fluoranthene	7600		4100	530	ug/Kg	20	☼	8270D	Total/NA
Carbazole	3800	J	4100	480	ug/Kg	20	☼	8270D	Total/NA
Chrysene	16000		4100	910	ug/Kg	20	☼	8270D	Total/NA
Dibenz(a,h)anthracene	3100	J	4100	720	ug/Kg	20	☼	8270D	Total/NA
Dibenzofuran	2700	J	4100	480	ug/Kg	20	☼	8270D	Total/NA
Fluoranthene	38000		4100	430	ug/Kg	20	☼	8270D	Total/NA
Fluorene	3700	J	4100	480	ug/Kg	20	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	6700		4100	500	ug/Kg	20	☼	8270D	Total/NA
Phenanthrene	34000		4100	600	ug/Kg	20	☼	8270D	Total/NA
Pyrene	26000		4100	480	ug/Kg	20	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-5 (Continued) — Lab Sample ID: 480-140944-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDT	55		40	9.3	ug/Kg	20	☼	8081B	Total/NA
Endrin	35	J	40	7.9	ug/Kg	20	☼	8081B	Total/NA
Endrin aldehyde	30	J	40	10	ug/Kg	20	☼	8081B	Total/NA
Endrin ketone	54		40	9.8	ug/Kg	20	☼	8081B	Total/NA
Aluminum	13300	B	12.1	5.3	mg/Kg	1	☼	6010C	Total/NA
Antimony	1.3	J	18.1	0.48	mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.7		2.4	0.48	mg/Kg	1	☼	6010C	Total/NA
Barium	92.9		0.60	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.72		0.24	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.38		0.24	0.036	mg/Kg	1	☼	6010C	Total/NA
Calcium	37400	B	60.4	4.0	mg/Kg	1	☼	6010C	Total/NA
Chromium	16.6		0.60	0.24	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.1		0.60	0.060	mg/Kg	1	☼	6010C	Total/NA
Copper	33.2		1.2	0.25	mg/Kg	1	☼	6010C	Total/NA
Iron	17900		12.1	4.2	mg/Kg	1	☼	6010C	Total/NA
Lead	312		1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Magnesium	17800	B	24.2	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	624	B	0.24	0.039	mg/Kg	1	☼	6010C	Total/NA
Nickel	18.0		6.0	0.28	mg/Kg	1	☼	6010C	Total/NA
Potassium	3300		36.2	24.2	mg/Kg	1	☼	6010C	Total/NA
Sodium	174		169	15.7	mg/Kg	1	☼	6010C	Total/NA
Vanadium	25.7		0.60	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	144		2.4	0.77	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.44		0.024	0.0098	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SS-6 — Lab Sample ID: 480-140944-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	6850	B	11.5	5.1	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.51	J	17.3	0.46	mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.8		2.3	0.46	mg/Kg	1	☼	6010C	Total/NA
Barium	69.1		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.44		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.33		0.23	0.035	mg/Kg	1	☼	6010C	Total/NA
Calcium	166000	B	288	19.0	mg/Kg	5	☼	6010C	Total/NA
Chromium	13.9		0.58	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	3.3		0.58	0.058	mg/Kg	1	☼	6010C	Total/NA
Copper	16.6		5.8	1.2	mg/Kg	5	☼	6010C	Total/NA
Iron	9040		11.5	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	53.6		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	30000	B	23.1	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	495	B	0.23	0.037	mg/Kg	1	☼	6010C	Total/NA
Nickel	11.8		5.8	0.27	mg/Kg	1	☼	6010C	Total/NA
Potassium	1500		34.6	23.1	mg/Kg	1	☼	6010C	Total/NA
Sodium	282		162	15.0	mg/Kg	1	☼	6010C	Total/NA
Vanadium	15.9		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	85.8		2.3	0.74	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.044		0.024	0.0096	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SS-7 — Lab Sample ID: 480-140944-8

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-7 (Continued)

Lab Sample ID: 480-140944-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	6000	B	11.6	5.1	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.49	J	17.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.7		2.3	0.47	mg/Kg	1	☼	6010C	Total/NA
Barium	54.3		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.48		0.23	0.033	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.30		0.23	0.035	mg/Kg	1	☼	6010C	Total/NA
Calcium	185000	B	291	19.2	mg/Kg	5	☼	6010C	Total/NA
Chromium	11.2		0.58	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	2.7		0.58	0.058	mg/Kg	1	☼	6010C	Total/NA
Copper	13.7		5.8	1.2	mg/Kg	5	☼	6010C	Total/NA
Iron	6630		11.6	4.1	mg/Kg	1	☼	6010C	Total/NA
Lead	66.3		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	11300	B	23.3	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	374	B	0.23	0.037	mg/Kg	1	☼	6010C	Total/NA
Nickel	8.7		5.8	0.27	mg/Kg	1	☼	6010C	Total/NA
Potassium	1640		34.9	23.3	mg/Kg	1	☼	6010C	Total/NA
Sodium	246		163	15.1	mg/Kg	1	☼	6010C	Total/NA
Vanadium	11.6		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	92.3		2.3	0.74	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.11		0.023	0.0095	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SS-8

Lab Sample ID: 480-140944-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	290		190	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	330		190	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	530		190	30	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	430		190	20	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	120	J	190	64	ug/Kg	1	☼	8270D	Total/NA
Chrysene	350		190	42	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	450		190	20	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	340		190	23	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	150	J	190	28	ug/Kg	1	☼	8270D	Total/NA
Pyrene	420		190	22	ug/Kg	1	☼	8270D	Total/NA
Aluminum	14100	B	11.2	4.9	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.87	J	16.9	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.6		2.2	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	179		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	3.8		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.098	J	0.22	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	166000	B	281	18.5	mg/Kg	5	☼	6010C	Total/NA
Chromium	6.1		0.56	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	2.4		0.56	0.056	mg/Kg	1	☼	6010C	Total/NA
Copper	10.8		5.6	1.2	mg/Kg	5	☼	6010C	Total/NA
Iron	21200		11.2	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	55.1		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	8350	B	22.5	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	1360	B	0.22	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	5.7		5.6	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	1000		33.7	22.5	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SS-8 (Continued) — Lab Sample ID: 480-140944-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	1.8	J	4.5	0.45	mg/Kg	1	☼	6010C	Total/NA
Sodium	405		157	14.6	mg/Kg	1	☼	6010C	Total/NA
Vanadium	7.6		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	70.3		2.2	0.72	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.023		0.023	0.0094	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SS-9 — Lab Sample ID: 480-140944-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	220		180	26	ug/Kg	1	☼	8270D	Total/NA
Acenaphthylene	38	J	180	23	ug/Kg	1	☼	8270D	Total/NA
Anthracene	450		180	44	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	2200		180	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	2500		180	26	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	3400		180	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	3000		180	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	1600		180	23	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	600		180	61	ug/Kg	1	☼	8270D	Total/NA
Carbazole	340		180	21	ug/Kg	1	☼	8270D	Total/NA
Chrysene	2700		180	40	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	660		180	31	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	86	J	180	21	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	5400		180	19	ug/Kg	1	☼	8270D	Total/NA
Fluorene	180		180	21	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	2300		180	22	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	2400		180	26	ug/Kg	1	☼	8270D	Total/NA
Pyrene	4200		180	21	ug/Kg	1	☼	8270D	Total/NA
Aluminum	7970	B	10.3	4.5	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.6		2.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Barium	86.7		0.52	0.11	mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.3		0.21	0.029	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.30		0.21	0.031	mg/Kg	1	☼	6010C	Total/NA
Calcium	160000	B	258	17.0	mg/Kg	5	☼	6010C	Total/NA
Chromium	9.7		0.52	0.21	mg/Kg	1	☼	6010C	Total/NA
Cobalt	1.7		0.52	0.052	mg/Kg	1	☼	6010C	Total/NA
Copper	12.9		5.2	1.1	mg/Kg	5	☼	6010C	Total/NA
Iron	5360		10.3	3.6	mg/Kg	1	☼	6010C	Total/NA
Lead	41.7		1.0	0.25	mg/Kg	1	☼	6010C	Total/NA
Magnesium	10800	B	20.6	0.96	mg/Kg	1	☼	6010C	Total/NA
Manganese	733	B	0.21	0.033	mg/Kg	1	☼	6010C	Total/NA
Nickel	7.4		5.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Potassium	1070		31.0	20.6	mg/Kg	1	☼	6010C	Total/NA
Sodium	271		145	13.4	mg/Kg	1	☼	6010C	Total/NA
Vanadium	6.4		0.52	0.11	mg/Kg	1	☼	6010C	Total/NA
Zinc	67.6		2.1	0.66	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.027		0.021	0.0087	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BD — Lab Sample ID: 480-140944-11

This Detection Summary does not include radiochemical test results.

Client Sample ID: BD (Continued)

Lab Sample ID: 480-140944-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	120	J	170	25	ug/Kg	1	☼	8270D	Total/NA
Anthracene	290		170	43	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	1700		170	17	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	1900		170	25	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	2600		170	27	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	2200		170	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	1200		170	22	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	620		170	59	ug/Kg	1	☼	8270D	Total/NA
Carbazole	200		170	20	ug/Kg	1	☼	8270D	Total/NA
Chrysene	2100		170	38	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	3700		170	18	ug/Kg	1	☼	8270D	Total/NA
Fluorene	86	J	170	20	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1800		170	21	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	1500		170	25	ug/Kg	1	☼	8270D	Total/NA
Pyrene	3200		170	20	ug/Kg	1	☼	8270D	Total/NA
Aluminum	8130	B	10.3	4.5	mg/Kg	1	☼	6010C	Total/NA
Arsenic	1.7	J	2.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Barium	100		0.51	0.11	mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.2		0.21	0.029	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.31		0.21	0.031	mg/Kg	1	☼	6010C	Total/NA
Calcium	170000	B	257	17.0	mg/Kg	5	☼	6010C	Total/NA
Chromium	10.1		0.51	0.21	mg/Kg	1	☼	6010C	Total/NA
Cobalt	1.7		0.51	0.051	mg/Kg	1	☼	6010C	Total/NA
Copper	13.4		5.1	1.1	mg/Kg	5	☼	6010C	Total/NA
Iron	4580		10.3	3.6	mg/Kg	1	☼	6010C	Total/NA
Lead	47.8		1.0	0.25	mg/Kg	1	☼	6010C	Total/NA
Magnesium	9060	B	20.5	0.95	mg/Kg	1	☼	6010C	Total/NA
Manganese	937	B	0.21	0.033	mg/Kg	1	☼	6010C	Total/NA
Nickel	8.8		5.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Potassium	1160		154	103	mg/Kg	5	☼	6010C	Total/NA
Sodium	280		144	13.4	mg/Kg	1	☼	6010C	Total/NA
Vanadium	6.7		0.51	0.11	mg/Kg	1	☼	6010C	Total/NA
Zinc	72.7		2.1	0.66	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.017	J	0.021	0.0083	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-1 (5-7)
Date Collected: 08/27/18 09:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.3	0.31	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,1,2,2-Tetrachloroethane	ND		4.3	0.70	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.98	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,1,2-Trichloroethane	ND		4.3	0.56	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,1-Dichloroethane	ND		4.3	0.53	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,1-Dichloroethene	ND		4.3	0.53	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2,4-Trichlorobenzene	ND		4.3	0.26	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2,4-Trimethylbenzene	ND		4.3	0.83	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2-Dibromo-3-Chloropropane	ND		4.3	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2-Dibromoethane	ND		4.3	0.55	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2-Dichlorobenzene	ND		4.3	0.34	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2-Dichloroethane	ND		4.3	0.22	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,2-Dichloropropane	ND		4.3	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,3,5-Trimethylbenzene	ND		4.3	0.28	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,3-Dichlorobenzene	ND		4.3	0.22	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
1,4-Dichlorobenzene	ND		4.3	0.60	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
2-Butanone (MEK)	ND		22	1.6	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
2-Hexanone	ND		22	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
4-Isopropyltoluene	ND		4.3	0.35	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
4-Methyl-2-pentanone (MIBK)	ND		22	1.4	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Acetone	ND		22	3.6	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Benzene	ND		4.3	0.21	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Bromodichloromethane	ND		4.3	0.58	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Bromoform	ND		4.3	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Bromomethane	ND		4.3	0.39	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Carbon disulfide	ND		4.3	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Carbon tetrachloride	ND		4.3	0.42	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Chlorobenzene	ND		4.3	0.57	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Chloroethane	ND	*	4.3	0.98	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Chloroform	ND		4.3	0.27	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Chloromethane	ND		4.3	0.26	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
cis-1,2-Dichloroethene	ND		4.3	0.55	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
cis-1,3-Dichloropropene	ND		4.3	0.62	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Cyclohexane	ND		4.3	0.60	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Dibromochloromethane	ND		4.3	0.55	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Dichlorodifluoromethane	ND		4.3	0.36	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Ethylbenzene	ND		4.3	0.30	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Isopropylbenzene	ND		4.3	0.65	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
m,p-Xylene	ND		8.6	0.73	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Methyl acetate	ND		22	2.6	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Methyl tert-butyl ether	ND		4.3	0.42	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Methylcyclohexane	ND		4.3	0.66	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Methylene Chloride	ND		4.3	2.0	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
n-Butylbenzene	ND		4.3	0.38	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
N-Propylbenzene	ND		4.3	0.35	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
o-Xylene	ND		4.3	0.56	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
sec-Butylbenzene	ND		4.3	0.38	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Styrene	ND		4.3	0.22	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
tert-Butylbenzene	ND		4.3	0.45	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-1 (5-7)
Date Collected: 08/27/18 09:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.3	0.58	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Toluene	ND		4.3	0.33	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
trans-1,2-Dichloroethene	ND		4.3	0.45	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
trans-1,3-Dichloropropene	ND		4.3	1.9	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Trichloroethene	ND		4.3	0.95	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Trichlorofluoromethane	ND		4.3	0.41	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Vinyl chloride	ND		4.3	0.53	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1
Xylenes, Total	ND		8.6	0.73	ug/Kg	☼	08/28/18 22:49	08/29/18 10:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*08/28/18 22:49*	*08/29/18 10:45*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*08/28/18 22:49*	*08/29/18 10:45*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*	*08/28/18 22:49*	*08/29/18 10:45*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*08/28/18 22:49*	*08/29/18 10:45*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	53	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2,4,6-Trichlorophenol	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2,4-Dichlorophenol	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2,4-Dimethylphenol	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2,4-Dinitrophenol	ND		1900	890	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2,4-Dinitrotoluene	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2,6-Dinitrotoluene	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2-Chloronaphthalene	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2-Methylnaphthalene	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2-Methylphenol	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2-Nitroaniline	ND		380	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
2-Nitrophenol	ND		190	55	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
3,3'-Dichlorobenzidine	ND		380	230	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
3-Nitroaniline	ND		380	54	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4,6-Dinitro-2-methylphenol	ND		380	190	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Chloro-3-methylphenol	ND		190	48	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Chloroaniline	ND		190	48	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Methylphenol	ND		380	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Nitroaniline	ND		380	100	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
4-Nitrophenol	ND		380	140	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Acenaphthene	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Acenaphthylene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Acetophenone	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Anthracene	ND		190	48	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Atrazine	ND		190	67	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Benzo[a]pyrene	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Benzo[b]fluoranthene	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Benzo[g,h,i]perylene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1

Client Sample ID: TP-1 (5-7)
Date Collected: 08/27/18 09:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Biphenyl	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
bis (2-chloroisopropyl) ether	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Bis(2-chloroethoxy)methane	ND		190	41	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Bis(2-ethylhexyl) phthalate	ND		190	66	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Butyl benzyl phthalate	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Caprolactam	ND		190	58	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Carbazole	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Chrysene	ND		190	43	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Dibenzofuran	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Dimethyl phthalate	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Di-n-octyl phthalate	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Fluoranthene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Fluorene	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Hexachlorobutadiene	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Hexachloroethane	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Indeno[1,2,3-cd]pyrene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Isophorone	ND		190	41	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Naphthalene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Nitrobenzene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
N-Nitrosodiphenylamine	ND		190	160	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Pentachlorophenol	ND		380	190	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Phenanthrene	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Phenol	ND		190	30	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1
Pyrene	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*54 - 120*	*08/29/18 14:24*	*08/31/18 18:59*	*1*
2-Fluorobiphenyl	*75*		*60 - 120*	*08/29/18 14:24*	*08/31/18 18:59*	*1*
2-Fluorophenol	*79*		*52 - 120*	*08/29/18 14:24*	*08/31/18 18:59*	*1*
Nitrobenzene-d5	*81*		*53 - 120*	*08/29/18 14:24*	*08/31/18 18:59*	*1*
Phenol-d5	*85*		*54 - 120*	*08/29/18 14:24*	*08/31/18 18:59*	*1*
p-Terphenyl-d14	*90*		*65 - 121*	*08/29/18 14:24*	*08/31/18 18:59*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.9	0.36	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
4,4'-DDE	ND		1.9	0.39	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
4,4'-DDT	ND		1.9	0.43	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Aldrin	ND		1.9	0.46	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
alpha-BHC	ND		1.9	0.33	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
cis-Chlordane	ND		1.9	0.92	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
beta-BHC	ND		1.9	0.33	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1

Client Sample ID: TP-1 (5-7)
Date Collected: 08/27/18 09:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-1
Matrix: Solid
Percent Solids: 87.5

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		1.9	0.34	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Dieldrin	ND		1.9	0.45	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Endosulfan I	ND		1.9	0.36	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Endosulfan II	ND		1.9	0.33	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Endosulfan sulfate	ND		1.9	0.35	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Endrin	ND		1.9	0.37	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Endrin aldehyde	ND		1.9	0.47	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Endrin ketone	ND		1.9	0.46	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
gamma-BHC (Lindane)	ND		1.9	0.34	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
trans-Chlordane	ND		1.9	0.59	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Heptachlor	ND		1.9	0.40	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Heptachlor epoxide	ND		1.9	0.48	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Methoxychlor	ND		1.9	0.38	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1
Toxaphene	ND		19	11	ug/Kg	☼	08/30/18 08:37	08/31/18 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*45 - 120*	*08/30/18 08:37*	*08/31/18 12:22*	*1*
DCB Decachlorobiphenyl	*79*		*45 - 120*	*08/30/18 08:37*	*08/31/18 12:22*	*1*
Tetrachloro-m-xylene	*74*		*30 - 124*	*08/30/18 08:37*	*08/31/18 12:22*	*1*
Tetrachloro-m-xylene	*68*		*30 - 124*	*08/30/18 08:37*	*08/31/18 12:22*	*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	0.050	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1
PCB-1221	ND		0.26	0.050	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1
PCB-1232	ND		0.26	0.050	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1
PCB-1242	ND		0.26	0.050	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1
PCB-1248	ND		0.26	0.050	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	08/29/18 14:41	08/30/18 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*103*		*60 - 154*	*08/29/18 14:41*	*08/30/18 23:16*	*1*
Tetrachloro-m-xylene	*83*		*60 - 154*	*08/29/18 14:41*	*08/30/18 23:16*	*1*
DCB Decachlorobiphenyl	*95*		*65 - 174*	*08/29/18 14:41*	*08/30/18 23:16*	*1*
DCB Decachlorobiphenyl	*86*		*65 - 174*	*08/29/18 14:41*	*08/30/18 23:16*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		19	6.1	ug/Kg	☼	09/04/18 07:12	09/07/18 12:37	1
Silvex (2,4,5-TP)	ND		19	6.8	ug/Kg	☼	09/04/18 07:12	09/07/18 12:37	1
2,4-D	ND		19	12	ug/Kg	☼	09/04/18 07:12	09/07/18 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*53*		*28 - 129*	*09/04/18 07:12*	*09/07/18 12:37*	*1*
2,4-Dichlorophenylacetic acid	*51*		*28 - 129*	*09/04/18 07:12*	*09/07/18 12:37*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**12300**	**B**	11.5	5.1	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Antimony	**0.61**	**J**	17.2	0.46	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-1 (5-7)
Date Collected: 08/27/18 09:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		2.3	0.46	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Barium	82.4		0.57	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Beryllium	0.50		0.23	0.032	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Cadmium	0.15	J	0.23	0.034	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Calcium	72900	B	57.4	3.8	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Chromium	16.4		0.57	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Cobalt	6.4		0.57	0.057	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Copper	12.2		1.1	0.24	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Iron	14100		11.5	4.0	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Lead	12.7		1.1	0.28	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Magnesium	24100	B	23.0	1.1	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Manganese	360	B	0.23	0.037	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Nickel	15.8		5.7	0.26	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Potassium	4270		34.5	23.0	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Selenium	ND		4.6	0.46	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Silver	ND		0.69	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Sodium	366		161	14.9	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Thallium	0.34	J	6.9	0.34	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Vanadium	24.2		0.57	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1
Zinc	61.6		2.3	0.73	mg/Kg	☼	08/31/18 11:25	09/04/18 14:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.023	0.0094	mg/Kg	☼	09/11/18 13:10	09/11/18 15:28	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-2 (8-10)
Date Collected: 08/27/18 10:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-2
Matrix: Solid
Percent Solids: 88.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	52	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2,4-Dinitrophenol	ND		1900	880	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
2-Nitrophenol	ND		190	54	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
3-Nitroaniline	ND		370	53	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Nitroaniline	ND		370	100	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Acenaphthylene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Acetophenone	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Anthracene	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Atrazine	ND		190	66	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Biphenyl	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Bis(2-ethylhexyl) phthalate	ND		190	65	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Caprolactam	ND		190	57	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Carbazole	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Chrysene	ND		190	43	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1

Client Sample ID: TP-2 (8-10)
Date Collected: 08/27/18 10:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-2
Matrix: Solid
Percent Solids: 88.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Fluorene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Hexachloroethane	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Indeno[1,2,3-cd]pyrene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Isophorone	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Naphthalene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Phenol	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1
Pyrene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*88*		*54 - 120*	*08/29/18 14:24*	*08/31/18 19:26*	*1*
2-Fluorobiphenyl	*79*		*60 - 120*	*08/29/18 14:24*	*08/31/18 19:26*	*1*
2-Fluorophenol	*68*		*52 - 120*	*08/29/18 14:24*	*08/31/18 19:26*	*1*
Nitrobenzene-d5	*74*		*53 - 120*	*08/29/18 14:24*	*08/31/18 19:26*	*1*
Phenol-d5	*74*		*54 - 120*	*08/29/18 14:24*	*08/31/18 19:26*	*1*
p-Terphenyl-d14	*93*		*65 - 121*	*08/29/18 14:24*	*08/31/18 19:26*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**12100**	**B**	11.3	5.0	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Antimony	**0.70**	**J**	16.9	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Arsenic	**2.9**		2.3	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Barium	**79.9**		0.56	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Beryllium	**0.51**		0.23	0.032	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Cadmium	**0.11**	**J**	0.23	0.034	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Calcium	**59500**	**B**	56.3	3.7	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Chromium	**15.5**		0.56	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Cobalt	**7.4**		0.56	0.056	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Copper	**13.4**		1.1	0.24	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Iron	**15000**		11.3	3.9	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Lead	**12.9**		1.1	0.27	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Magnesium	**25700**	**B**	22.5	1.0	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Manganese	**398**	**B**	0.23	0.036	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Nickel	**16.7**		5.6	0.26	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Potassium	**4150**		33.8	22.5	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Selenium	ND		4.5	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Silver	ND		0.68	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Sodium	**247**		158	14.6	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Thallium	**0.36**	**J**	6.8	0.34	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Vanadium	**24.3**		0.56	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1
Zinc	**54.5**		2.3	0.72	mg/Kg	☼	08/31/18 11:25	09/04/18 14:47	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-2 (8-10)
Date Collected: 08/27/18 10:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-2
Matrix: Solid
Percent Solids: 88.8

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.022	0.0089	mg/Kg	☼	09/11/18 13:10	09/11/18 15:30	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-3 (2-4)
Date Collected: 08/27/18 10:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-3
Matrix: Solid
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	0.32	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,1,2,2-Tetrachloroethane	ND		4.4	0.71	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.4	1.0	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,1,2-Trichloroethane	ND		4.4	0.57	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,1-Dichloroethane	ND		4.4	0.54	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,1-Dichloroethene	ND		4.4	0.54	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2,4-Trichlorobenzene	ND		4.4	0.27	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2,4-Trimethylbenzene	ND		4.4	0.84	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2-Dibromo-3-Chloropropane	ND		4.4	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2-Dibromoethane	ND		4.4	0.56	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2-Dichlorobenzene	ND		4.4	0.34	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2-Dichloroethane	ND		4.4	0.22	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,2-Dichloropropane	ND		4.4	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,3,5-Trimethylbenzene	ND		4.4	0.28	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,3-Dichlorobenzene	ND		4.4	0.23	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
1,4-Dichlorobenzene	ND		4.4	0.62	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
2-Butanone (MEK)	ND		22	1.6	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
2-Hexanone	ND		22	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
4-Isopropyltoluene	ND		4.4	0.35	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
4-Methyl-2-pentanone (MIBK)	ND		22	1.4	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Acetone	ND		22	3.7	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Benzene	ND		4.4	0.22	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Bromodichloromethane	ND		4.4	0.59	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Bromoform	ND		4.4	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Bromomethane	ND		4.4	0.40	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Carbon disulfide	ND		4.4	2.2	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Carbon tetrachloride	ND		4.4	0.43	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Chlorobenzene	ND		4.4	0.58	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Chloroethane	ND	*	4.4	0.99	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Chloroform	ND		4.4	0.27	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Chloromethane	ND		4.4	0.27	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
cis-1,2-Dichloroethene	ND		4.4	0.56	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
cis-1,3-Dichloropropene	ND		4.4	0.63	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Cyclohexane	ND		4.4	0.62	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Dibromochloromethane	ND		4.4	0.56	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Dichlorodifluoromethane	ND		4.4	0.36	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Ethylbenzene	ND		4.4	0.30	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Isopropylbenzene	ND		4.4	0.66	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
m,p-Xylene	ND		8.8	0.74	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Methyl acetate	ND		22	2.7	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Methyl tert-butyl ether	ND		4.4	0.43	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Methylcyclohexane	ND		4.4	0.67	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Methylene Chloride	ND		4.4	2.0	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
n-Butylbenzene	ND		4.4	0.38	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
N-Propylbenzene	ND		4.4	0.35	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
o-Xylene	ND		4.4	0.57	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
sec-Butylbenzene	ND		4.4	0.38	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Styrene	ND		4.4	0.22	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
tert-Butylbenzene	ND		4.4	0.46	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1

Client Sample ID: TP-3 (2-4)
Date Collected: 08/27/18 10:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-3
Matrix: Solid
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.4	0.59	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Toluene	0.33	J	4.4	0.33	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
trans-1,2-Dichloroethene	ND		4.4	0.45	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
trans-1,3-Dichloropropene	ND		4.4	1.9	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Trichloroethene	ND		4.4	0.97	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Trichlorofluoromethane	ND		4.4	0.42	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Vinyl chloride	ND		4.4	0.54	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1
Xylenes, Total	ND		8.8	0.74	ug/Kg	☼	08/28/18 22:49	08/29/18 11:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 126*	*08/28/18 22:49*	*08/29/18 11:11*	*1*
4-Bromofluorobenzene (Surr)	*96*		*72 - 126*	*08/28/18 22:49*	*08/29/18 11:11*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*	*08/28/18 22:49*	*08/29/18 11:11*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*08/28/18 22:49*	*08/29/18 11:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2,4-Dinitrophenol	ND		1800	870	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2-Chlorophenol	ND		190	34	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
3-Nitroaniline	ND		370	52	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Nitroaniline	ND		370	99	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Acenaphthylene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Acetophenone	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Anthracene	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Atrazine	ND		190	66	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-3 (2-4)
Date Collected: 08/27/18 10:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-3
Matrix: Solid
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Biphenyl	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Bis(2-ethylhexyl) phthalate	ND		190	65	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Caprolactam	ND		190	57	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Carbazole	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Chrysene	ND		190	42	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Fluoranthene	**28**	**J**	190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Fluorene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Hexachloroethane	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Indeno[1,2,3-cd]pyrene	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Isophorone	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Naphthalene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Phenol	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1
Pyrene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*54 - 120*	*08/29/18 14:24*	*08/31/18 19:54*	*1*
2-Fluorobiphenyl	*81*		*60 - 120*	*08/29/18 14:24*	*08/31/18 19:54*	*1*
2-Fluorophenol	*75*		*52 - 120*	*08/29/18 14:24*	*08/31/18 19:54*	*1*
Nitrobenzene-d5	*79*		*53 - 120*	*08/29/18 14:24*	*08/31/18 19:54*	*1*
Phenol-d5	*79*		*54 - 120*	*08/29/18 14:24*	*08/31/18 19:54*	*1*
p-Terphenyl-d14	*94*		*65 - 121*	*08/29/18 14:24*	*08/31/18 19:54*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.8	0.36	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
4,4'-DDE	ND		1.8	0.38	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
4,4'-DDT	ND		1.8	0.43	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Aldrin	ND		1.8	0.45	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
alpha-BHC	ND		1.8	0.33	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
cis-Chlordane	ND		1.8	0.91	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
beta-BHC	ND		1.8	0.33	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1

Client Sample ID: TP-3 (2-4)
Date Collected: 08/27/18 10:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-3
Matrix: Solid
Percent Solids: 88.6

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		1.8	0.34	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Dieldrin	ND		1.8	0.44	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Endosulfan I	ND		1.8	0.35	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Endosulfan II	ND		1.8	0.33	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Endosulfan sulfate	ND		1.8	0.34	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Endrin	ND		1.8	0.36	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Endrin aldehyde	ND		1.8	0.47	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Endrin ketone	ND		1.8	0.45	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
gamma-BHC (Lindane)	ND		1.8	0.34	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
trans-Chlordane	ND		1.8	0.58	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Heptachlor	ND		1.8	0.40	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Heptachlor epoxide	ND		1.8	0.47	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Methoxychlor	ND		1.8	0.37	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1
Toxaphene	ND		18	11	ug/Kg	☼	08/30/18 08:37	08/31/18 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*65*		*45 - 120*	*08/30/18 08:37*	*08/31/18 12:42*	*1*
DCB Decachlorobiphenyl	*76*		*45 - 120*	*08/30/18 08:37*	*08/31/18 12:42*	*1*
Tetrachloro-m-xylene	*55*		*30 - 124*	*08/30/18 08:37*	*08/31/18 12:42*	*1*
Tetrachloro-m-xylene	*51*		*30 - 124*	*08/30/18 08:37*	*08/31/18 12:42*	*1*

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	☼	08/29/18 14:41	08/30/18 23:32	1
PCB-1221	ND		0.27	0.053	mg/Kg	☼	08/29/18 14:41	08/30/18 23:32	1
PCB-1232	ND		0.27	0.053	mg/Kg	☼	08/29/18 14:41	08/30/18 23:32	1
PCB-1242	ND		0.27	0.053	mg/Kg	☼	08/29/18 14:41	08/30/18 23:32	1
PCB-1248	ND		0.27	0.053	mg/Kg	☼	08/29/18 14:41	08/30/18 23:32	1
PCB-1254	ND		0.27	0.13	mg/Kg	☼	08/29/18 14:41	08/30/18 23:32	1
PCB-1260	ND		0.27	0.13	mg/Kg	☼	08/29/18 14:41	08/30/18 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*103*		*60 - 154*	*08/29/18 14:41*	*08/30/18 23:32*	*1*
Tetrachloro-m-xylene	*86*		*60 - 154*	*08/29/18 14:41*	*08/30/18 23:32*	*1*
DCB Decachlorobiphenyl	*94*		*65 - 174*	*08/29/18 14:41*	*08/30/18 23:32*	*1*
DCB Decachlorobiphenyl	*85*		*65 - 174*	*08/29/18 14:41*	*08/30/18 23:32*	*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	☼	09/04/18 07:12	09/07/18 13:07	1
Silvex (2,4,5-TP)	ND		19	6.7	ug/Kg	☼	09/04/18 07:12	09/07/18 13:07	1
2,4-D	ND		19	12	ug/Kg	☼	09/04/18 07:12	09/07/18 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*56*		*28 - 129*	*09/04/18 07:12*	*09/07/18 13:07*	*1*
2,4-Dichlorophenylacetic acid	*56*		*28 - 129*	*09/04/18 07:12*	*09/07/18 13:07*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**12100**	**B**	10.9	4.8	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Antimony	**0.61**	**J**	16.3	0.43	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-3 (2-4)
Date Collected: 08/27/18 10:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-3
Matrix: Solid
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.2	0.43	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Barium	66.2		0.54	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Beryllium	0.48		0.22	0.030	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Cadmium	0.12	J	0.22	0.033	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Calcium	65000	B	54.3	3.6	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Chromium	15.3		0.54	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Cobalt	7.9		0.54	0.054	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Copper	15.9		1.1	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Iron	14700		10.9	3.8	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Lead	12.9		1.1	0.26	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Magnesium	25900	B	21.7	1.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Manganese	394	B	0.22	0.035	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Nickel	16.3		5.4	0.25	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Potassium	4310		32.6	21.7	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Selenium	ND		4.3	0.43	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Silver	ND		0.65	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Sodium	274		152	14.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Thallium	ND		6.5	0.33	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Vanadium	26.0		0.54	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1
Zinc	54.7		2.2	0.69	mg/Kg	☼	08/31/18 11:25	09/04/18 15:02	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.033		0.023	0.0093	mg/Kg	☼	09/11/18 13:10	09/11/18 15:32	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-4 (1-3)
Date Collected: 08/27/18 11:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-4
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	52	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2,4-Dinitrophenol	ND		1900	880	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2,6-Dinitrotoluene	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2-Chloronaphthalene	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2-Methylphenol	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
2-Nitrophenol	ND		190	54	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
3,3'-Dichlorobenzidine	ND		370	230	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
3-Nitroaniline	ND		370	53	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Methylphenol	ND		370	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Nitroaniline	ND		370	100	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Acenaphthylene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Acetophenone	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Anthracene	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Atrazine	ND		190	67	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Biphenyl	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Bis(2-chloroethoxy)methane	ND		190	41	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Bis(2-ethylhexyl) phthalate	ND		190	65	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Butyl benzyl phthalate	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Caprolactam	ND		190	58	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Carbazole	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Chrysene	ND		190	43	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Dibenzofuran	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Dimethyl phthalate	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Di-n-octyl phthalate	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1

Client Sample ID: TP-4 (1-3)
Date Collected: 08/27/18 11:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-4
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	33	J	190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Fluorene	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Hexachloroethane	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Indeno[1,2,3-cd]pyrene	32	J	190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Isophorone	ND		190	41	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Naphthalene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
N-Nitrosodiphenylamine	ND		190	160	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Phenol	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1
Pyrene	27	J	190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*81*		*54 - 120*	*08/29/18 14:24*	*08/31/18 20:21*	*1*
2-Fluorobiphenyl	*76*		*60 - 120*	*08/29/18 14:24*	*08/31/18 20:21*	*1*
2-Fluorophenol	*76*		*52 - 120*	*08/29/18 14:24*	*08/31/18 20:21*	*1*
Nitrobenzene-d5	*78*		*53 - 120*	*08/29/18 14:24*	*08/31/18 20:21*	*1*
Phenol-d5	*87*		*54 - 120*	*08/29/18 14:24*	*08/31/18 20:21*	*1*
p-Terphenyl-d14	*91*		*65 - 121*	*08/29/18 14:24*	*08/31/18 20:21*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	15700	B	11.1	4.9	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Antimony	0.89	J	16.6	0.44	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Arsenic	3.3		2.2	0.44	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Barium	80.6		0.55	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Beryllium	0.62		0.22	0.031	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Cadmium	0.060	J	0.22	0.033	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Calcium	40300	B	55.5	3.7	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Chromium	18.8		0.55	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Cobalt	10.6		0.55	0.055	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Copper	18.2		1.1	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Iron	24500		11.1	3.9	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Lead	19.4		1.1	0.27	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Magnesium	17300	B	22.2	1.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Manganese	561	B	0.22	0.035	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Nickel	24.4		5.5	0.26	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Potassium	4410		33.3	22.2	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Selenium	ND		4.4	0.44	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Silver	ND		0.67	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Sodium	186		155	14.4	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Thallium	ND		6.7	0.33	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Vanadium	28.3		0.55	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1
Zinc	69.0		2.2	0.71	mg/Kg	☼	08/31/18 11:25	09/04/18 15:05	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-4 (1-3)
Date Collected: 08/27/18 11:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-4
Matrix: Solid
Percent Solids: 88.4

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.044		0.023	0.0093	mg/Kg	☼	09/11/18 13:10	09/11/18 15:33	1

Client Sample ID: TP-5 (9-11)
Date Collected: 08/27/18 11:45
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-5
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2,4-Dinitrophenol	ND		1800	870	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
3-Nitroaniline	ND		370	52	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Nitroaniline	ND		370	99	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Acenaphthylene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Acetophenone	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Anthracene	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Atrazine	ND		190	66	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Benzo[a]pyrene	**76**	**J**	190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Benzo[b]fluoranthene	**100**	**J**	190	30	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Benzo[g,h,i]perylene	**80**	**J**	190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Biphenyl	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Bis(2-ethylhexyl) phthalate	ND		190	65	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Caprolactam	ND		190	57	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Carbazole	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Chrysene	**55**	**J**	190	42	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1

Client Sample ID: TP-5 (9-11)
Date Collected: 08/27/18 11:45
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-5
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	100	J	190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Fluorene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Hexachloroethane	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Indeno[1,2,3-cd]pyrene	71	J	190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Isophorone	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Naphthalene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Phenanthrene	30	J	190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Phenol	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1
Pyrene	85	J	190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*54 - 120*	*08/29/18 14:24*	*08/31/18 20:49*	*1*
2-Fluorobiphenyl	*78*		*60 - 120*	*08/29/18 14:24*	*08/31/18 20:49*	*1*
2-Fluorophenol	*72*		*52 - 120*	*08/29/18 14:24*	*08/31/18 20:49*	*1*
Nitrobenzene-d5	*80*		*53 - 120*	*08/29/18 14:24*	*08/31/18 20:49*	*1*
Phenol-d5	*75*		*54 - 120*	*08/29/18 14:24*	*08/31/18 20:49*	*1*
p-Terphenyl-d14	*92*		*65 - 121*	*08/29/18 14:24*	*08/31/18 20:49*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000	B	11.2	4.9	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Antimony	0.90	J	16.9	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Arsenic	3.5		2.2	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Barium	98.5		0.56	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Beryllium	0.65		0.22	0.031	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Cadmium	0.12	J	0.22	0.034	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Calcium	72000	B	56.2	3.7	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Chromium	18.0		0.56	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Cobalt	8.4		0.56	0.056	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Copper	16.5		1.1	0.24	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Iron	16900		11.2	3.9	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Lead	16.7		1.1	0.27	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Magnesium	24600	B	22.5	1.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Manganese	427	B	0.22	0.036	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Nickel	19.9		5.6	0.26	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Potassium	4690		33.7	22.5	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Selenium	ND		4.5	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Silver	ND		0.67	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Sodium	331		157	14.6	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Thallium	ND		6.7	0.34	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Vanadium	28.1		0.56	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1
Zinc	60.3		2.2	0.72	mg/Kg	☼	08/31/18 11:25	09/04/18 15:09	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: TP-5 (9-11)
Date Collected: 08/27/18 11:45
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-5
Matrix: Solid
Percent Solids: 87.5

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	J	0.023	0.0095	mg/Kg	☼	09/11/18 13:10	09/11/18 15:35	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: SS-5
Date Collected: 08/27/18 12:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-6
Matrix: Solid
Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4100	1100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2,4,6-Trichlorophenol	ND		4100	820	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2,4-Dichlorophenol	ND		4100	430	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2,4-Dimethylphenol	ND		4100	980	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2,4-Dinitrophenol	ND		40000	19000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2,4-Dinitrotoluene	ND		4100	840	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2,6-Dinitrotoluene	ND		4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2-Chloronaphthalene	ND		4100	670	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2-Chlorophenol	ND		4100	740	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2-Methylnaphthalene	**1200**	**J**	4100	820	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2-Methylphenol	ND		4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2-Nitroaniline	ND		7900	600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
2-Nitrophenol	ND		4100	1200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
3,3'-Dichlorobenzidine	ND		7900	4800	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
3-Nitroaniline	ND		7900	1100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4,6-Dinitro-2-methylphenol	ND		7900	4100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Bromophenyl phenyl ether	ND		4100	580	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Chloro-3-methylphenol	ND		4100	1000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Chloroaniline	ND		4100	1000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Chlorophenyl phenyl ether	ND		4100	500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Methylphenol	ND		7900	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Nitroaniline	ND		7900	2100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
4-Nitrophenol	ND		7900	2900	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Acenaphthene	**4200**		4100	600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Acenaphthylene	**650**	**J**	4100	530	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Acetophenone	ND		4100	550	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Anthracene	**10000**		4100	1000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Atrazine	ND		4100	1400	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Benzaldehyde	ND		4100	3200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Benzo[a]anthracene	**18000**		4100	410	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Benzo[a]pyrene	**13000**		4100	600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Benzo[b]fluoranthene	**15000**		4100	650	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Benzo[g,h,i]perylene	**7400**		4100	430	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Benzo[k]fluoranthene	**7600**		4100	530	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Biphenyl	ND		4100	600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
bis (2-chloroisopropyl) ether	ND		4100	820	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Bis(2-chloroethoxy)methane	ND		4100	860	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Bis(2-chloroethyl)ether	ND		4100	530	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Bis(2-ethylhexyl) phthalate	ND		4100	1400	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Butyl benzyl phthalate	ND		4100	670	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Caprolactam	ND		4100	1200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Carbazole	**3800**	**J**	4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Chrysene	**16000**		4100	910	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Dibenz(a,h)anthracene	**3100**	**J**	4100	720	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Dibenzofuran	**2700**	**J**	4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Diethyl phthalate	ND		4100	530	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Dimethyl phthalate	ND		4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Di-n-butyl phthalate	ND		4100	700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Di-n-octyl phthalate	ND		4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20

Client Sample ID: SS-5
Date Collected: 08/27/18 12:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-6
Matrix: Solid
Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**38000**		4100	430	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Fluorene	**3700**	**J**	4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Hexachlorobenzene	ND		4100	550	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Hexachlorobutadiene	ND		4100	600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Hexachlorocyclopentadiene	ND		4100	550	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Hexachloroethane	ND		4100	530	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Indeno[1,2,3-cd]pyrene	**6700**		4100	500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Isophorone	ND		4100	860	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Naphthalene	ND		4100	530	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Nitrobenzene	ND		4100	460	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
N-Nitrosodi-n-propylamine	ND		4100	700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
N-Nitrosodiphenylamine	ND		4100	3300	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Pentachlorophenol	ND		7900	4100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Phenanthrene	**34000**		4100	600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Phenol	ND		4100	620	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20
Pyrene	**26000**		4100	480	ug/Kg	☼	08/29/18 14:24	08/31/18 21:16	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*138*	*X*	*54 - 120*	*08/29/18 14:24*	*08/31/18 21:16*	*20*
2-Fluorobiphenyl	*94*		*60 - 120*	*08/29/18 14:24*	*08/31/18 21:16*	*20*
2-Fluorophenol	*0*	*X*	*52 - 120*	*08/29/18 14:24*	*08/31/18 21:16*	*20*
Nitrobenzene-d5	*89*		*53 - 120*	*08/29/18 14:24*	*08/31/18 21:16*	*20*
Phenol-d5	*99*		*54 - 120*	*08/29/18 14:24*	*08/31/18 21:16*	*20*
p-Terphenyl-d14	*119*		*65 - 121*	*08/29/18 14:24*	*08/31/18 21:16*	*20*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		40	7.7	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
4,4'-DDE	ND		40	8.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
4,4'-DDT	**55**		40	9.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Aldrin	ND		40	9.8	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
alpha-BHC	ND		40	7.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
cis-Chlordane	ND		40	20	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
beta-BHC	ND		40	7.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
delta-BHC	ND		40	7.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Dieldrin	ND		40	9.5	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Endosulfan I	ND		40	7.6	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Endosulfan II	ND		40	7.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Endosulfan sulfate	ND		40	7.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Endrin	**35**	**J**	40	7.9	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Endrin aldehyde	**30**	**J**	40	10	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Endrin ketone	**54**		40	9.8	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
gamma-BHC (Lindane)	ND		40	7.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
trans-Chlordane	ND		40	13	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Heptachlor	ND		40	8.6	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Heptachlor epoxide	ND		40	10	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Methoxychlor	ND		40	8.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20
Toxaphene	ND		400	230	ug/Kg	☼	08/30/18 08:37	08/31/18 13:01	20

Client Sample ID: SS-5
Date Collected: 08/27/18 12:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-6
Matrix: Solid
Percent Solids: 82.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	524	X	45 - 120	08/30/18 08:37	08/31/18 13:01	20
DCB Decachlorobiphenyl	1476	X	45 - 120	08/30/18 08:37	08/31/18 13:01	20
Tetrachloro-m-xylene	0	X	30 - 124	08/30/18 08:37	08/31/18 13:01	20
Tetrachloro-m-xylene	0	X	30 - 124	08/30/18 08:37	08/31/18 13:01	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.27	0.052	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1
PCB-1221	ND		0.27	0.052	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1
PCB-1232	ND		0.27	0.052	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1
PCB-1242	ND		0.27	0.052	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1
PCB-1248	ND		0.27	0.052	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1
PCB-1254	ND		0.27	0.12	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1
PCB-1260	ND		0.27	0.12	mg/Kg	☼	08/29/18 14:41	08/30/18 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		60 - 154	08/29/18 14:41	08/30/18 23:48	1
Tetrachloro-m-xylene	82		60 - 154	08/29/18 14:41	08/30/18 23:48	1
DCB Decachlorobiphenyl	91		65 - 174	08/29/18 14:41	08/30/18 23:48	1
DCB Decachlorobiphenyl	80		65 - 174	08/29/18 14:41	08/30/18 23:48	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	6.4	ug/Kg	☼	09/04/18 07:12	09/07/18 13:37	1
Silvex (2,4,5-TP)	ND		20	7.2	ug/Kg	☼	09/04/18 07:12	09/07/18 13:37	1
2,4-D	ND		20	13	ug/Kg	☼	09/04/18 07:12	09/07/18 13:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	47		28 - 129	09/04/18 07:12	09/07/18 13:37	1
2,4-Dichlorophenylacetic acid	50		28 - 129	09/04/18 07:12	09/07/18 13:37	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13300	B	12.1	5.3	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Antimony	1.3	J	18.1	0.48	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Arsenic	5.7		2.4	0.48	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Barium	92.9		0.60	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Beryllium	0.72		0.24	0.034	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Cadmium	0.38		0.24	0.036	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Calcium	37400	B	60.4	4.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Chromium	16.6		0.60	0.24	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Cobalt	7.1		0.60	0.060	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Copper	33.2		1.2	0.25	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Iron	17900		12.1	4.2	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Lead	312		1.2	0.29	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Magnesium	17800	B	24.2	1.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Manganese	624	B	0.24	0.039	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Nickel	18.0		6.0	0.28	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Potassium	3300		36.2	24.2	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Selenium	ND		4.8	0.48	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Silver	ND		0.72	0.24	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: SS-5
Date Collected: 08/27/18 12:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-6
Matrix: Solid
Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	174		169	15.7	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Thallium	ND		7.2	0.36	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Vanadium	25.7		0.60	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1
Zinc	144		2.4	0.77	mg/Kg	☼	08/31/18 11:25	09/04/18 15:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.44		0.024	0.0098	mg/Kg	☼	09/11/18 13:10	09/11/18 15:36	1

Client Sample ID: SS-6
Date Collected: 08/27/18 12:15
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-7
Matrix: Solid
Percent Solids: 85.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		39000	10000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2,4,6-Trichlorophenol	ND		39000	7700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2,4-Dichlorophenol	ND		39000	4100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2,4-Dimethylphenol	ND		39000	9300	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2,4-Dinitrophenol	ND		380000	180000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2,4-Dinitrotoluene	ND		39000	7900	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2,6-Dinitrotoluene	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2-Chloronaphthalene	ND		39000	6300	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2-Chlorophenol	ND		39000	7000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2-Methylnaphthalene	ND		39000	7700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2-Methylphenol	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2-Nitroaniline	ND		75000	5700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
2-Nitrophenol	ND		39000	11000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
3,3'-Dichlorobenzidine	ND		75000	45000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
3-Nitroaniline	ND		75000	11000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4,6-Dinitro-2-methylphenol	ND		75000	39000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Bromophenyl phenyl ether	ND		39000	5400	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Chloro-3-methylphenol	ND		39000	9500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Chloroaniline	ND		39000	9500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Chlorophenyl phenyl ether	ND		39000	4800	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Methylphenol	ND		75000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Nitroaniline	ND		75000	20000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
4-Nitrophenol	ND		75000	27000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Acenaphthene	ND		39000	5700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Acenaphthylene	ND		39000	5000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Acetophenone	ND		39000	5200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Anthracene	ND		39000	9500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Atrazine	ND		39000	13000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Benzaldehyde	ND		39000	31000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Benzo[a]anthracene	ND		39000	3900	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Benzo[a]pyrene	ND		39000	5700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Benzo[b]fluoranthene	ND		39000	6100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Benzo[g,h,i]perylene	ND		39000	4100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Benzo[k]fluoranthene	ND		39000	5000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Biphenyl	ND		39000	5700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
bis (2-chloroisopropyl) ether	ND		39000	7700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Bis(2-chloroethoxy)methane	ND		39000	8200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Bis(2-chloroethyl)ether	ND		39000	5000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Bis(2-ethylhexyl) phthalate	ND		39000	13000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Butyl benzyl phthalate	ND		39000	6300	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Caprolactam	ND		39000	12000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Carbazole	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Chrysene	ND		39000	8600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Dibenz(a,h)anthracene	ND		39000	6800	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Dibenzofuran	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Diethyl phthalate	ND		39000	5000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Dimethyl phthalate	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Di-n-butyl phthalate	ND		39000	6600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Di-n-octyl phthalate	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20

Client Sample ID: SS-6
Date Collected: 08/27/18 12:15
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-7
Matrix: Solid
Percent Solids: 85.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		39000	4100	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Fluorene	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Hexachlorobenzene	ND		39000	5200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Hexachlorobutadiene	ND		39000	5700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Hexachlorocyclopentadiene	ND		39000	5200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Hexachloroethane	ND		39000	5000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Indeno[1,2,3-cd]pyrene	ND		39000	4800	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Isophorone	ND		39000	8200	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Naphthalene	ND		39000	5000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Nitrobenzene	ND		39000	4300	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
N-Nitrosodi-n-propylamine	ND		39000	6600	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
N-Nitrosodiphenylamine	ND		39000	31000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Pentachlorophenol	ND		75000	39000	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Phenanthrene	ND		39000	5700	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Phenol	ND		39000	5900	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20
Pyrene	ND		39000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 21:44	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*0*	*X*	*54 - 120*	*08/29/18 14:24*	*08/31/18 21:44*	*20*
2-Fluorobiphenyl	*0*	*X*	*60 - 120*	*08/29/18 14:24*	*08/31/18 21:44*	*20*
2-Fluorophenol	*0*	*X*	*52 - 120*	*08/29/18 14:24*	*08/31/18 21:44*	*20*
Nitrobenzene-d5	*0*	*X*	*53 - 120*	*08/29/18 14:24*	*08/31/18 21:44*	*20*
Phenol-d5	*0*	*X*	*54 - 120*	*08/29/18 14:24*	*08/31/18 21:44*	*20*
p-Terphenyl-d14	*0*	*X*	*65 - 121*	*08/29/18 14:24*	*08/31/18 21:44*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**6850**	**B**	11.5	5.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Antimony	**0.51**	**J**	17.3	0.46	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Arsenic	**4.8**		2.3	0.46	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Barium	**69.1**		0.58	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Beryllium	**0.44**		0.23	0.032	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Cadmium	**0.33**		0.23	0.035	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Calcium	**166000**	**B**	288	19.0	mg/Kg	☼	08/31/18 11:25	09/06/18 11:43	5
Chromium	**13.9**		0.58	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Cobalt	**3.3**		0.58	0.058	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Copper	**16.6**		5.8	1.2	mg/Kg	☼	08/31/18 11:25	09/06/18 11:43	5
Iron	**9040**		11.5	4.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Lead	**53.6**		1.2	0.28	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Magnesium	**30000**	**B**	23.1	1.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Manganese	**495**	**B**	0.23	0.037	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Nickel	**11.8**		5.8	0.27	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Potassium	**1500**		34.6	23.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Selenium	ND		4.6	0.46	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Silver	ND		0.69	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Sodium	**282**		162	15.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Thallium	ND		6.9	0.35	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Vanadium	**15.9**		0.58	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1
Zinc	**85.8**		2.3	0.74	mg/Kg	☼	08/31/18 11:25	09/04/18 15:16	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: SS-6
Date Collected: 08/27/18 12:15
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-7
Matrix: Solid
Percent Solids: 85.8

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.044		0.024	0.0096	mg/Kg	☼	09/11/18 13:10	09/11/18 15:38	1

Client Sample ID: SS-7
Date Collected: 08/27/18 12:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-8
Matrix: Solid
Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		38000	10000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2,4,6-Trichlorophenol	ND		38000	7600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2,4-Dichlorophenol	ND		38000	4000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2,4-Dimethylphenol	ND		38000	9200	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2,4-Dinitrophenol	ND		370000	180000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2,4-Dinitrotoluene	ND		38000	7800	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2,6-Dinitrotoluene	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2-Chloronaphthalene	ND		38000	6300	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2-Chlorophenol	ND		38000	6900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2-Methylnaphthalene	ND		38000	7600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2-Methylphenol	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2-Nitroaniline	ND		74000	5600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
2-Nitrophenol	ND		38000	11000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
3,3'-Dichlorobenzidine	ND		74000	45000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
3-Nitroaniline	ND		74000	11000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4,6-Dinitro-2-methylphenol	ND		74000	38000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Bromophenyl phenyl ether	ND		38000	5400	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Chloro-3-methylphenol	ND		38000	9400	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Chloroaniline	ND		38000	9400	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Chlorophenyl phenyl ether	ND		38000	4700	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Methylphenol	ND		74000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Nitroaniline	ND		74000	20000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
4-Nitrophenol	ND		74000	27000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Acenaphthene	ND		38000	5600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Acenaphthylene	ND		38000	4900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Acetophenone	ND		38000	5200	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Anthracene	ND		38000	9400	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Atrazine	ND		38000	13000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Benzaldehyde	ND		38000	30000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Benzo[a]anthracene	ND		38000	3800	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Benzo[a]pyrene	ND		38000	5600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Benzo[b]fluoranthene	ND		38000	6000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Benzo[g,h,i]perylene	ND		38000	4000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Benzo[k]fluoranthene	ND		38000	4900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Biphenyl	ND		38000	5600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
bis (2-chloroisopropyl) ether	ND		38000	7600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Bis(2-chloroethoxy)methane	ND		38000	8100	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Bis(2-chloroethyl)ether	ND		38000	4900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Bis(2-ethylhexyl) phthalate	ND		38000	13000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Butyl benzyl phthalate	ND		38000	6300	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Caprolactam	ND		38000	11000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Carbazole	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Chrysene	ND		38000	8500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Dibenz(a,h)anthracene	ND		38000	6700	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Dibenzofuran	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Diethyl phthalate	ND		38000	4900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Dimethyl phthalate	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Di-n-butyl phthalate	ND		38000	6500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Di-n-octyl phthalate	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20

Client Sample ID: SS-7
Date Collected: 08/27/18 12:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-8
Matrix: Solid
Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		38000	4000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Fluorene	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Hexachlorobenzene	ND		38000	5200	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Hexachlorobutadiene	ND		38000	5600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Hexachlorocyclopentadiene	ND		38000	5200	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Hexachloroethane	ND		38000	4900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Indeno[1,2,3-cd]pyrene	ND		38000	4700	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Isophorone	ND		38000	8100	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Naphthalene	ND		38000	4900	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Nitrobenzene	ND		38000	4300	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
N-Nitrosodi-n-propylamine	ND		38000	6500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
N-Nitrosodiphenylamine	ND		38000	31000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Pentachlorophenol	ND		74000	38000	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Phenanthrene	ND		38000	5600	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Phenol	ND		38000	5800	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20
Pyrene	ND		38000	4500	ug/Kg	☼	08/29/18 14:24	08/31/18 22:11	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*0*	*X*	*54 - 120*	*08/29/18 14:24*	*08/31/18 22:11*	*20*
2-Fluorobiphenyl	*0*	*X*	*60 - 120*	*08/29/18 14:24*	*08/31/18 22:11*	*20*
2-Fluorophenol	*0*	*X*	*52 - 120*	*08/29/18 14:24*	*08/31/18 22:11*	*20*
Nitrobenzene-d5	*0*	*X*	*53 - 120*	*08/29/18 14:24*	*08/31/18 22:11*	*20*
Phenol-d5	*0*	*X*	*54 - 120*	*08/29/18 14:24*	*08/31/18 22:11*	*20*
p-Terphenyl-d14	*0*	*X*	*65 - 121*	*08/29/18 14:24*	*08/31/18 22:11*	*20*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**6000**	**B**	11.6	5.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Antimony	**0.49**	**J**	17.4	0.47	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Arsenic	**2.7**		2.3	0.47	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Barium	**54.3**		0.58	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Beryllium	**0.48**		0.23	0.033	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Cadmium	**0.30**		0.23	0.035	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Calcium	**185000**	**B**	291	19.2	mg/Kg	☼	08/31/18 11:25	09/05/18 12:39	5
Chromium	**11.2**		0.58	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Cobalt	**2.7**		0.58	0.058	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Copper	**13.7**		5.8	1.2	mg/Kg	☼	08/31/18 11:25	09/05/18 12:39	5
Iron	**6630**		11.6	4.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Lead	**66.3**		1.2	0.28	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Magnesium	**11300**	**B**	23.3	1.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Manganese	**374**	**B**	0.23	0.037	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Nickel	**8.7**		5.8	0.27	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Potassium	**1640**		34.9	23.3	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Selenium	ND		4.7	0.47	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Silver	ND		0.70	0.23	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Sodium	**246**		163	15.1	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Thallium	ND		7.0	0.35	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Vanadium	**11.6**		0.58	0.13	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1
Zinc	**92.3**		2.3	0.74	mg/Kg	☼	08/31/18 11:25	09/04/18 15:20	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: SS-7
Date Collected: 08/27/18 12:30
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-8
Matrix: Solid
Percent Solids: 87.4

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.023	0.0095	mg/Kg	☼	09/11/18 13:10	09/11/18 15:39	1

Client Sample ID: SS-8
Date Collected: 08/27/18 12:45
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-9
Matrix: Solid
Percent Solids: 89.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2,4-Dimethylphenol	ND		190	45	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2,4-Dinitrophenol	ND		1800	870	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2-Chlorophenol	ND		190	34	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
3-Nitroaniline	ND		370	52	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Nitroaniline	ND		370	99	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Acenaphthylene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Acetophenone	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Anthracene	ND		190	47	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Atrazine	ND		190	65	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Benzo[a]anthracene	**290**		190	19	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Benzo[a]pyrene	**330**		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Benzo[b]fluoranthene	**530**		190	30	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Benzo[g,h,i]perylene	**430**		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Biphenyl	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Bis(2-ethylhexyl) phthalate	**120**	**J**	190	64	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Caprolactam	ND		190	56	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Carbazole	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Chrysene	**350**		190	42	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1

Client Sample ID: SS-8
Date Collected: 08/27/18 12:45
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-9
Matrix: Solid
Percent Solids: 89.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	450		190	20	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Fluorene	ND		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Hexachlorobenzene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Hexachlorocyclopentadiene	ND		190	25	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Hexachloroethane	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Indeno[1,2,3-cd]pyrene	340		190	23	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Isophorone	ND		190	40	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Naphthalene	ND		190	24	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Phenanthrene	150	J	190	28	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Phenol	ND		190	29	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1
Pyrene	420		190	22	ug/Kg	☼	08/29/18 14:24	08/31/18 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*92*		*54 - 120*	*08/29/18 14:24*	*08/31/18 18:31*	*1*
2-Fluorobiphenyl	*86*		*60 - 120*	*08/29/18 14:24*	*08/31/18 18:31*	*1*
2-Fluorophenol	*78*		*52 - 120*	*08/29/18 14:24*	*08/31/18 18:31*	*1*
Nitrobenzene-d5	*78*		*53 - 120*	*08/29/18 14:24*	*08/31/18 18:31*	*1*
Phenol-d5	*91*		*54 - 120*	*08/29/18 14:24*	*08/31/18 18:31*	*1*
p-Terphenyl-d14	*103*		*65 - 121*	*08/29/18 14:24*	*08/31/18 18:31*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14100	B	11.2	4.9	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Antimony	0.87	J	16.9	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Arsenic	4.6		2.2	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Barium	179		0.56	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Beryllium	3.8		0.22	0.031	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Cadmium	0.098	J	0.22	0.034	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Calcium	166000	B	281	18.5	mg/Kg	☼	08/31/18 11:25	09/05/18 12:43	5
Chromium	6.1		0.56	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Cobalt	2.4		0.56	0.056	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Copper	10.8		5.6	1.2	mg/Kg	☼	08/31/18 11:25	09/05/18 12:43	5
Iron	21200		11.2	3.9	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Lead	55.1		1.1	0.27	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Magnesium	8350	B	22.5	1.0	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Manganese	1360	B	0.22	0.036	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Nickel	5.7		5.6	0.26	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Potassium	1000		33.7	22.5	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Selenium	1.8	J	4.5	0.45	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Silver	ND		0.67	0.22	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Sodium	405		157	14.6	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Thallium	ND		6.7	0.34	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Vanadium	7.6		0.56	0.12	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1
Zinc	70.3		2.2	0.72	mg/Kg	☼	08/31/18 11:25	09/04/18 15:24	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: SS-8
Date Collected: 08/27/18 12:45
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-9
Matrix: Solid
Percent Solids: 89.2

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.023	0.0094	mg/Kg	☼	09/11/18 13:10	09/11/18 15:41	1

Client Sample ID: SS-9
Date Collected: 08/27/18 13:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-10
Matrix: Solid
Percent Solids: 94.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		180	48	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2,4,6-Trichlorophenol	ND		180	36	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2,4-Dichlorophenol	ND		180	19	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2,4-Dimethylphenol	ND		180	43	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2,4-Dinitrophenol	ND		1700	820	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2,4-Dinitrotoluene	ND		180	37	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2,6-Dinitrotoluene	ND		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2-Chloronaphthalene	ND		180	29	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2-Chlorophenol	ND		180	33	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2-Methylnaphthalene	ND		180	36	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2-Methylphenol	ND		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2-Nitroaniline	ND		350	26	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
2-Nitrophenol	ND		180	50	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
3,3'-Dichlorobenzidine	ND		350	210	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
3-Nitroaniline	ND		350	49	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4,6-Dinitro-2-methylphenol	ND		350	180	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Bromophenyl phenyl ether	ND		180	25	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Chloro-3-methylphenol	ND		180	44	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Chloroaniline	ND		180	44	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Chlorophenyl phenyl ether	ND		180	22	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Methylphenol	ND		350	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Nitroaniline	ND		350	93	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
4-Nitrophenol	ND		350	120	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Acenaphthene	**220**		180	26	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Acenaphthylene	**38**	**J**	180	23	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Acetophenone	ND		180	24	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Anthracene	**450**		180	44	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Atrazine	ND		180	62	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Benzaldehyde	ND		180	140	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Benzo[a]anthracene	**2200**		180	18	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Benzo[a]pyrene	**2500**		180	26	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Benzo[b]fluoranthene	**3400**		180	28	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Benzo[g,h,i]perylene	**3000**		180	19	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Benzo[k]fluoranthene	**1600**		180	23	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Biphenyl	ND		180	26	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
bis (2-chloroisopropyl) ether	ND		180	36	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Bis(2-chloroethoxy)methane	ND		180	38	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Bis(2-chloroethyl)ether	ND		180	23	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Bis(2-ethylhexyl) phthalate	**600**		180	61	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Butyl benzyl phthalate	ND		180	29	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Caprolactam	ND		180	53	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Carbazole	**340**		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Chrysene	**2700**		180	40	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Dibenz(a,h)anthracene	**660**		180	31	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Dibenzofuran	**86**	**J**	180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Diethyl phthalate	ND		180	23	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Dimethyl phthalate	ND		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Di-n-butyl phthalate	ND		180	30	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Di-n-octyl phthalate	ND		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1

Client Sample ID: SS-9
Date Collected: 08/27/18 13:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-10
Matrix: Solid
Percent Solids: 94.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**5400**		180	19	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Fluorene	**180**		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Hexachlorobenzene	ND		180	24	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Hexachlorobutadiene	ND		180	26	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Hexachlorocyclopentadiene	ND		180	24	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Hexachloroethane	ND		180	23	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Indeno[1,2,3-cd]pyrene	**2300**		180	22	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Isophorone	ND		180	38	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Naphthalene	ND		180	23	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Nitrobenzene	ND		180	20	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
N-Nitrosodi-n-propylamine	ND		180	30	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
N-Nitrosodiphenylamine	ND		180	140	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Pentachlorophenol	ND		350	180	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Phenanthrene	**2400**		180	26	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Phenol	ND		180	27	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1
Pyrene	**4200**		180	21	ug/Kg	☼	08/29/18 14:24	08/31/18 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*100*		*54 - 120*	*08/29/18 14:24*	*08/31/18 22:39*	*1*
2-Fluorobiphenyl	*79*		*60 - 120*	*08/29/18 14:24*	*08/31/18 22:39*	*1*
2-Fluorophenol	*66*		*52 - 120*	*08/29/18 14:24*	*08/31/18 22:39*	*1*
Nitrobenzene-d5	*71*		*53 - 120*	*08/29/18 14:24*	*08/31/18 22:39*	*1*
Phenol-d5	*76*		*54 - 120*	*08/29/18 14:24*	*08/31/18 22:39*	*1*
p-Terphenyl-d14	*92*		*65 - 121*	*08/29/18 14:24*	*08/31/18 22:39*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		17	3.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
4,4'-DDE	ND		17	3.6	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
4,4'-DDT	ND		17	4.0	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Aldrin	ND		17	4.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
alpha-BHC	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
cis-Chlordane	ND		17	8.5	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
beta-BHC	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
delta-BHC	ND		17	3.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Dieldrin	ND		17	4.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Endosulfan I	ND		17	3.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Endosulfan II	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Endosulfan sulfate	ND		17	3.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Endrin	ND		17	3.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Endrin aldehyde	ND		17	4.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Endrin ketone	ND		17	4.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
gamma-BHC (Lindane)	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
trans-Chlordane	ND		17	5.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Heptachlor	ND		17	3.7	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Heptachlor epoxide	ND		17	4.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Methoxychlor	ND		17	3.5	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10
Toxaphene	ND		170	99	ug/Kg	☼	08/30/18 08:37	08/31/18 13:21	10

Client Sample ID: SS-9
Date Collected: 08/27/18 13:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-10
Matrix: Solid
Percent Solids: 94.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	170	X	45 - 120	08/30/18 08:37	08/31/18 13:21	10
DCB Decachlorobiphenyl	460	X	45 - 120	08/30/18 08:37	08/31/18 13:21	10
Tetrachloro-m-xylene	111		30 - 124	08/30/18 08:37	08/31/18 13:21	10
Tetrachloro-m-xylene	73		30 - 124	08/30/18 08:37	08/31/18 13:21	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.23	0.045	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1
PCB-1221	ND		0.23	0.045	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1
PCB-1232	ND		0.23	0.045	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1
PCB-1242	ND		0.23	0.045	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1
PCB-1248	ND		0.23	0.045	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1
PCB-1254	ND		0.23	0.11	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1
PCB-1260	ND		0.23	0.11	mg/Kg	☼	08/29/18 14:41	08/31/18 00:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		60 - 154	08/29/18 14:41	08/31/18 00:03	1
Tetrachloro-m-xylene	81		60 - 154	08/29/18 14:41	08/31/18 00:03	1
DCB Decachlorobiphenyl	94		65 - 174	08/29/18 14:41	08/31/18 00:03	1
DCB Decachlorobiphenyl	81		65 - 174	08/29/18 14:41	08/31/18 00:03	1

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		18	5.6	ug/Kg	☼	09/04/18 07:12	09/07/18 14:07	1
Silvex (2,4,5-TP)	ND		18	6.3	ug/Kg	☼	09/04/18 07:12	09/07/18 14:07	1
2,4-D	ND		18	11	ug/Kg	☼	09/04/18 07:12	09/07/18 14:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	43		28 - 129	09/04/18 07:12	09/07/18 14:07	1
2,4-Dichlorophenylacetic acid	39		28 - 129	09/04/18 07:12	09/07/18 14:07	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7970	B	10.3	4.5	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Antimony	ND		15.5	0.41	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Arsenic	2.6		2.1	0.41	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Barium	86.7		0.52	0.11	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Beryllium	1.3		0.21	0.029	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Cadmium	0.30		0.21	0.031	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Calcium	160000	B	258	17.0	mg/Kg	☼	08/31/18 11:25	09/05/18 12:47	5
Chromium	9.7		0.52	0.21	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Cobalt	1.7		0.52	0.052	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Copper	12.9		5.2	1.1	mg/Kg	☼	08/31/18 11:25	09/05/18 12:47	5
Iron	5360		10.3	3.6	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Lead	41.7		1.0	0.25	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Magnesium	10800	B	20.6	0.96	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Manganese	733	B	0.21	0.033	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Nickel	7.4		5.2	0.24	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Potassium	1070		31.0	20.6	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Selenium	ND		4.1	0.41	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Silver	ND		0.62	0.21	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: SS-9
Date Collected: 08/27/18 13:00
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-10
Matrix: Solid
Percent Solids: 94.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	271		145	13.4	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Thallium	ND		6.2	0.31	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Vanadium	6.4		0.52	0.11	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1
Zinc	67.6		2.1	0.66	mg/Kg	☼	08/31/18 11:25	09/04/18 15:27	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027		0.021	0.0087	mg/Kg	☼	09/11/18 13:10	09/11/18 15:42	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: BD
Date Collected: 08/27/18 13:05
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-11
Matrix: Solid
Percent Solids: 96.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		170	47	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2,4-Dichlorophenol	ND		170	18	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2,4-Dimethylphenol	ND		170	42	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2,4-Dinitrophenol	ND		1700	790	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2-Chloronaphthalene	ND		170	28	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2-Chlorophenol	ND		170	31	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2-Methylnaphthalene	ND		170	34	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2-Methylphenol	ND		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2-Nitroaniline	ND		330	25	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
2-Nitrophenol	ND		170	49	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
3-Nitroaniline	ND		330	48	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Chloro-3-methylphenol	ND		170	43	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Chloroaniline	ND		170	43	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Methylphenol	ND		330	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Nitroaniline	ND		330	90	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
4-Nitrophenol	ND		330	120	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Acenaphthene	**120**	**J**	170	25	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Acenaphthylene	ND		170	22	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Acetophenone	ND		170	23	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Anthracene	**290**		170	43	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Atrazine	ND		170	60	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Benzaldehyde	ND		170	140	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Benzo[a]anthracene	**1700**		170	17	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Benzo[a]pyrene	**1900**		170	25	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Benzo[b]fluoranthene	**2600**		170	27	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Benzo[g,h,i]perylene	**2200**		170	18	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Benzo[k]fluoranthene	**1200**		170	22	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Biphenyl	ND		170	25	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Bis(2-ethylhexyl) phthalate	**620**		170	59	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Butyl benzyl phthalate	ND		170	28	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Caprolactam	ND		170	52	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Carbazole	**200**		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Chrysene	**2100**		170	38	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Dibenzofuran	ND		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Diethyl phthalate	ND		170	22	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Dimethyl phthalate	ND		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Di-n-butyl phthalate	ND		170	29	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Di-n-octyl phthalate	ND		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1

Client Sample ID: BD
Date Collected: 08/27/18 13:05
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-11
Matrix: Solid
Percent Solids: 96.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**3700**		170	18	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Fluorene	**86**	**J**	170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Hexachlorobenzene	ND		170	23	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Hexachlorobutadiene	ND		170	25	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Hexachloroethane	ND		170	22	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Indeno[1,2,3-cd]pyrene	**1800**		170	21	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Isophorone	ND		170	36	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Naphthalene	ND		170	22	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Nitrobenzene	ND		170	19	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Pentachlorophenol	ND		330	170	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Phenanthrene	**1500**		170	25	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Phenol	ND		170	26	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1
Pyrene	**3200**		170	20	ug/Kg	☼	08/29/18 14:24	08/31/18 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*54 - 120*	*08/29/18 14:24*	*08/31/18 23:07*	*1*
2-Fluorobiphenyl	*76*		*60 - 120*	*08/29/18 14:24*	*08/31/18 23:07*	*1*
2-Fluorophenol	*65*		*52 - 120*	*08/29/18 14:24*	*08/31/18 23:07*	*1*
Nitrobenzene-d5	*69*		*53 - 120*	*08/29/18 14:24*	*08/31/18 23:07*	*1*
Phenol-d5	*74*		*54 - 120*	*08/29/18 14:24*	*08/31/18 23:07*	*1*
p-Terphenyl-d14	*95*		*65 - 121*	*08/29/18 14:24*	*08/31/18 23:07*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		17	3.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
4,4'-DDE	ND		17	3.6	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
4,4'-DDT	ND		17	4.0	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Aldrin	ND		17	4.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
alpha-BHC	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
cis-Chlordane	ND		17	8.6	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
beta-BHC	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
delta-BHC	ND		17	3.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Dieldrin	ND		17	4.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Endosulfan I	ND		17	3.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Endosulfan II	ND		17	3.1	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Endosulfan sulfate	ND		17	3.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Endrin	ND		17	3.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Endrin aldehyde	ND		17	4.4	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Endrin ketone	ND		17	4.3	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
gamma-BHC (Lindane)	ND		17	3.2	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
trans-Chlordane	ND		17	5.5	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Heptachlor	ND		17	3.7	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Heptachlor epoxide	ND		17	4.5	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Methoxychlor	ND		17	3.5	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10
Toxaphene	ND		170	100	ug/Kg	☼	08/30/18 08:37	08/31/18 13:40	10

Client Sample ID: BD
Date Collected: 08/27/18 13:05
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-11
Matrix: Solid
Percent Solids: 96.0

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*99*		*45 - 120*	*08/30/18 08:37*	*08/31/18 13:40*	*10*
DCB Decachlorobiphenyl	*509*	*X*	*45 - 120*	*08/30/18 08:37*	*08/31/18 13:40*	*10*
Tetrachloro-m-xylene	*96*		*30 - 124*	*08/30/18 08:37*	*08/31/18 13:40*	*10*
Tetrachloro-m-xylene	*65*		*30 - 124*	*08/30/18 08:37*	*08/31/18 13:40*	*10*

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	☼	08/29/18 14:41	08/31/18 00:19	1
PCB-1221	ND		0.26	0.051	mg/Kg	☼	08/29/18 14:41	08/31/18 00:19	1
PCB-1232	ND		0.26	0.051	mg/Kg	☼	08/29/18 14:41	08/31/18 00:19	1
PCB-1242	ND		0.26	0.051	mg/Kg	☼	08/29/18 14:41	08/31/18 00:19	1
PCB-1248	ND		0.26	0.051	mg/Kg	☼	08/29/18 14:41	08/31/18 00:19	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	08/29/18 14:41	08/31/18 00:19	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	08/29/18 14:41	08/31/18 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*92*		*60 - 154*	*08/29/18 14:41*	*08/31/18 00:19*	*1*
Tetrachloro-m-xylene	*74*		*60 - 154*	*08/29/18 14:41*	*08/31/18 00:19*	*1*
DCB Decachlorobiphenyl	*86*		*65 - 174*	*08/29/18 14:41*	*08/31/18 00:19*	*1*
DCB Decachlorobiphenyl	*74*		*65 - 174*	*08/29/18 14:41*	*08/31/18 00:19*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		17	5.5	ug/Kg	☼	09/04/18 07:12	09/07/18 14:37	1
Silvex (2,4,5-TP)	ND		17	6.2	ug/Kg	☼	09/04/18 07:12	09/07/18 14:37	1
2,4-D	ND		17	11	ug/Kg	☼	09/04/18 07:12	09/07/18 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*80*		*28 - 129*	*09/04/18 07:12*	*09/07/18 14:37*	*1*
2,4-Dichlorophenylacetic acid	*52*		*28 - 129*	*09/04/18 07:12*	*09/07/18 14:37*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**8130**	**B**	10.3	4.5	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Antimony	ND		15.4	0.41	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Arsenic	**1.7**	**J**	2.1	0.41	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Barium	**100**		0.51	0.11	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Beryllium	**1.2**		0.21	0.029	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Cadmium	**0.31**		0.21	0.031	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Calcium	**170000**	**B**	257	17.0	mg/Kg	☼	08/31/18 11:25	09/05/18 12:51	5
Chromium	**10.1**		0.51	0.21	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Cobalt	**1.7**		0.51	0.051	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Copper	**13.4**		5.1	1.1	mg/Kg	☼	08/31/18 11:25	09/05/18 12:51	5
Iron	**4580**		10.3	3.6	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Lead	**47.8**		1.0	0.25	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Magnesium	**9060**	**B**	20.5	0.95	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Manganese	**937**	**B**	0.21	0.033	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Nickel	**8.8**		5.1	0.24	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Potassium	**1160**		154	103	mg/Kg	☼	08/31/18 11:25	09/05/18 12:51	5
Selenium	ND		4.1	0.41	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Silver	ND		0.62	0.21	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: BD
Date Collected: 08/27/18 13:05
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-11
Matrix: Solid
Percent Solids: 96.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	280		144	13.4	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Thallium	ND		6.2	0.31	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Vanadium	6.7		0.51	0.11	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1
Zinc	72.7		2.1	0.66	mg/Kg	☼	08/31/18 11:25	09/05/18 13:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	J	0.021	0.0083	mg/Kg	☼	09/11/18 13:10	09/11/18 15:47	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(60-140)	(71-125)
480-140944-1	TP-1 (5-7)	102	99	99	100
480-140944-3	TP-3 (2-4)	101	96	99	100
LCS 480-431879/1-A	Lab Control Sample	98	101	100	102
LCSD 480-431879/2-A	Lab Control Sample Dup	97	100	98	101
MB 480-431879/3-A	Method Blank	99	99	97	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(53-120)	(54-120)	(65-121)
480-140944-1	TP-1 (5-7)	90	75	79	81	85	90
480-140944-2	TP-2 (8-10)	88	79	68	74	74	93
480-140944-3	TP-3 (2-4)	91	81	75	79	79	94
480-140944-4	TP-4 (1-3)	81	76	76	78	87	91
480-140944-5	TP-5 (9-11)	85	78	72	80	75	92
480-140944-6	SS-5	138 X	94	0 X	89	99	119
480-140944-7	SS-6	0 X	0 X	0 X	0 X	0 X	0 X
480-140944-8	SS-7	0 X	0 X	0 X	0 X	0 X	0 X
480-140944-9	SS-8	92	86	78	78	91	103
480-140944-9 MS	SS-8	94	75	67	77	80	93
480-140944-9 MSD	SS-8	90	81	75	76	77	95
480-140944-10	SS-9	100	79	66	71	76	92
480-140944-11	BD	89	76	65	69	74	95
LCS 480-432014/2-A	Lab Control Sample	82	72	70	74	75	89
MB 480-432014/1-A	Method Blank	82	83	80	75	78	87

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHd14 = p-Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-140944-1	TP-1 (5-7)	80	79	74	68
480-140944-3	TP-3 (2-4)	65	76	55	51

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-140944-6	SS-5	524 X	1476 X	0 X	0 X
480-140944-10	SS-9	170 X	460 X	111	73
480-140944-11	BD	99	509 X	96	65
LCS 480-432159/2-A	Lab Control Sample	85	87	73	63
MB 480-432159/1-A	Method Blank	91	84	69	59

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-140944-1	TP-1 (5-7)	103	83	95	86
480-140944-3	TP-3 (2-4)	103	86	94	85
480-140944-6	SS-5	96	82	91	80
480-140944-10	SS-9	100	81	94	81
480-140944-11	BD	92	74	86	74
LCS 480-432017/2-A	Lab Control Sample	122	90	109	96
MB 480-432017/1-A	Method Blank	91	71	80	72

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1	DCPAA2
Lab Sample ID	Client Sample ID	(28-129)	(28-129)
480-140944-1	TP-1 (5-7)	53	51
480-140944-3	TP-3 (2-4)	56	56
480-140944-6	SS-5	47	50
480-140944-10	SS-9	43	39
480-140944-11	BD	80	52
LCS 480-432586/2-A	Lab Control Sample	73	65
MB 480-432586/1-A	Method Blank	54	52

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 480-431879/3-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431879

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
2-Hexanone	ND		25	2.5	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Acetone	ND		25	4.2	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Benzene	ND		5.0	0.25	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Bromoform	ND		5.0	2.5	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Bromomethane	ND		5.0	0.45	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Chloroethane	ND		5.0	1.1	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Chloroform	ND		5.0	0.31	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Chloromethane	ND		5.0	0.30	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Cyclohexane	ND		5.0	0.70	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
m,p-Xylene	ND		10	0.84	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Methyl acetate	ND		25	3.0	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
o-Xylene	ND		5.0	0.65	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Styrene	ND		5.0	0.25	ug/Kg		08/28/18 22:49	08/29/18 09:42	1

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

Lab Sample ID: MB 480-431879/3-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431879

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		5.0	0.52	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Toluene	ND		5.0	0.38	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Trichloroethene	ND		5.0	1.1	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		08/28/18 22:49	08/29/18 09:42	1
Xylenes, Total	ND		10	0.84	ug/Kg		08/28/18 22:49	08/29/18 09:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*	*08/28/18 22:49*	*08/29/18 09:42*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*08/28/18 22:49*	*08/29/18 09:42*	*1*
Dibromofluoromethane (Surr)	*97*		*60 - 140*	*08/28/18 22:49*	*08/29/18 09:42*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*08/28/18 22:49*	*08/29/18 09:42*	*1*

Lab Sample ID: LCS 480-431879/1-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	43.4		ug/Kg		87	77 - 121
1,1,2,2-Tetrachloroethane	50.0	50.6		ug/Kg		101	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	43.9		ug/Kg		88	60 - 140
1,1,2-Trichloroethane	50.0	50.2		ug/Kg		100	78 - 122
1,1-Dichloroethane	50.0	46.6		ug/Kg		93	73 - 126
1,1-Dichloroethene	50.0	46.2		ug/Kg		92	59 - 125
1,2,4-Trichlorobenzene	50.0	45.4		ug/Kg		91	64 - 120
1,2,4-Trimethylbenzene	50.0	47.1		ug/Kg		94	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	46.0		ug/Kg		92	63 - 124
1,2-Dibromoethane	50.0	49.9		ug/Kg		100	78 - 120
1,2-Dichlorobenzene	50.0	46.8		ug/Kg		94	75 - 120
1,2-Dichloroethane	50.0	43.4		ug/Kg		87	77 - 122
1,2-Dichloropropane	50.0	48.8		ug/Kg		98	75 - 124
1,3,5-Trimethylbenzene	50.0	46.9		ug/Kg		94	74 - 120
1,3-Dichlorobenzene	50.0	47.0		ug/Kg		94	74 - 120
1,4-Dichlorobenzene	50.0	46.8		ug/Kg		94	73 - 120
2-Butanone (MEK)	250	269		ug/Kg		108	70 - 134
2-Hexanone	250	258		ug/Kg		103	59 - 130
4-Isopropyltoluene	50.0	47.2		ug/Kg		94	74 - 120
4-Methyl-2-pentanone (MIBK)	250	250		ug/Kg		100	65 - 133
Acetone	250	267		ug/Kg		107	61 - 137
Benzene	50.0	48.9		ug/Kg		98	79 - 127
Bromodichloromethane	50.0	47.1		ug/Kg		94	80 - 122
Bromoform	50.0	48.1		ug/Kg		96	68 - 126
Bromomethane	50.0	40.9		ug/Kg		82	37 - 149
Carbon disulfide	50.0	44.8		ug/Kg		90	64 - 131

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

Lab Sample ID: LCS 480-431879/1-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	50.0	42.9		ug/Kg		86	75 - 135
Chlorobenzene	50.0	48.0		ug/Kg		96	76 - 124
Chloroethane	50.0	41.6		ug/Kg		83	69 - 135
Chloroform	50.0	45.6		ug/Kg		91	80 - 120
Chloromethane	50.0	37.7		ug/Kg		75	63 - 127
cis-1,2-Dichloroethene	50.0	48.1		ug/Kg		96	81 - 120
cis-1,3-Dichloropropene	50.0	48.6		ug/Kg		97	80 - 120
Cyclohexane	50.0	47.3		ug/Kg		95	65 - 120
Dibromochloromethane	50.0	47.8		ug/Kg		96	76 - 125
Dichlorodifluoromethane	50.0	43.4		ug/Kg		87	57 - 142
Ethylbenzene	50.0	47.2		ug/Kg		94	80 - 120
Isopropylbenzene	50.0	46.8		ug/Kg		94	72 - 120
m,p-Xylene	50.0	48.2		ug/Kg		96	70 - 130
Methyl acetate	100	105		ug/Kg		105	55 - 136
Methyl tert-butyl ether	50.0	47.1		ug/Kg		94	63 - 125
Methylcyclohexane	50.0	47.8		ug/Kg		96	60 - 140
Methylene Chloride	50.0	43.5		ug/Kg		87	61 - 127
Naphthalene	50.0	47.4		ug/Kg		95	38 - 137
n-Butylbenzene	50.0	46.2		ug/Kg		92	70 - 120
N-Propylbenzene	50.0	47.0		ug/Kg		94	70 - 130
o-Xylene	50.0	47.9		ug/Kg		96	70 - 130
sec-Butylbenzene	50.0	46.9		ug/Kg		94	74 - 120
Styrene	50.0	49.2		ug/Kg		98	80 - 120
tert-Butylbenzene	50.0	47.2		ug/Kg		94	73 - 120
Tetrachloroethene	50.0	46.6		ug/Kg		93	74 - 122
Toluene	50.0	48.3		ug/Kg		97	74 - 128
trans-1,2-Dichloroethene	50.0	47.8		ug/Kg		96	78 - 126
trans-1,3-Dichloropropene	50.0	48.5		ug/Kg		97	73 - 123
Trichloroethene	50.0	46.5		ug/Kg		93	77 - 129
Trichlorofluoromethane	50.0	44.8		ug/Kg		90	65 - 146
Vinyl chloride	50.0	39.2		ug/Kg		78	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*
4-Bromofluorobenzene (Surr)	*101*		*72 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*102*		*71 - 125*

Lab Sample ID: LCSD 480-431879/2-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 431879

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	40.5		ug/Kg		81	77 - 121	7	20
1,1,2,2-Tetrachloroethane	50.0	48.8		ug/Kg		98	80 - 120	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	39.7		ug/Kg		79	60 - 140	10	20
1,1,2-Trichloroethane	50.0	47.4		ug/Kg		95	78 - 122	6	20

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

Lab Sample ID: LCSD 480-431879/2-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 431879

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	50.0	43.6		ug/Kg		87	73 - 126	6	20
1,1-Dichloroethene	50.0	41.9		ug/Kg		84	59 - 125	10	20
1,2,4-Trichlorobenzene	50.0	42.1		ug/Kg		84	64 - 120	8	20
1,2,4-Trimethylbenzene	50.0	44.1		ug/Kg		88	74 - 120	7	20
1,2-Dibromo-3-Chloropropane	50.0	43.9		ug/Kg		88	63 - 124	5	20
1,2-Dibromoethane	50.0	47.3		ug/Kg		95	78 - 120	5	20
1,2-Dichlorobenzene	50.0	44.2		ug/Kg		88	75 - 120	6	20
1,2-Dichloroethane	50.0	41.2		ug/Kg		82	77 - 122	5	20
1,2-Dichloropropane	50.0	46.1		ug/Kg		92	75 - 124	6	20
1,3,5-Trimethylbenzene	50.0	43.7		ug/Kg		87	74 - 120	7	20
1,3-Dichlorobenzene	50.0	44.3		ug/Kg		89	74 - 120	6	20
1,4-Dichlorobenzene	50.0	44.4		ug/Kg		89	73 - 120	5	20
2-Butanone (MEK)	250	254		ug/Kg		102	70 - 134	6	20
2-Hexanone	250	242		ug/Kg		97	59 - 130	6	20
4-Isopropyltoluene	50.0	43.5		ug/Kg		87	74 - 120	8	20
4-Methyl-2-pentanone (MIBK)	250	237		ug/Kg		95	65 - 133	6	20
Acetone	250	250		ug/Kg		100	61 - 137	6	20
Benzene	50.0	45.5		ug/Kg		91	79 - 127	7	20
Bromodichloromethane	50.0	44.5		ug/Kg		89	80 - 122	6	20
Bromoform	50.0	45.6		ug/Kg		91	68 - 126	5	20
Bromomethane	50.0	42.6		ug/Kg		85	37 - 149	4	20
Carbon disulfide	50.0	41.8		ug/Kg		84	64 - 131	7	20
Carbon tetrachloride	50.0	39.5		ug/Kg		79	75 - 135	8	20
Chlorobenzene	50.0	45.2		ug/Kg		90	76 - 124	6	20
Chloroethane	50.0	55.8	*	ug/Kg		112	69 - 135	29	20
Chloroform	50.0	42.8		ug/Kg		86	80 - 120	6	20
Chloromethane	50.0	34.7		ug/Kg		69	63 - 127	8	20
cis-1,2-Dichloroethene	50.0	45.1		ug/Kg		90	81 - 120	7	20
cis-1,3-Dichloropropene	50.0	46.5		ug/Kg		93	80 - 120	4	20
Cyclohexane	50.0	42.5		ug/Kg		85	65 - 120	11	20
Dibromochloromethane	50.0	45.7		ug/Kg		91	76 - 125	5	20
Dichlorodifluoromethane	50.0	39.5		ug/Kg		79	57 - 142	9	20
Ethylbenzene	50.0	44.1		ug/Kg		88	80 - 120	7	20
Isopropylbenzene	50.0	43.7		ug/Kg		87	72 - 120	7	20
m,p-Xylene	50.0	44.8		ug/Kg		90	70 - 130	7	20
Methyl acetate	100	99.4		ug/Kg		99	55 - 136	6	20
Methyl tert-butyl ether	50.0	44.8		ug/Kg		90	63 - 125	5	20
Methylcyclohexane	50.0	43.4		ug/Kg		87	60 - 140	10	20
Methylene Chloride	50.0	41.0		ug/Kg		82	61 - 127	6	20
Naphthalene	50.0	44.3		ug/Kg		89	38 - 137	7	20
n-Butylbenzene	50.0	42.3		ug/Kg		85	70 - 120	9	20
N-Propylbenzene	50.0	43.9		ug/Kg		88	70 - 130	7	20
o-Xylene	50.0	44.6		ug/Kg		89	70 - 130	7	20
sec-Butylbenzene	50.0	43.3		ug/Kg		87	74 - 120	8	20
Styrene	50.0	46.2		ug/Kg		92	80 - 120	6	20
tert-Butylbenzene	50.0	43.5		ug/Kg		87	73 - 120	8	20
Tetrachloroethene	50.0	43.2		ug/Kg		86	74 - 122	8	20
Toluene	50.0	44.8		ug/Kg		90	74 - 128	8	20

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

Lab Sample ID: LCSD 480-431879/2-A
Matrix: Solid
Analysis Batch: 431892

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 431879

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene			50.0	44.0		ug/Kg		88	78 - 126	8	20
trans-1,3-Dichloropropene			50.0	45.9		ug/Kg		92	73 - 123	5	20
Trichloroethene			50.0	43.1		ug/Kg		86	77 - 129	7	20
Trichlorofluoromethane			50.0	42.6		ug/Kg		85	65 - 146	5	20
Vinyl chloride			50.0	35.8		ug/Kg		72	61 - 133	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 126*
4-Bromofluorobenzene (Surr)	*100*		*72 - 126*
Dibromofluoromethane (Surr)	*98*		*60 - 140*
Toluene-d8 (Surr)	*101*		*71 - 125*

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

Lab Sample ID: MB 480-432014/1-A
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		160	45	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2,4,6-Trichlorophenol	ND		160	33	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2,4-Dichlorophenol	ND		160	17	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2,4-Dimethylphenol	ND		160	40	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2,4-Dinitrophenol	ND		1600	760	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2,4-Dinitrotoluene	ND		160	34	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2,6-Dinitrotoluene	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2-Chloronaphthalene	ND		160	27	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2-Chlorophenol	ND		160	30	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2-Methylnaphthalene	ND		160	33	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2-Methylphenol	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2-Nitroaniline	ND		320	24	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
2-Nitrophenol	ND		160	47	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
3,3'-Dichlorobenzidine	ND		320	190	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
3-Nitroaniline	ND		320	46	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4,6-Dinitro-2-methylphenol	ND		320	160	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Bromophenyl phenyl ether	ND		160	23	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Chloro-3-methylphenol	ND		160	41	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Chloroaniline	ND		160	41	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Chlorophenyl phenyl ether	ND		160	20	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Methylphenol	ND		320	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Nitroaniline	ND		320	86	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
4-Nitrophenol	ND		320	120	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Acenaphthene	ND		160	24	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Acenaphthylene	ND		160	21	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Acetophenone	ND		160	22	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Anthracene	ND		160	41	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Atrazine	ND		160	57	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Benzaldehyde	ND		160	130	ug/Kg		08/29/18 14:24	08/31/18 16:41	1

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

Lab Sample ID: MB 480-432014/1-A
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		160	16	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Benzo[a]pyrene	ND		160	24	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Benzo[b]fluoranthene	ND		160	26	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Benzo[g,h,i]perylene	ND		160	17	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Benzo[k]fluoranthene	ND		160	21	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Biphenyl	ND		160	24	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
bis (2-chloroisopropyl) ether	ND		160	33	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Bis(2-chloroethoxy)methane	ND		160	35	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Bis(2-chloroethyl)ether	ND		160	21	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Bis(2-ethylhexyl) phthalate	ND		160	56	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Butyl benzyl phthalate	ND		160	27	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Caprolactam	ND		160	49	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Carbazole	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Chrysene	ND		160	37	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Dibenz(a,h)anthracene	ND		160	29	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Dibenzofuran	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Diethyl phthalate	ND		160	21	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Dimethyl phthalate	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Di-n-butyl phthalate	ND		160	28	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Di-n-octyl phthalate	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Fluoranthene	ND		160	17	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Fluorene	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Hexachlorobenzene	ND		160	22	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Hexachlorobutadiene	ND		160	24	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Hexachlorocyclopentadiene	ND		160	22	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Hexachloroethane	ND		160	21	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Indeno[1,2,3-cd]pyrene	ND		160	20	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Isophorone	ND		160	35	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Naphthalene	ND		160	21	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Nitrobenzene	ND		160	18	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
N-Nitrosodi-n-propylamine	ND		160	28	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
N-Nitrosodiphenylamine	ND		160	130	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Pentachlorophenol	ND		320	160	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Phenanthrene	ND		160	24	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Phenol	ND		160	25	ug/Kg		08/29/18 14:24	08/31/18 16:41	1
Pyrene	ND		160	19	ug/Kg		08/29/18 14:24	08/31/18 16:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*82*		*54 - 120*	*08/29/18 14:24*	*08/31/18 16:41*	*1*
2-Fluorobiphenyl	*83*		*60 - 120*	*08/29/18 14:24*	*08/31/18 16:41*	*1*
2-Fluorophenol	*80*		*52 - 120*	*08/29/18 14:24*	*08/31/18 16:41*	*1*
Nitrobenzene-d5	*75*		*53 - 120*	*08/29/18 14:24*	*08/31/18 16:41*	*1*
Phenol-d5	*78*		*54 - 120*	*08/29/18 14:24*	*08/31/18 16:41*	*1*
p-Terphenyl-d14	*87*		*65 - 121*	*08/29/18 14:24*	*08/31/18 16:41*	*1*

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

Lab Sample ID: LCS 480-432014/2-A
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	1650	1450		ug/Kg		88	59 - 126
2,4,6-Trichlorophenol	1650	1440		ug/Kg		88	59 - 123
2,4-Dichlorophenol	1650	1330		ug/Kg		81	61 - 120
2,4-Dimethylphenol	1650	1440		ug/Kg		87	59 - 120
2,4-Dinitrophenol	3300	2580		ug/Kg		78	41 - 146
2,4-Dinitrotoluene	1650	1460		ug/Kg		88	63 - 120
2,6-Dinitrotoluene	1650	1620		ug/Kg		99	66 - 120
2-Chloronaphthalene	1650	1400		ug/Kg		85	57 - 120
2-Chlorophenol	1650	1220		ug/Kg		74	53 - 120
2-Methylnaphthalene	1650	1360		ug/Kg		82	59 - 120
2-Methylphenol	1650	1460		ug/Kg		89	54 - 120
2-Nitroaniline	1650	1450		ug/Kg		88	61 - 120
2-Nitrophenol	1650	1400		ug/Kg		85	56 - 120
3,3'-Dichlorobenzidine	3300	3010		ug/Kg		91	54 - 120
3-Nitroaniline	1650	1380		ug/Kg		84	48 - 120
4,6-Dinitro-2-methylphenol	3300	3340		ug/Kg		101	49 - 122
4-Bromophenyl phenyl ether	1650	1620		ug/Kg		99	58 - 120
4-Chloro-3-methylphenol	1650	1530		ug/Kg		93	61 - 120
4-Chloroaniline	1650	1270		ug/Kg		77	38 - 120
4-Chlorophenyl phenyl ether	1650	1570		ug/Kg		95	63 - 124
4-Methylphenol	1650	1420		ug/Kg		86	55 - 120
4-Nitroaniline	1650	1550		ug/Kg		94	56 - 120
4-Nitrophenol	3300	3310		ug/Kg		100	43 - 147
Acenaphthene	1650	1420		ug/Kg		86	62 - 120
Acenaphthylene	1650	1460		ug/Kg		89	58 - 121
Acetophenone	1650	1270		ug/Kg		77	54 - 120
Anthracene	1650	1590		ug/Kg		96	62 - 120
Atrazine	3300	3320		ug/Kg		101	60 - 127
Benzaldehyde	3300	2620		ug/Kg		79	10 - 150
Benzo[a]anthracene	1650	1660		ug/Kg		101	65 - 120
Benzo[a]pyrene	1650	1640		ug/Kg		99	64 - 120
Benzo[b]fluoranthene	1650	1760		ug/Kg		107	64 - 120
Benzo[g,h,i]perylene	1650	1630		ug/Kg		99	45 - 145
Benzo[k]fluoranthene	1650	1550		ug/Kg		94	65 - 120
Biphenyl	1650	1370		ug/Kg		83	59 - 120
bis (2-chloroisopropyl) ether	1650	1310		ug/Kg		80	44 - 120
Bis(2-chloroethoxy)methane	1650	1280		ug/Kg		78	55 - 120
Bis(2-chloroethyl)ether	1650	1270		ug/Kg		77	45 - 120
Bis(2-ethylhexyl) phthalate	1650	1630		ug/Kg		99	61 - 133
Butyl benzyl phthalate	1650	1670		ug/Kg		101	61 - 129
Caprolactam	3300	3090		ug/Kg		94	47 - 120
Carbazole	1650	1630		ug/Kg		99	65 - 120
Chrysene	1650	1690		ug/Kg		102	64 - 120
Dibenz(a,h)anthracene	1650	1580		ug/Kg		96	54 - 132
Dibenzofuran	1650	1520		ug/Kg		92	63 - 120
Diethyl phthalate	1650	1420		ug/Kg		86	66 - 120
Dimethyl phthalate	1650	1570		ug/Kg		95	65 - 124
Di-n-butyl phthalate	1650	1640		ug/Kg		100	58 - 130

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

Lab Sample ID: LCS 480-432014/2-A
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	1650	1620		ug/Kg		98	57 - 133
Fluoranthene	1650	1690		ug/Kg		103	62 - 120
Fluorene	1650	1550		ug/Kg		94	63 - 120
Hexachlorobenzene	1650	1580		ug/Kg		96	60 - 120
Hexachlorobutadiene	1650	1250		ug/Kg		76	45 - 120
Hexachlorocyclopentadiene	1650	1230		ug/Kg		75	47 - 120
Hexachloroethane	1650	1130		ug/Kg		69	41 - 120
Indeno[1,2,3-cd]pyrene	1650	1610		ug/Kg		98	56 - 134
Isophorone	1650	1490		ug/Kg		90	56 - 120
Naphthalene	1650	1270		ug/Kg		77	55 - 120
Nitrobenzene	1650	1340		ug/Kg		81	54 - 120
N-Nitrosodi-n-propylamine	1650	1320		ug/Kg		80	52 - 120
Pentachlorophenol	3300	3520		ug/Kg		107	51 - 120
Phenanthrene	1650	1630		ug/Kg		99	60 - 120
Phenol	1650	1330		ug/Kg		81	53 - 120
Pyrene	1650	1640		ug/Kg		99	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*82*		*54 - 120*
2-Fluorobiphenyl	*72*		*60 - 120*
2-Fluorophenol	*70*		*52 - 120*
Nitrobenzene-d5	*74*		*53 - 120*
Phenol-d5	*75*		*54 - 120*
p-Terphenyl-d14	*89*		*65 - 121*

Lab Sample ID: 480-140944-9 MS
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: SS-8
Prep Type: Total/NA
Prep Batch: 432014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	ND		1840	1720		ug/Kg	☼	94	46 - 120
2,4,6-Trichlorophenol	ND		1840	1690		ug/Kg	☼	92	41 - 123
2,4-Dichlorophenol	ND		1840	1680		ug/Kg	☼	92	45 - 120
2,4-Dimethylphenol	ND		1840	1750		ug/Kg	☼	95	52 - 120
2,4-Dinitrophenol	ND		3680	2310		ug/Kg	☼	63	41 - 146
2,4-Dinitrotoluene	ND		1840	1720		ug/Kg	☼	93	63 - 125
2,6-Dinitrotoluene	ND		1840	1580		ug/Kg	☼	86	66 - 120
2-Chloronaphthalene	ND		1840	1480		ug/Kg	☼	81	57 - 120
2-Chlorophenol	ND		1840	1380		ug/Kg	☼	75	43 - 120
2-Methylnaphthalene	ND		1840	1530		ug/Kg	☼	83	55 - 120
2-Methylphenol	ND		1840	1570		ug/Kg	☼	86	48 - 120
2-Nitroaniline	ND		1840	1680		ug/Kg	☼	91	61 - 120
2-Nitrophenol	ND		1840	1460		ug/Kg	☼	79	37 - 120
3,3'-Dichlorobenzidine	ND		3680	3570		ug/Kg	☼	97	37 - 126
3-Nitroaniline	ND		1840	1680		ug/Kg	☼	91	48 - 120
4,6-Dinitro-2-methylphenol	ND		3680	3610		ug/Kg	☼	98	23 - 149
4-Bromophenyl phenyl ether	ND		1840	1850		ug/Kg	☼	101	58 - 120
4-Chloro-3-methylphenol	ND		1840	1900		ug/Kg	☼	103	49 - 125

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

Lab Sample ID: 480-140944-9 MS
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: SS-8
Prep Type: Total/NA
Prep Batch: 432014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	ND		1840	1640		ug/Kg	☼	89	38 - 120
4-Chlorophenyl phenyl ether	ND		1840	1760		ug/Kg	☼	96	63 - 124
4-Methylphenol	ND		1840	1540		ug/Kg	☼	84	50 - 120
4-Nitroaniline	ND		1840	1560		ug/Kg	☼	85	47 - 120
4-Nitrophenol	ND		3680	3820		ug/Kg	☼	104	31 - 147
Acenaphthene	ND		1840	1610		ug/Kg	☼	88	60 - 120
Acenaphthylene	ND		1840	1610		ug/Kg	☼	88	58 - 121
Acetophenone	ND		1840	1440		ug/Kg	☼	78	47 - 120
Anthracene	ND		1840	1930		ug/Kg	☼	105	62 - 120
Atrazine	ND		3680	3890		ug/Kg	☼	106	60 - 150
Benzaldehyde	ND		3680	2920		ug/Kg	☼	79	10 - 150
Benzo[a]anthracene	290		1840	2300		ug/Kg	☼	109	65 - 120
Benzo[a]pyrene	330		1840	2340		ug/Kg	☼	109	64 - 120
Benzo[b]fluoranthene	530		1840	2600		ug/Kg	☼	113	64 - 120
Benzo[g,h,i]perylene	430		1840	2890		ug/Kg	☼	134	45 - 145
Benzo[k]fluoranthene	ND		1840	2180		ug/Kg	☼	118	65 - 120
Biphenyl	ND		1840	1500		ug/Kg	☼	82	58 - 120
bis (2-chloroisopropyl) ether	ND		1840	1410		ug/Kg	☼	77	31 - 120
Bis(2-chloroethoxy)methane	ND		1840	1620		ug/Kg	☼	88	52 - 120
Bis(2-chloroethyl)ether	ND		1840	1500		ug/Kg	☼	82	45 - 120
Bis(2-ethylhexyl) phthalate	120	J	1840	2000		ug/Kg	☼	102	61 - 133
Butyl benzyl phthalate	ND		1840	1850		ug/Kg	☼	100	61 - 120
Caprolactam	ND		3680	4040		ug/Kg	☼	110	37 - 133
Carbazole	ND		1840	2020		ug/Kg	☼	110	59 - 120
Chrysene	350		1840	2350		ug/Kg	☼	108	64 - 120
Dibenz(a,h)anthracene	ND		1840	2310		ug/Kg	☼	126	54 - 132
Dibenzofuran	ND		1840	1760		ug/Kg	☼	96	62 - 120
Diethyl phthalate	ND		1840	1750		ug/Kg	☼	95	66 - 120
Dimethyl phthalate	ND		1840	1830		ug/Kg	☼	100	65 - 124
Di-n-butyl phthalate	ND		1840	1970		ug/Kg	☼	107	58 - 130
Di-n-octyl phthalate	ND		1840	1880		ug/Kg	☼	102	57 - 133
Fluoranthene	450		1840	2580		ug/Kg	☼	115	62 - 120
Fluorene	ND		1840	1850		ug/Kg	☼	101	63 - 120
Hexachlorobenzene	ND		1840	2020		ug/Kg	☼	110	60 - 120
Hexachlorobutadiene	ND		1840	1600		ug/Kg	☼	87	45 - 120
Hexachlorocyclopentadiene	ND		1840	1330		ug/Kg	☼	72	31 - 120
Hexachloroethane	ND		1840	1160		ug/Kg	☼	63	21 - 120
Indeno[1,2,3-cd]pyrene	340		1840	2670		ug/Kg	☼	127	56 - 134
Isophorone	ND		1840	1640		ug/Kg	☼	89	56 - 120
Naphthalene	ND		1840	1410		ug/Kg	☼	77	46 - 120
Nitrobenzene	ND		1840	1510		ug/Kg	☼	82	49 - 120
N-Nitrosodi-n-propylamine	ND		1840	1430		ug/Kg	☼	78	46 - 120
Pentachlorophenol	ND		3680	4120		ug/Kg	☼	112	25 - 136
Phenanthrene	150	J	1840	2120		ug/Kg	☼	107	60 - 122
Phenol	ND		1840	1440		ug/Kg	☼	79	50 - 120
Pyrene	420		1840	2300		ug/Kg	☼	102	61 - 133

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

Lab Sample ID: 480-140944-9 MS
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: SS-8
Prep Type: Total/NA
Prep Batch: 432014

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol	*94*		*54 - 120*
2-Fluorobiphenyl	*75*		*60 - 120*
2-Fluorophenol	*67*		*52 - 120*
Nitrobenzene-d5	*77*		*53 - 120*
Phenol-d5	*80*		*54 - 120*
p-Terphenyl-d14	*93*		*65 - 121*

Lab Sample ID: 480-140944-9 MSD
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: SS-8
Prep Type: Total/NA
Prep Batch: 432014

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	ND		1850	1960		ug/Kg	☼	106	46 - 120	13	18
2,4,6-Trichlorophenol	ND		1850	1890		ug/Kg	☼	102	41 - 123	11	19
2,4-Dichlorophenol	ND		1850	1750		ug/Kg	☼	94	45 - 120	4	19
2,4-Dimethylphenol	ND		1850	1680		ug/Kg	☼	91	52 - 120	4	42
2,4-Dinitrophenol	ND		3700	2720		ug/Kg	☼	73	41 - 146	16	22
2,4-Dinitrotoluene	ND		1850	2030		ug/Kg	☼	110	63 - 125	17	20
2,6-Dinitrotoluene	ND		1850	1810		ug/Kg	☼	98	66 - 120	14	15
2-Chloronaphthalene	ND		1850	1760		ug/Kg	☼	95	57 - 120	17	21
2-Chlorophenol	ND		1850	1500		ug/Kg	☼	81	43 - 120	9	25
2-Methylnaphthalene	ND		1850	1600		ug/Kg	☼	86	55 - 120	4	21
2-Methylphenol	ND		1850	1720		ug/Kg	☼	93	48 - 120	9	27
2-Nitroaniline	ND		1850	1940		ug/Kg	☼	105	61 - 120	14	15
2-Nitrophenol	ND		1850	1500		ug/Kg	☼	81	37 - 120	3	18
3,3'-Dichlorobenzidine	ND		3700	3540		ug/Kg	☼	96	37 - 126	1	25
3-Nitroaniline	ND		1850	1770		ug/Kg	☼	96	48 - 120	5	19
4,6-Dinitro-2-methylphenol	ND		3700	3710		ug/Kg	☼	100	23 - 149	3	15
4-Bromophenyl phenyl ether	ND		1850	1790		ug/Kg	☼	97	58 - 120	3	15
4-Chloro-3-methylphenol	ND		1850	1990		ug/Kg	☼	108	49 - 125	5	27
4-Chloroaniline	ND		1850	1620		ug/Kg	☼	88	38 - 120	1	22
4-Chlorophenyl phenyl ether	ND		1850	1820		ug/Kg	☼	98	63 - 124	3	16
4-Methylphenol	ND		1850	1760		ug/Kg	☼	95	50 - 120	13	24
4-Nitroaniline	ND		1850	1690		ug/Kg	☼	92	47 - 120	8	24
4-Nitrophenol	ND		3700	4270		ug/Kg	☼	115	31 - 147	11	25
Acenaphthene	ND		1850	1830		ug/Kg	☼	99	60 - 120	13	35
Acenaphthylene	ND		1850	1780		ug/Kg	☼	96	58 - 121	10	18
Acetophenone	ND		1850	1520		ug/Kg	☼	82	47 - 120	6	20
Anthracene	ND		1850	1940		ug/Kg	☼	105	62 - 120	1	15
Atrazine	ND		3700	4040		ug/Kg	☼	109	60 - 150	4	20
Benzaldehyde	ND		3700	3290		ug/Kg	☼	89	10 - 150	12	20
Benzo[a]anthracene	290		1850	2260		ug/Kg	☼	107	65 - 120	1	15
Benzo[a]pyrene	330		1850	2260		ug/Kg	☼	104	64 - 120	4	15
Benzo[b]fluoranthene	530		1850	2570		ug/Kg	☼	110	64 - 120	1	15
Benzo[g,h,i]perylene	430		1850	2720		ug/Kg	☼	124	45 - 145	6	15
Benzo[k]fluoranthene	ND		1850	2100		ug/Kg	☼	113	65 - 120	4	22
Biphenyl	ND		1850	1700		ug/Kg	☼	92	58 - 120	12	20
bis (2-chloroisopropyl) ether	ND		1850	1510		ug/Kg	☼	82	31 - 120	7	24

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

Lab Sample ID: 480-140944-9 MSD
Matrix: Solid
Analysis Batch: 432487

Client Sample ID: SS-8
Prep Type: Total/NA
Prep Batch: 432014

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	ND		1850	1530		ug/Kg	☼	83	52 - 120	6	17
Bis(2-chloroethyl)ether	ND		1850	1480		ug/Kg	☼	80	45 - 120	1	21
Bis(2-ethylhexyl) phthalate	120	J	1850	2030		ug/Kg	☼	103	61 - 133	1	15
Butyl benzyl phthalate	ND		1850	1960		ug/Kg	☼	106	61 - 120	6	16
Caprolactam	ND		3700	3990		ug/Kg	☼	108	37 - 133	1	20
Carbazole	ND		1850	1930		ug/Kg	☼	104	59 - 120	5	20
Chrysene	350		1850	2380		ug/Kg	☼	109	64 - 120	1	15
Dibenz(a,h)anthracene	ND		1850	2270		ug/Kg	☼	123	54 - 132	2	15
Dibenzofuran	ND		1850	1870		ug/Kg	☼	101	62 - 120	6	15
Diethyl phthalate	ND		1850	1930		ug/Kg	☼	105	66 - 120	10	15
Dimethyl phthalate	ND		1850	2020		ug/Kg	☼	109	65 - 124	10	15
Di-n-butyl phthalate	ND		1850	1960		ug/Kg	☼	106	58 - 130	0	15
Di-n-octyl phthalate	ND		1850	1870		ug/Kg	☼	101	57 - 133	1	16
Fluoranthene	450		1850	2450		ug/Kg	☼	108	62 - 120	5	15
Fluorene	ND		1850	1930		ug/Kg	☼	104	63 - 120	4	15
Hexachlorobenzene	ND		1850	1900		ug/Kg	☼	103	60 - 120	6	15
Hexachlorobutadiene	ND		1850	1530		ug/Kg	☼	83	45 - 120	4	44
Hexachlorocyclopentadiene	ND		1850	1390		ug/Kg	☼	75	31 - 120	4	49
Hexachloroethane	ND		1850	1310		ug/Kg	☼	71	21 - 120	12	46
Indeno[1,2,3-cd]pyrene	340		1850	2530		ug/Kg	☼	119	56 - 134	5	15
Isophorone	ND		1850	1690		ug/Kg	☼	92	56 - 120	3	17
Naphthalene	ND		1850	1470		ug/Kg	☼	79	46 - 120	4	29
Nitrobenzene	ND		1850	1580		ug/Kg	☼	85	49 - 120	4	24
N-Nitrosodi-n-propylamine	ND		1850	1570		ug/Kg	☼	85	46 - 120	9	31
Pentachlorophenol	ND		3700	4180		ug/Kg	☼	113	25 - 136	1	35
Phenanthrene	150	J	1850	2110		ug/Kg	☼	106	60 - 122	0	15
Phenol	ND		1850	1660		ug/Kg	☼	90	50 - 120	14	35
Pyrene	420		1850	2330		ug/Kg	☼	103	61 - 133	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*90*		*54 - 120*
2-Fluorobiphenyl	*81*		*60 - 120*
2-Fluorophenol	*75*		*52 - 120*
Nitrobenzene-d5	*76*		*53 - 120*
Phenol-d5	*77*		*54 - 120*
p-Terphenyl-d14	*95*		*65 - 121*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-432159/1-A
Matrix: Solid
Analysis Batch: 432367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432159

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.6	0.31	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
4,4'-DDE	ND		1.6	0.34	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
4,4'-DDT	ND		1.6	0.38	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Aldrin	ND		1.6	0.40	ug/Kg		08/30/18 08:37	08/31/18 10:44	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-432159/1-A
Matrix: Solid
Analysis Batch: 432367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432159

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		1.6	0.29	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
cis-Chlordane	ND		1.6	0.80	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
beta-BHC	ND		1.6	0.29	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
delta-BHC	ND		1.6	0.30	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Dieldrin	ND		1.6	0.39	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Endosulfan I	ND		1.6	0.31	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Endosulfan II	ND		1.6	0.29	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Endosulfan sulfate	ND		1.6	0.30	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Endrin	ND		1.6	0.32	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Endrin aldehyde	ND		1.6	0.41	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Endrin ketone	ND		1.6	0.40	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
gamma-BHC (Lindane)	ND		1.6	0.30	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
trans-Chlordane	ND		1.6	0.51	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Heptachlor	ND		1.6	0.35	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Heptachlor epoxide	ND		1.6	0.42	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Methoxychlor	ND		1.6	0.33	ug/Kg		08/30/18 08:37	08/31/18 10:44	1
Toxaphene	ND		16	9.4	ug/Kg		08/30/18 08:37	08/31/18 10:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*45 - 120*	*08/30/18 08:37*	*08/31/18 10:44*	*1*
DCB Decachlorobiphenyl	*84*		*45 - 120*	*08/30/18 08:37*	*08/31/18 10:44*	*1*
Tetrachloro-m-xylene	*69*		*30 - 124*	*08/30/18 08:37*	*08/31/18 10:44*	*1*
Tetrachloro-m-xylene	*59*		*30 - 124*	*08/30/18 08:37*	*08/31/18 10:44*	*1*

Lab Sample ID: LCS 480-432159/2-A
Matrix: Solid
Analysis Batch: 432367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432159

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	16.4	13.4		ug/Kg		82	56 - 120
4,4'-DDE	16.4	12.7		ug/Kg		78	44 - 120
4,4'-DDT	16.4	14.0		ug/Kg		86	38 - 120
Aldrin	16.4	11.4		ug/Kg		70	38 - 120
alpha-BHC	16.4	9.25		ug/Kg		57	39 - 120
cis-Chlordane	16.4	10.8		ug/Kg		66	47 - 120
beta-BHC	16.4	11.4		ug/Kg		70	40 - 120
delta-BHC	16.4	11.3		ug/Kg		69	45 - 120
Dieldrin	16.4	13.6		ug/Kg		83	58 - 120
Endosulfan I	16.4	13.3		ug/Kg		81	49 - 120
Endosulfan II	16.4	15.3		ug/Kg		93	55 - 120
Endosulfan sulfate	16.4	14.6		ug/Kg		89	49 - 124
Endrin	16.4	13.8		ug/Kg		84	58 - 120
Endrin aldehyde	16.4	11.1		ug/Kg		68	37 - 121
Endrin ketone	16.4	16.3		ug/Kg		100	46 - 123
gamma-BHC (Lindane)	16.4	10.4		ug/Kg		64	50 - 120
trans-Chlordane	16.4	10.9		ug/Kg		67	48 - 120
Heptachlor	16.4	11.4		ug/Kg		70	50 - 120
Heptachlor epoxide	16.4	12.3		ug/Kg		75	50 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-432159/2-A
Matrix: Solid
Analysis Batch: 432367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432159

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methoxychlor	16.4	14.6		ug/Kg		89	58 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*85*		*45 - 120*
DCB Decachlorobiphenyl	*87*		*45 - 120*
Tetrachloro-m-xylene	*73*		*30 - 124*
Tetrachloro-m-xylene	*63*		*30 - 124*

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

Lab Sample ID: MB 480-432017/1-A
Matrix: Solid
Analysis Batch: 432212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432017

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.047	mg/Kg		08/29/18 14:41	08/30/18 21:24	1
PCB-1221	ND		0.24	0.047	mg/Kg		08/29/18 14:41	08/30/18 21:24	1
PCB-1232	ND		0.24	0.047	mg/Kg		08/29/18 14:41	08/30/18 21:24	1
PCB-1242	ND		0.24	0.047	mg/Kg		08/29/18 14:41	08/30/18 21:24	1
PCB-1248	ND		0.24	0.047	mg/Kg		08/29/18 14:41	08/30/18 21:24	1
PCB-1254	ND		0.24	0.11	mg/Kg		08/29/18 14:41	08/30/18 21:24	1
PCB-1260	ND		0.24	0.11	mg/Kg		08/29/18 14:41	08/30/18 21:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*60 - 154*	*08/29/18 14:41*	*08/30/18 21:24*	*1*
Tetrachloro-m-xylene	*71*		*60 - 154*	*08/29/18 14:41*	*08/30/18 21:24*	*1*
DCB Decachlorobiphenyl	*80*		*65 - 174*	*08/29/18 14:41*	*08/30/18 21:24*	*1*
DCB Decachlorobiphenyl	*72*		*65 - 174*	*08/29/18 14:41*	*08/30/18 21:24*	*1*

Lab Sample ID: LCS 480-432017/2-A
Matrix: Solid
Analysis Batch: 432212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432017

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.34	3.46		mg/Kg		148	51 - 185
PCB-1260	2.34	3.51		mg/Kg		150	61 - 184

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*122*		*60 - 154*
Tetrachloro-m-xylene	*90*		*60 - 154*
DCB Decachlorobiphenyl	*109*		*65 - 174*
DCB Decachlorobiphenyl	*96*		*65 - 174*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-432586/1-A
Matrix: Solid
Analysis Batch: 433270

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		16	5.2	ug/Kg		09/04/18 07:12	09/07/18 10:08	1
Silvex (2,4,5-TP)	ND		16	5.8	ug/Kg		09/04/18 07:12	09/07/18 10:08	1
2,4-D	ND		16	10	ug/Kg		09/04/18 07:12	09/07/18 10:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*54*		*28 - 129*	*09/04/18 07:12*	*09/07/18 10:08*	*1*
2,4-Dichlorophenylacetic acid	*52*		*28 - 129*	*09/04/18 07:12*	*09/07/18 10:08*	*1*

Lab Sample ID: LCS 480-432586/2-A
Matrix: Solid
Analysis Batch: 433270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	66.1	47.1		ug/Kg		71	41 - 120
Silvex (2,4,5-TP)	66.1	47.7		ug/Kg		72	39 - 125
2,4-D	66.1	50.5		ug/Kg		76	40 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*73*		*28 - 129*
2,4-Dichlorophenylacetic acid	*65*		*28 - 129*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-432400/1-A
Matrix: Solid
Analysis Batch: 432810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432400

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8.17	J	10	4.4	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Antimony	ND		15.0	0.40	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Arsenic	ND		2.0	0.40	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Barium	ND		0.50	0.11	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Beryllium	ND		0.20	0.028	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Cadmium	ND		0.20	0.030	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Calcium	14.91	J	50.0	3.3	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Chromium	ND		0.50	0.20	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Cobalt	ND		0.50	0.050	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Copper	ND		1.0	0.21	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Iron	ND		10	3.5	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Lead	ND		1.0	0.24	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Magnesium	1.26	J	20.0	0.93	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Manganese	0.180	J	0.20	0.032	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Nickel	ND		5.0	0.23	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Potassium	ND		30.0	20.0	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Selenium	ND		4.0	0.40	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Silver	ND		0.60	0.20	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Sodium	ND		140	13.0	mg/Kg		08/31/18 11:25	09/04/18 14:18	1

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

Lab Sample ID: MB 480-432400/1-A
Matrix: Solid
Analysis Batch: 432810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432400

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		6.0	0.30	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Vanadium	ND		0.50	0.11	mg/Kg		08/31/18 11:25	09/04/18 14:18	1
Zinc	ND		2.0	0.64	mg/Kg		08/31/18 11:25	09/04/18 14:18	1

Lab Sample ID: LCSSRM 480-432400/2-A
Matrix: Solid
Analysis Batch: 432810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432400

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10100	8256		mg/Kg		81.7	30.4 - 125.7
Antimony	184	59.23		mg/Kg		32.2	10.0 - 137.5
Arsenic	178	137.9		mg/Kg		77.5	65.7 - 120.8
Barium	228	171.9		mg/Kg		75.4	68.4 - 118.4
Beryllium	61.3	47.50		mg/Kg		77.5	69.3 - 120.1
Cadmium	143	102.6		mg/Kg		71.7	65.9 - 114.0
Calcium	5190	3920		mg/Kg		75.5	65.9 - 115.8
Chromium	107	85.87		mg/Kg		80.2	65.9 - 123.4
Cobalt	71.4	64.50		mg/Kg		90.3	71.3 - 120.4
Copper	116	90.69		mg/Kg		78.2	70.6 - 119.0
Iron	15000	13580		mg/Kg		90.5	33.0 - 155.3
Lead	210	193.9		mg/Kg		92.3	71.9 - 121.0
Magnesium	2570	2064		mg/Kg		80.3	55.3 - 123.0
Manganese	383	304.4		mg/Kg		79.5	73.1 - 120.1
Nickel	95.4	83.22		mg/Kg		87.2	65.6 - 117.4
Potassium	2420	1873		mg/Kg		77.4	47.9 - 116.9
Selenium	130	96.03		mg/Kg		73.9	59.2 - 120.0
Silver	91.2	73.06		mg/Kg		80.1	64.0 - 126.1
Sodium	690	502.6		mg/Kg		72.8	49.0 - 131.0
Thallium	156	141.7		mg/Kg		90.8	61.9 - 119.9
Vanadium	104	86.29		mg/Kg		83.0	61.4 - 126.0
Zinc	254	192.8		mg/Kg		75.9	66.9 - 122.4

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-433764/1-A
Matrix: Solid
Analysis Batch: 433864

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019	0.0078	mg/Kg		09/11/18 13:10	09/11/18 15:14	1

Lab Sample ID: LCSSRM 480-433764/2-A ^10
Matrix: Solid
Analysis Batch: 433864

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433764

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	23.7	13.30		mg/Kg		56.1	27.7 - 110.1

GC/MS VOA

Prep Batch: 431879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	5035A_L	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	5035A_L	
MB 480-431879/3-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-431879/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	
LCSD 480-431879/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_L	

Analysis Batch: 431892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	8260C	431879
480-140944-3	TP-3 (2-4)	Total/NA	Solid	8260C	431879
MB 480-431879/3-A	Method Blank	Total/NA	Solid	8260C	431879
LCS 480-431879/1-A	Lab Control Sample	Total/NA	Solid	8260C	431879
LCSD 480-431879/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	431879

GC/MS Semi VOA

Prep Batch: 432014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	3550C	
480-140944-2	TP-2 (8-10)	Total/NA	Solid	3550C	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	3550C	
480-140944-4	TP-4 (1-3)	Total/NA	Solid	3550C	
480-140944-5	TP-5 (9-11)	Total/NA	Solid	3550C	
480-140944-6	SS-5	Total/NA	Solid	3550C	
480-140944-7	SS-6	Total/NA	Solid	3550C	
480-140944-8	SS-7	Total/NA	Solid	3550C	
480-140944-9	SS-8	Total/NA	Solid	3550C	
480-140944-10	SS-9	Total/NA	Solid	3550C	
480-140944-11	BD	Total/NA	Solid	3550C	
MB 480-432014/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-432014/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-140944-9 MS	SS-8	Total/NA	Solid	3550C	
480-140944-9 MSD	SS-8	Total/NA	Solid	3550C	

Analysis Batch: 432487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	8270D	432014
480-140944-2	TP-2 (8-10)	Total/NA	Solid	8270D	432014
480-140944-3	TP-3 (2-4)	Total/NA	Solid	8270D	432014
480-140944-4	TP-4 (1-3)	Total/NA	Solid	8270D	432014
480-140944-5	TP-5 (9-11)	Total/NA	Solid	8270D	432014
480-140944-6	SS-5	Total/NA	Solid	8270D	432014
480-140944-7	SS-6	Total/NA	Solid	8270D	432014
480-140944-8	SS-7	Total/NA	Solid	8270D	432014
480-140944-9	SS-8	Total/NA	Solid	8270D	432014
480-140944-10	SS-9	Total/NA	Solid	8270D	432014
480-140944-11	BD	Total/NA	Solid	8270D	432014
MB 480-432014/1-A	Method Blank	Total/NA	Solid	8270D	432014
LCS 480-432014/2-A	Lab Control Sample	Total/NA	Solid	8270D	432014
480-140944-9 MS	SS-8	Total/NA	Solid	8270D	432014

GC/MS Semi VOA (Continued)

Analysis Batch: 432487 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-9 MSD	SS-8	Total/NA	Solid	8270D	432014

GC Semi VOA

Prep Batch: 432017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	3550C	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	3550C	
480-140944-6	SS-5	Total/NA	Solid	3550C	
480-140944-10	SS-9	Total/NA	Solid	3550C	
480-140944-11	BD	Total/NA	Solid	3550C	
MB 480-432017/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-432017/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Prep Batch: 432159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	3550C	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	3550C	
480-140944-6	SS-5	Total/NA	Solid	3550C	
480-140944-10	SS-9	Total/NA	Solid	3550C	
480-140944-11	BD	Total/NA	Solid	3550C	
MB 480-432159/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-432159/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 432212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	8082A	432017
480-140944-3	TP-3 (2-4)	Total/NA	Solid	8082A	432017
480-140944-6	SS-5	Total/NA	Solid	8082A	432017
480-140944-10	SS-9	Total/NA	Solid	8082A	432017
480-140944-11	BD	Total/NA	Solid	8082A	432017
MB 480-432017/1-A	Method Blank	Total/NA	Solid	8082A	432017
LCS 480-432017/2-A	Lab Control Sample	Total/NA	Solid	8082A	432017

Analysis Batch: 432367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	8081B	432159
480-140944-3	TP-3 (2-4)	Total/NA	Solid	8081B	432159
480-140944-6	SS-5	Total/NA	Solid	8081B	432159
480-140944-10	SS-9	Total/NA	Solid	8081B	432159
480-140944-11	BD	Total/NA	Solid	8081B	432159
MB 480-432159/1-A	Method Blank	Total/NA	Solid	8081B	432159
LCS 480-432159/2-A	Lab Control Sample	Total/NA	Solid	8081B	432159

Prep Batch: 432586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	8151A	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	8151A	
480-140944-6	SS-5	Total/NA	Solid	8151A	
480-140944-10	SS-9	Total/NA	Solid	8151A	

GC Semi VOA (Continued)

Prep Batch: 432586 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-11	BD	Total/NA	Solid	8151A	
MB 480-432586/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 480-432586/2-A	Lab Control Sample	Total/NA	Solid	8151A	

Analysis Batch: 433270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	8151A	432586
480-140944-3	TP-3 (2-4)	Total/NA	Solid	8151A	432586
480-140944-6	SS-5	Total/NA	Solid	8151A	432586
480-140944-10	SS-9	Total/NA	Solid	8151A	432586
480-140944-11	BD	Total/NA	Solid	8151A	432586
MB 480-432586/1-A	Method Blank	Total/NA	Solid	8151A	432586
LCS 480-432586/2-A	Lab Control Sample	Total/NA	Solid	8151A	432586

Metals

Prep Batch: 432400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	3050B	
480-140944-2	TP-2 (8-10)	Total/NA	Solid	3050B	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	3050B	
480-140944-4	TP-4 (1-3)	Total/NA	Solid	3050B	
480-140944-5	TP-5 (9-11)	Total/NA	Solid	3050B	
480-140944-6	SS-5	Total/NA	Solid	3050B	
480-140944-7	SS-6	Total/NA	Solid	3050B	
480-140944-8	SS-7	Total/NA	Solid	3050B	
480-140944-9	SS-8	Total/NA	Solid	3050B	
480-140944-10	SS-9	Total/NA	Solid	3050B	
480-140944-11	BD	Total/NA	Solid	3050B	
MB 480-432400/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-432400/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 432810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	6010C	432400
480-140944-2	TP-2 (8-10)	Total/NA	Solid	6010C	432400
480-140944-3	TP-3 (2-4)	Total/NA	Solid	6010C	432400
480-140944-4	TP-4 (1-3)	Total/NA	Solid	6010C	432400
480-140944-5	TP-5 (9-11)	Total/NA	Solid	6010C	432400
480-140944-6	SS-5	Total/NA	Solid	6010C	432400
480-140944-7	SS-6	Total/NA	Solid	6010C	432400
480-140944-8	SS-7	Total/NA	Solid	6010C	432400
480-140944-9	SS-8	Total/NA	Solid	6010C	432400
480-140944-10	SS-9	Total/NA	Solid	6010C	432400
MB 480-432400/1-A	Method Blank	Total/NA	Solid	6010C	432400
LCSSRM 480-432400/2-A	Lab Control Sample	Total/NA	Solid	6010C	432400

Analysis Batch: 433012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-8	SS-7	Total/NA	Solid	6010C	432400

Metals (Continued)

Analysis Batch: 433012 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-9	SS-8	Total/NA	Solid	6010C	432400
480-140944-10	SS-9	Total/NA	Solid	6010C	432400
480-140944-11	BD	Total/NA	Solid	6010C	432400
480-140944-11	BD	Total/NA	Solid	6010C	432400

Analysis Batch: 433121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-7	SS-6	Total/NA	Solid	6010C	432400

Prep Batch: 433764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	7471B	
480-140944-2	TP-2 (8-10)	Total/NA	Solid	7471B	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	7471B	
480-140944-4	TP-4 (1-3)	Total/NA	Solid	7471B	
480-140944-5	TP-5 (9-11)	Total/NA	Solid	7471B	
480-140944-6	SS-5	Total/NA	Solid	7471B	
480-140944-7	SS-6	Total/NA	Solid	7471B	
480-140944-8	SS-7	Total/NA	Solid	7471B	
480-140944-9	SS-8	Total/NA	Solid	7471B	
480-140944-10	SS-9	Total/NA	Solid	7471B	
480-140944-11	BD	Total/NA	Solid	7471B	
MB 480-433764/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-433764/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 433864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	7471B	433764
480-140944-2	TP-2 (8-10)	Total/NA	Solid	7471B	433764
480-140944-3	TP-3 (2-4)	Total/NA	Solid	7471B	433764
480-140944-4	TP-4 (1-3)	Total/NA	Solid	7471B	433764
480-140944-5	TP-5 (9-11)	Total/NA	Solid	7471B	433764
480-140944-6	SS-5	Total/NA	Solid	7471B	433764
480-140944-7	SS-6	Total/NA	Solid	7471B	433764
480-140944-8	SS-7	Total/NA	Solid	7471B	433764
480-140944-9	SS-8	Total/NA	Solid	7471B	433764
480-140944-10	SS-9	Total/NA	Solid	7471B	433764
480-140944-11	BD	Total/NA	Solid	7471B	433764
MB 480-433764/1-A	Method Blank	Total/NA	Solid	7471B	433764
LCSSRM 480-433764/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	433764

General Chemistry

Analysis Batch: 431903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-1	TP-1 (5-7)	Total/NA	Solid	Moisture	
480-140944-2	TP-2 (8-10)	Total/NA	Solid	Moisture	
480-140944-3	TP-3 (2-4)	Total/NA	Solid	Moisture	
480-140944-4	TP-4 (1-3)	Total/NA	Solid	Moisture	
480-140944-5	TP-5 (9-11)	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 431903 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140944-6	SS-5	Total/NA	Solid	Moisture	
480-140944-7	SS-6	Total/NA	Solid	Moisture	
480-140944-8	SS-7	Total/NA	Solid	Moisture	
480-140944-9	SS-8	Total/NA	Solid	Moisture	
480-140944-10	SS-9	Total/NA	Solid	Moisture	
480-140944-11	BD	Total/NA	Solid	Moisture	

Client Sample ID: TP-1 (5-7)

Lab Sample ID: 480-140944-1

Date Collected: 08/27/18 09:30

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: TP-1 (5-7)

Lab Sample ID: 480-140944-1

Date Collected: 08/27/18 09:30

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			431879	08/28/18 22:49	AEM	TAL BUF
Total/NA	Analysis	8260C		1	431892	08/29/18 10:45	AEM	TAL BUF
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 18:59	PJQ	TAL BUF
Total/NA	Prep	3550C			432159	08/30/18 08:37	AAP	TAL BUF
Total/NA	Analysis	8081B		1	432367	08/31/18 12:22	JLS	TAL BUF
Total/NA	Prep	3550C			432017	08/29/18 14:41	SGD	TAL BUF
Total/NA	Analysis	8082A		1	432212	08/30/18 23:16	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433270	09/07/18 12:37	MAN	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 14:43	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:28	BMB	TAL BUF

Client Sample ID: TP-2 (8-10)

Lab Sample ID: 480-140944-2

Date Collected: 08/27/18 10:00

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: TP-2 (8-10)

Lab Sample ID: 480-140944-2

Date Collected: 08/27/18 10:00

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 19:26	PJQ	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 14:47	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:30	BMB	TAL BUF

Client Sample ID: TP-3 (2-4)

Lab Sample ID: 480-140944-3

Date Collected: 08/27/18 10:30

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: TP-3 (2-4)

Lab Sample ID: 480-140944-3

Date Collected: 08/27/18 10:30

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 88.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			431879	08/28/18 22:49	AEM	TAL BUF
Total/NA	Analysis	8260C		1	431892	08/29/18 11:11	AEM	TAL BUF
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 19:54	PJQ	TAL BUF
Total/NA	Prep	3550C			432159	08/30/18 08:37	AAP	TAL BUF
Total/NA	Analysis	8081B		1	432367	08/31/18 12:42	JLS	TAL BUF
Total/NA	Prep	3550C			432017	08/29/18 14:41	SGD	TAL BUF
Total/NA	Analysis	8082A		1	432212	08/30/18 23:32	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433270	09/07/18 13:07	MAN	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:02	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:32	BMB	TAL BUF

Client Sample ID: TP-4 (1-3)

Lab Sample ID: 480-140944-4

Date Collected: 08/27/18 11:30

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: TP-4 (1-3)

Lab Sample ID: 480-140944-4

Date Collected: 08/27/18 11:30

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 20:21	PJQ	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:05	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:33	BMB	TAL BUF

Client Sample ID: TP-5 (9-11) — **Lab Sample ID: 480-140944-5**
Date Collected: 08/27/18 11:45 — **Matrix: Solid**
Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: TP-5 (9-11) — **Lab Sample ID: 480-140944-5**
Date Collected: 08/27/18 11:45 — **Matrix: Solid**
Date Received: 08/28/18 09:40 — **Percent Solids: 87.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 20:49	PJQ	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:09	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:35	BMB	TAL BUF

Client Sample ID: SS-5 — **Lab Sample ID: 480-140944-6**
Date Collected: 08/27/18 12:00 — **Matrix: Solid**
Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: SS-5 — **Lab Sample ID: 480-140944-6**
Date Collected: 08/27/18 12:00 — **Matrix: Solid**
Date Received: 08/28/18 09:40 — **Percent Solids: 82.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		20	432487	08/31/18 21:16	PJQ	TAL BUF
Total/NA	Prep	3550C			432159	08/30/18 08:37	AAP	TAL BUF
Total/NA	Analysis	8081B		20	432367	08/31/18 13:01	JLS	TAL BUF
Total/NA	Prep	3550C			432017	08/29/18 14:41	SGD	TAL BUF
Total/NA	Analysis	8082A		1	432212	08/30/18 23:48	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433270	09/07/18 13:37	MAN	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:13	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:36	BMB	TAL BUF

Client Sample ID: SS-6

Lab Sample ID: 480-140944-7

Date Collected: 08/27/18 12:15

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: SS-6

Lab Sample ID: 480-140944-7

Date Collected: 08/27/18 12:15

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		20	432487	08/31/18 21:44	PJQ	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:16	EMB	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		5	433121	09/06/18 11:43	LMH	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:38	BMB	TAL BUF

Client Sample ID: SS-7

Lab Sample ID: 480-140944-8

Date Collected: 08/27/18 12:30

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: SS-7

Lab Sample ID: 480-140944-8

Date Collected: 08/27/18 12:30

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		20	432487	08/31/18 22:11	PJQ	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		5	433012	09/05/18 12:39	EMB	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:20	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:39	BMB	TAL BUF

Client Sample ID: SS-8

Lab Sample ID: 480-140944-9

Date Collected: 08/27/18 12:45

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: SS-8

Lab Sample ID: 480-140944-9

Date Collected: 08/27/18 12:45

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 18:31	PJQ	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		5	433012	09/05/18 12:43	EMB	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:24	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:41	BMB	TAL BUF

Client Sample ID: SS-9

Lab Sample ID: 480-140944-10

Date Collected: 08/27/18 13:00

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Client Sample ID: SS-9

Lab Sample ID: 480-140944-10

Date Collected: 08/27/18 13:00

Matrix: Solid

Date Received: 08/28/18 09:40

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 22:39	PJQ	TAL BUF
Total/NA	Prep	3550C			432159	08/30/18 08:37	AAP	TAL BUF
Total/NA	Analysis	8081B		10	432367	08/31/18 13:21	JLS	TAL BUF
Total/NA	Prep	3550C			432017	08/29/18 14:41	SGD	TAL BUF
Total/NA	Analysis	8082A		1	432212	08/31/18 00:03	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433270	09/07/18 14:07	MAN	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		5	433012	09/05/18 12:47	EMB	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	432810	09/04/18 15:27	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:42	BMB	TAL BUF

Client Sample ID: BD

Lab Sample ID: 480-140944-11

Date Collected: 08/27/18 13:05

Matrix: Solid

Date Received: 08/28/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	431903	08/29/18 07:37	CSW	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Client Sample ID: BD
Date Collected: 08/27/18 13:05
Date Received: 08/28/18 09:40

Lab Sample ID: 480-140944-11
Matrix: Solid
Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432014	08/29/18 14:24	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432487	08/31/18 23:07	PJQ	TAL BUF
Total/NA	Prep	3550C			432159	08/30/18 08:37	AAP	TAL BUF
Total/NA	Analysis	8081B		10	432367	08/31/18 13:40	JLS	TAL BUF
Total/NA	Prep	3550C			432017	08/29/18 14:41	SGD	TAL BUF
Total/NA	Analysis	8082A		1	432212	08/31/18 00:19	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433270	09/07/18 14:37	MAN	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		5	433012	09/05/18 12:51	EMB	TAL BUF
Total/NA	Prep	3050B			432400	08/31/18 11:25	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433012	09/05/18 13:06	EMB	TAL BUF
Total/NA	Prep	7471B			433764	09/11/18 13:10	VEG	TAL BUF
Total/NA	Analysis	7471B		1	433864	09/11/18 15:47	BMB	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
TestAmerica Job ID: 480-140944-1
Project/Site: Benchmark - 990 Niagara St. site

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

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 (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5035A_L	Closed System Purge and Trap	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF
8151A	Extraction (Herbicides)	SW846	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 - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-140944-1	TP-1 (5-7)	Solid	08/27/18 09:30	08/28/18 09:40
480-140944-2	TP-2 (8-10)	Solid	08/27/18 10:00	08/28/18 09:40
480-140944-3	TP-3 (2-4)	Solid	08/27/18 10:30	08/28/18 09:40
480-140944-4	TP-4 (1-3)	Solid	08/27/18 11:30	08/28/18 09:40
480-140944-5	TP-5 (9-11)	Solid	08/27/18 11:45	08/28/18 09:40
480-140944-6	SS-5	Solid	08/27/18 12:00	08/28/18 09:40
480-140944-7	SS-6	Solid	08/27/18 12:15	08/28/18 09:40
480-140944-8	SS-7	Solid	08/27/18 12:30	08/28/18 09:40
480-140944-9	SS-8	Solid	08/27/18 12:45	08/28/18 09:40
480-140944-10	SS-9	Solid	08/27/18 13:00	08/28/18 09:40
480-140944-11	BD	Solid	08/27/18 13:05	08/28/18 09:40

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRO

480-140944 COC

Client Information	Sampler: Nick Surace	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-114782-26554.1
Client Contact: Bryan Mayback	Phone: 716-713-3437	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 5
Company: Benchmark Env. Eng. & Science, PLLC				Job #:

Address: 2558 Hamburg Turnpike	Due Date Requested: standard
City: Lackawanna	TAT Requested (days):
State, Zip: NY, 14218	
Phone: 716-856-0599(Tel)	PO #: Purchase Order Requested
Email: bmayback@turnkeyllc.com	WO #:
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286
Site: 990 Niagara St.	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270D TCL SVOCs + TAL Metals	8081B, 8082A, 8151A Pesticides, Herb	Moisture - Percent Moisture	TCL + CP-51 VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N			
TP-1 (5-7')	8/27/18	9:30	G	Solid			X	X	X	X	7	encores
TP-2 (8-10')		10:00		Solid			X				1	
TP-3 (2-4')		10:30		Solid			X	X	X	X	7	encores
TP-4 (1-3')		11:30		Solid			X				1	
TP-5 (9-11')		11:45		Solid			X				1	
SS-5		12:00		Solid			X	X			3	
SS-6		12:15		Solid			X				1	
SS-7		12:30		Solid			X				1	
SS-8		12:45		Solid			X				1	
SS-9		13:00		Solid			X	X			3	
BP		13:05		Solid			X	X			3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Category B, NYS DEC ~~Reporting~~ 6401s

Special Instructions/QC Requirements: Category B deliverables

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8/27/18 15:00	BMTK		8/28/18 08:45	TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8/28/18 09:25	TAB		8/28/18 0925	TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 3.1

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-140944-1

Login Number: 140944

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wallace, Cameron

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 (Excluding tests with immediate HTs)..	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	BENCHMARK ENV
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: 480-141069-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Joseph V. Giacomazza

Authorized for release by:
9/14/2018 2:03:12 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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Have a Question? Ask The Expert

Visit us at: 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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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.

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
X	Surrogate is outside 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.

Metals

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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds 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.
¤	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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-141069-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-141069-1

Comments
No additional comments.

Receipt
The samples were received on 8/30/2018 6:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-432572 recovered above the upper control limit for 2-Butanone (MEK). The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: MW-5 (6"-2') (480-141069-1), SB-16 (10'-12') (480-141069-3), BD-2 (480-141069-5), MW-4 (16-18') (480-141069-6) and MW-6 (2-4) (480-141069-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8081B: The following sample was diluted due to the nature of the sample matrix: SB-16 (10'-12') (480-141069-3). Elevated reporting limits (RLs) are provided.

Method(s) 8081B: 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) 8081B: All primary data for analytical batch 432605 is reported from the RTX-CLPI column.

Method(s) 8082A: Surrogate recovery for the following samples were outside control limits: MW-5 (6"-2') (480-141069-1), BD-2 (480-141069-5) and MW-6 (2-4) (480-141069-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8082A: All primary data for analytical batch 432560 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) 8082A: The continuing calibration verifications (CCV 480-432560/6) and (CCV 480-432560/7) associated with analytical batch 480-432560 recovered above the upper control limit for PCB-1221, PCB-1232 and PCB-1254. The samples associated with these CCVs were non-detect for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-5 (6"-2') (480-141069-1), SB-16 (10'-12') (480-141069-3), BD-2 (480-141069-5), MW-4 (16-18') (480-141069-6) and MW-6 (2-4) (480-141069-9).

Method(s) 8082A: The following sample is associated with continuing calibration verifications (CCVIS 480-432560/5) and (CCV 480-432560/31) that had recoveries for the surrogate Decachlorobiphenyl that were below acceptance limits:SB-16 (10'-12') (480-141069-3). The secondary surrogate, Tetrachloro-m-xylene is within limits, therefore the data has been reported.

Method(s) 8151A: All primary data for analytical batches 433270 and 433521 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
Method(s) 6010C: The Low Level Continuing Calibration Verification, (CCVL 480-433119/29) contained Total Zinc above the upper quality control limit. The associated samples were either ND for the affected analyte or contained this analyte at a concentration greater than 10X

Job ID: 480-141069-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

the value found in the CCVL; therefore, re-analysis of samples MW-5 (6"-2') (480-141069-1), SB-14 (8'-10') (480-141069-2), SB-16 (10'-12') (480-141069-3), SB-13 (8-10') (480-141069-4), SB-13 (8-10')MS (480-141069-4[MS]), SB-13 (8-10')MSD (480-141069-4[MSD]), BD-2 (480-141069-5), MW-4 (16-18') (480-141069-6), SB-15 (1-3') (480-141069-7), SB-17 (4-6') (480-141069-8), MW-6 (2-4) (480-141069-9), (LCSSRM 480-432641/2-A), (MB 480-432641/1-A), (480-141069-A-4-D PDS) and (480-141069-A-4-D SD ^5) was not performed.

Method(s) 6010C: The Serial Dilution (480-141069-A-4-D SD ^5) in batch480-432641 , exhibited results outside the quality control limits for Total Calcium, Chromium, Magnesium, and Vanadium. However, the Post Digestion Spike was compliant so no corrective action was necessary.

Method(s) 6010C: The recoveries of Post Spike, (480-141069-A-4-D PDS), in batch 480-432641 exhibited results outside the quality control limits for Total Aluminium, Barium, Potassium, and Sodium. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

Method(s) 6010C: The Serial Dilution and Post Spike (480-141069-A-4-D PDS) and (480-141069-A-4-D SD ^5) exceeded the quality control limits for Total Iron, Manganese, and Zinc . Sample matrix is suspected, therefore, no corrective action was necessary.

Method(s) 6010C: The method blank for preparation batch 480-432641 and analytical batch 480-433119 contained Total Manganese above the reporting limit (RL). Associated samples MW-5 (6"-2') (480-141069-1), SB-14 (8'-10') (480-141069-2), SB-13 (8-10') (480-141069-4), BD-2 (480-141069-5), MW-4 (16-18') (480-141069-6), SB-17 (4-6') (480-141069-8) and MW-6 (2-4) (480-141069-9) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3550C: The following samples required a Florisil clean-up, via 3620C, to reduce matrix interferences: SB-16 (10'-12') (480-141069-3), MW-4 (16-18') (480-141069-6), (480-141069-C-1 MS) and (480-141069-C-1 MSD).

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 - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-5 (6"-2')

Lab Sample ID: 480-141069-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.5	J	24	4.1	ug/Kg	1	☼	8260C	Total/NA
Bis(2-ethylhexyl) phthalate	460		200	67	ug/Kg	1	☼	8270D	Total/NA
4,4'-DDT	0.57	J	1.9	0.46	ug/Kg	1	☼	8081B	Total/NA
Endosulfan sulfate	0.81	J B	1.9	0.36	ug/Kg	1	☼	8081B	Total/NA
Aluminum	15500	B	11.8	5.2	mg/Kg	1	☼	6010C	Total/NA
Antimony	1.3	J	17.7	0.47	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.7		2.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Barium	93.0		0.59	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.64		0.24	0.033	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.11	J	0.24	0.035	mg/Kg	1	☼	6010C	Total/NA
Calcium	65300	B	59.1	3.9	mg/Kg	1	☼	6010C	Total/NA
Chromium	19.3		0.59	0.24	mg/Kg	1	☼	6010C	Total/NA
Cobalt	10.6		0.59	0.059	mg/Kg	1	☼	6010C	Total/NA
Copper	15.8		1.2	0.25	mg/Kg	1	☼	6010C	Total/NA
Iron	18900	B	11.8	4.1	mg/Kg	1	☼	6010C	Total/NA
Lead	16.3		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	25500	B	23.7	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	487	B	0.24	0.038	mg/Kg	1	☼	6010C	Total/NA
Nickel	22.8		5.9	0.27	mg/Kg	1	☼	6010C	Total/NA
Potassium	5170		35.5	23.7	mg/Kg	1	☼	6010C	Total/NA
Sodium	391		166	15.4	mg/Kg	1	☼	6010C	Total/NA
Thallium	0.36	J	7.1	0.35	mg/Kg	1	☼	6010C	Total/NA
Vanadium	31.0		0.59	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	60.3	^	2.4	0.76	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.010	J	0.024	0.0096	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-14 (8'-10')

Lab Sample ID: 480-141069-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	12100	B	11.3	5.0	mg/Kg	1	☼	6010C	Total/NA
Antimony	1.1	J	16.9	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.1		2.3	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	116		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.50		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.23	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	63200	B	56.4	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	16.7		0.56	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	8.5		0.56	0.056	mg/Kg	1	☼	6010C	Total/NA
Copper	15.6		1.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Iron	15500	B	11.3	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	14.0		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	26300	B	22.6	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	437	B	0.23	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	17.9		5.6	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	4170		33.9	22.6	mg/Kg	1	☼	6010C	Total/NA
Sodium	330		158	14.7	mg/Kg	1	☼	6010C	Total/NA
Thallium	0.38	J	6.8	0.34	mg/Kg	1	☼	6010C	Total/NA
Vanadium	27.0		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	60.2	^	2.3	0.72	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-16 (10'-12') — Lab Sample ID: 480-141069-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.0	J	21	3.6	ug/Kg	1	☼	8260C	Total/NA
Acenaphthene	63	J	190	28	ug/Kg	1	☼	8270D	Total/NA
Anthracene	110	J	190	47	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	400		190	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	370		190	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	430		190	30	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	330		190	20	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	230		190	64	ug/Kg	1	☼	8270D	Total/NA
Carbazole	45	J	190	22	ug/Kg	1	☼	8270D	Total/NA
Chrysene	440		190	42	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	28	J	190	22	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	830		190	20	ug/Kg	1	☼	8270D	Total/NA
Fluorene	32	J	190	22	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	220		190	23	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	740		190	28	ug/Kg	1	☼	8270D	Total/NA
Pyrene	1000		190	22	ug/Kg	1	☼	8270D	Total/NA
4,4'-DDT	1.7	J	3.8	0.88	ug/Kg	2	☼	8081B	Total/NA
Aluminum	10600	B	11.2	4.9	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.72	J	16.8	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.4		2.2	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	74.9		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.44		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.12	J	0.22	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	74200	B	56.1	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	14.3		0.56	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	6.2		0.56	0.056	mg/Kg	1	☼	6010C	Total/NA
Copper	13.4		1.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Iron	14200	B	11.2	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	10.7		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	31800	B	22.5	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	524	B	0.22	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	14.4		5.6	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	3640		33.7	22.5	mg/Kg	1	☼	6010C	Total/NA
Sodium	293		157	14.6	mg/Kg	1	☼	6010C	Total/NA
Vanadium	23.5		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	49.8	^	2.2	0.72	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.010	J	0.023	0.0091	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-13 (8-10') — Lab Sample ID: 480-141069-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	11600	B	10.8	4.7	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.70	J F1	16.2	0.43	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.4		2.2	0.43	mg/Kg	1	☼	6010C	Total/NA
Barium	72.8	F1	0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.49		0.22	0.030	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J	0.22	0.032	mg/Kg	1	☼	6010C	Total/NA
Calcium	67300	B	53.9	3.6	mg/Kg	1	☼	6010C	Total/NA
Chromium	15.8		0.54	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.8		0.54	0.054	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-13 (8-10') (Continued)

Lab Sample ID: 480-141069-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	27.5	F1	1.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	14400	B	10.8	3.8	mg/Kg	1	☼	6010C	Total/NA
Lead	14.6		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Magnesium	29000	B F2	21.6	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	423	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	15.9		5.4	0.25	mg/Kg	1	☼	6010C	Total/NA
Potassium	3960	F1	32.3	21.6	mg/Kg	1	☼	6010C	Total/NA
Sodium	301		151	14.0	mg/Kg	1	☼	6010C	Total/NA
Vanadium	24.8		0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	52.9	^	2.2	0.69	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.0098	J	0.023	0.0094	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BD-2

Lab Sample ID: 480-141069-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.9	J	25	4.1	ug/Kg	1	☼	8260C	Total/NA
Bis(2-ethylhexyl) phthalate	2800		200	68	ug/Kg	1	☼	8270D	Total/NA
Aluminum	18000	B	11.9	5.2	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.98	J	17.8	0.47	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.5		2.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Barium	80.2		0.59	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.72		0.24	0.033	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.24	0.036	mg/Kg	1	☼	6010C	Total/NA
Calcium	72100	B	59.3	3.9	mg/Kg	1	☼	6010C	Total/NA
Chromium	21.7		0.59	0.24	mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.9		0.59	0.059	mg/Kg	1	☼	6010C	Total/NA
Copper	17.3		1.2	0.25	mg/Kg	1	☼	6010C	Total/NA
Iron	20200	B	11.9	4.1	mg/Kg	1	☼	6010C	Total/NA
Lead	19.1		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	28500	B	23.7	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	473	B	0.24	0.038	mg/Kg	1	☼	6010C	Total/NA
Nickel	23.6		5.9	0.27	mg/Kg	1	☼	6010C	Total/NA
Potassium	6230		35.6	23.7	mg/Kg	1	☼	6010C	Total/NA
Sodium	420		166	15.4	mg/Kg	1	☼	6010C	Total/NA
Vanadium	33.8		0.59	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	68.0	^	2.4	0.76	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.015	J	0.024	0.0096	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: MW-4 (16-18')

Lab Sample ID: 480-141069-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.1	J	24	4.1	ug/Kg	1	☼	8260C	Total/NA
Aluminum	12100	B	11.2	4.9	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.84	J	16.8	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.3		2.2	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	72.6		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.48		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.12	J	0.22	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	70800	B	55.9	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	15.9		0.56	0.22	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4 (16-18') (Continued) — Lab Sample ID: 480-141069-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	7.4		0.56	0.056	mg/Kg	1	☼	6010C	Total/NA
Copper	14.0		1.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	15000	B	11.2	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	13.5		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	30400	B	22.3	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	429	B	0.22	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	16.0		5.6	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	4240		33.5	22.3	mg/Kg	1	☼	6010C	Total/NA
Sodium	289		156	14.5	mg/Kg	1	☼	6010C	Total/NA
Vanadium	26.5		0.56	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	50.7	^	2.2	0.71	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.010	J	0.022	0.0090	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-15 (1-3') — Lab Sample ID: 480-141069-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	55	J	180	44	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	160	J	180	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	130	J	180	26	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	180		180	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	110	J	180	19	ug/Kg	1	☼	8270D	Total/NA
Chrysene	140	J	180	40	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	250		180	19	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	98	J	180	22	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	160	J	180	26	ug/Kg	1	☼	8270D	Total/NA
Pyrene	210		180	21	ug/Kg	1	☼	8270D	Total/NA
Aluminum	4210	B	10.3	4.5	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.61	J	15.5	0.41	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.5		2.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Barium	28.4		0.52	0.11	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.20	J	0.21	0.029	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.12	J	0.21	0.031	mg/Kg	1	☼	6010C	Total/NA
Calcium	40600	B	51.7	3.4	mg/Kg	1	☼	6010C	Total/NA
Chromium	5.2		0.52	0.21	mg/Kg	1	☼	6010C	Total/NA
Cobalt	3.0		0.52	0.052	mg/Kg	1	☼	6010C	Total/NA
Copper	12.8		1.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Iron	8020	B	10.3	3.6	mg/Kg	1	☼	6010C	Total/NA
Lead	31.8		1.0	0.25	mg/Kg	1	☼	6010C	Total/NA
Magnesium	9160	B	20.7	0.96	mg/Kg	1	☼	6010C	Total/NA
Manganese	273	B	0.21	0.033	mg/Kg	1	☼	6010C	Total/NA
Nickel	7.9		5.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Potassium	958		31.0	20.7	mg/Kg	1	☼	6010C	Total/NA
Sodium	150		145	13.4	mg/Kg	1	☼	6010C	Total/NA
Thallium	0.39	J	6.2	0.31	mg/Kg	1	☼	6010C	Total/NA
Vanadium	9.6		0.52	0.11	mg/Kg	1	☼	6010C	Total/NA
Zinc	38.0	^	2.1	0.66	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.072		0.021	0.0085	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-17 (4-6') — Lab Sample ID: 480-141069-8

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-17 (4-6') (Continued)

Lab Sample ID: 480-141069-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	53	J	180	26	ug/Kg	1	☼	8270D	Total/NA
Anthracene	120	J	180	44	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	380		180	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	330		180	26	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	380		180	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	280		180	19	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	750		180	61	ug/Kg	1	☼	8270D	Total/NA
Chrysene	360		180	40	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	680		180	19	ug/Kg	1	☼	8270D	Total/NA
Fluorene	43	J	180	21	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	240		180	22	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	540		180	26	ug/Kg	1	☼	8270D	Total/NA
Pyrene	710		180	21	ug/Kg	1	☼	8270D	Total/NA
Aluminum	4020	B	10.6	4.6	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.95	J	15.8	0.42	mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.3		2.1	0.42	mg/Kg	1	☼	6010C	Total/NA
Barium	39.5		0.53	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.20	J	0.21	0.030	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.21	0.032	mg/Kg	1	☼	6010C	Total/NA
Calcium	49900	B	52.8	3.5	mg/Kg	1	☼	6010C	Total/NA
Chromium	5.5		0.53	0.21	mg/Kg	1	☼	6010C	Total/NA
Cobalt	3.9		0.53	0.053	mg/Kg	1	☼	6010C	Total/NA
Copper	24.9		1.1	0.22	mg/Kg	1	☼	6010C	Total/NA
Iron	11200	B	10.6	3.7	mg/Kg	1	☼	6010C	Total/NA
Lead	31.0		1.1	0.25	mg/Kg	1	☼	6010C	Total/NA
Magnesium	17600	B	21.1	0.98	mg/Kg	1	☼	6010C	Total/NA
Manganese	355	B	0.21	0.034	mg/Kg	1	☼	6010C	Total/NA
Nickel	9.0		5.3	0.24	mg/Kg	1	☼	6010C	Total/NA
Potassium	998		31.7	21.1	mg/Kg	1	☼	6010C	Total/NA
Sodium	210		148	13.7	mg/Kg	1	☼	6010C	Total/NA
Vanadium	9.7		0.53	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	34.9	^	2.1	0.68	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.094		0.021	0.0087	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: MW-6 (2-4)

Lab Sample ID: 480-141069-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	9.1	J	22	3.7	ug/Kg	1	☼	8260C	Total/NA
Bis(2-ethylhexyl) phthalate	200		190	64	ug/Kg	1	☼	8270D	Total/NA
4,4'-DDT	0.57	J	1.8	0.43	ug/Kg	1	☼	8081B	Total/NA
Aluminum	13300	B	11.3	5.0	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.74	J	17.0	0.45	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.4		2.3	0.45	mg/Kg	1	☼	6010C	Total/NA
Barium	76.7		0.57	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.52		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J	0.23	0.034	mg/Kg	1	☼	6010C	Total/NA
Calcium	11100	B	56.6	3.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	15.8		0.57	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.4		0.57	0.057	mg/Kg	1	☼	6010C	Total/NA
Copper	14.8		1.1	0.24	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-6 (2-4) (Continued)

Lab Sample ID: 480-141069-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	14900	B	11.3	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	18.8		1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Magnesium	7250	B	22.6	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	430	B	0.23	0.036	mg/Kg	1	☼	6010C	Total/NA
Nickel	13.8		5.7	0.26	mg/Kg	1	☼	6010C	Total/NA
Potassium	2520		33.9	22.6	mg/Kg	1	☼	6010C	Total/NA
Sodium	356		158	14.7	mg/Kg	1	☼	6010C	Total/NA
Vanadium	25.2		0.57	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	118	^	2.3	0.72	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.083		0.022	0.0089	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-5 (6"-2')
Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.8	0.35	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,1,2,2-Tetrachloroethane	ND		4.8	0.78	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,1,2-Trichloroethane	ND		4.8	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,1-Dichloroethane	ND		4.8	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,1-Dichloroethene	ND		4.8	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2,4-Trichlorobenzene	ND		4.8	0.29	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2,4-Trimethylbenzene	ND		4.8	0.92	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2-Dibromo-3-Chloropropane	ND		4.8	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2-Dibromoethane	ND		4.8	0.62	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2-Dichlorobenzene	ND		4.8	0.38	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2-Dichloroethane	ND		4.8	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,2-Dichloropropane	ND		4.8	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,3,5-Trimethylbenzene	ND		4.8	0.31	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,3-Dichlorobenzene	ND		4.8	0.25	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
1,4-Dichlorobenzene	ND		4.8	0.67	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
2-Butanone (MEK)	ND		24	1.8	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
2-Hexanone	ND		24	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
4-Isopropyltoluene	ND		4.8	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
4-Methyl-2-pentanone (MIBK)	ND		24	1.6	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Acetone	**5.5**	**J**	24	4.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Benzene	ND		4.8	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Bromodichloromethane	ND		4.8	0.65	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Bromomethane	ND		4.8	0.43	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Carbon disulfide	ND		4.8	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Carbon tetrachloride	ND		4.8	0.47	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Chlorobenzene	ND		4.8	0.64	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Chloroethane	ND		4.8	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Chloroform	ND		4.8	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Chloromethane	ND		4.8	0.29	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
cis-1,2-Dichloroethene	ND		4.8	0.62	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
cis-1,3-Dichloropropene	ND		4.8	0.69	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Cyclohexane	ND		4.8	0.67	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Dibromochloromethane	ND		4.8	0.62	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Dichlorodifluoromethane	ND		4.8	0.40	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Ethylbenzene	ND		4.8	0.33	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Isopropylbenzene	ND		4.8	0.73	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
m,p-Xylene	ND		9.6	0.81	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Methyl acetate	ND		24	2.9	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Methyl tert-butyl ether	ND		4.8	0.47	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Methylcyclohexane	ND		4.8	0.73	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Methylene Chloride	ND		4.8	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
n-Butylbenzene	ND		4.8	0.42	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
N-Propylbenzene	ND		4.8	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
o-Xylene	ND		4.8	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
sec-Butylbenzene	ND		4.8	0.42	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Styrene	ND		4.8	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
tert-Butylbenzene	ND		4.8	0.50	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-5 (6"-2')
Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.8	0.65	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Toluene	ND		4.8	0.36	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
trans-1,2-Dichloroethene	ND		4.8	0.50	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
trans-1,3-Dichloropropene	ND		4.8	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Trichloroethene	ND		4.8	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Trichlorofluoromethane	ND		4.8	0.46	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Vinyl chloride	ND		4.8	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1
Xylenes, Total	ND		9.6	0.81	ug/Kg	☼	08/31/18 07:51	09/04/18 11:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 126*	*08/31/18 07:51*	*09/04/18 11:21*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 126*	*08/31/18 07:51*	*09/04/18 11:21*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*08/31/18 07:51*	*09/04/18 11:21*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*08/31/18 07:51*	*09/04/18 11:21*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		200	53	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2,4,6-Trichlorophenol	ND		200	39	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2,4-Dichlorophenol	ND		200	21	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2,4-Dimethylphenol	ND		200	47	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2,4-Dinitrophenol	ND		1900	910	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2,4-Dinitrotoluene	ND		200	41	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2,6-Dinitrotoluene	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2-Chloronaphthalene	ND		200	32	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2-Chlorophenol	ND		200	36	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2-Methylnaphthalene	ND		200	39	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2-Methylphenol	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2-Nitroaniline	ND		380	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
2-Nitrophenol	ND		200	56	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
3,3'-Dichlorobenzidine	ND		380	230	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
3-Nitroaniline	ND		380	54	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4,6-Dinitro-2-methylphenol	ND		380	200	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Bromophenyl phenyl ether	ND		200	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Chloro-3-methylphenol	ND		200	49	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Chloroaniline	ND		200	49	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Chlorophenyl phenyl ether	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Methylphenol	ND		380	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Nitroaniline	ND		380	100	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
4-Nitrophenol	ND		380	140	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Acenaphthene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Acenaphthylene	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Acetophenone	ND		200	27	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Anthracene	ND		200	49	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Atrazine	ND		200	68	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Benzaldehyde	ND		200	160	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Benzo[a]anthracene	ND		200	20	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Benzo[a]pyrene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Benzo[b]fluoranthene	ND		200	31	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Benzo[g,h,i]perylene	ND		200	21	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-5 (6"-2')
Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Biphenyl	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
bis (2-chloroisopropyl) ether	ND		200	39	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Bis(2-chloroethoxy)methane	ND		200	42	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Bis(2-chloroethyl)ether	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Bis(2-ethylhexyl) phthalate	**460**		200	67	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Butyl benzyl phthalate	ND		200	32	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Caprolactam	ND		200	59	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Carbazole	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Chrysene	ND		200	44	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Dibenz(a,h)anthracene	ND		200	35	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Dibenzofuran	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Diethyl phthalate	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Dimethyl phthalate	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Di-n-butyl phthalate	ND		200	34	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Di-n-octyl phthalate	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Fluoranthene	ND		200	21	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Fluorene	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Hexachlorobenzene	ND		200	27	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Hexachlorobutadiene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Hexachlorocyclopentadiene	ND		200	27	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Hexachloroethane	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Indeno[1,2,3-cd]pyrene	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Isophorone	ND		200	42	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Naphthalene	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Nitrobenzene	ND		200	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
N-Nitrosodi-n-propylamine	ND		200	34	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
N-Nitrosodiphenylamine	ND		200	160	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Pentachlorophenol	ND		380	200	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Phenanthrene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Phenol	ND		200	30	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1
Pyrene	ND		200	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*84*		*54 - 120*	*08/31/18 14:16*	*09/05/18 21:48*	*1*
2-Fluorobiphenyl	*76*		*60 - 120*	*08/31/18 14:16*	*09/05/18 21:48*	*1*
2-Fluorophenol	*66*		*52 - 120*	*08/31/18 14:16*	*09/05/18 21:48*	*1*
Nitrobenzene-d5	*71*		*53 - 120*	*08/31/18 14:16*	*09/05/18 21:48*	*1*
Phenol-d5	*65*		*54 - 120*	*08/31/18 14:16*	*09/05/18 21:48*	*1*
p-Terphenyl-d14	*100*		*65 - 121*	*08/31/18 14:16*	*09/05/18 21:48*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.9	0.38	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
4,4'-DDE	ND		1.9	0.41	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
4,4'-DDT	**0.57**	**J**	1.9	0.46	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Aldrin	ND		1.9	0.48	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
alpha-BHC	ND		1.9	0.35	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
cis-Chlordane	ND		1.9	0.97	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
beta-BHC	ND		1.9	0.35	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1

Client Sample ID: MW-5 (6"-2')
Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid
Percent Solids: 85.3

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		1.9	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Dieldrin	ND		1.9	0.47	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Endosulfan I	ND		1.9	0.37	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Endosulfan II	ND		1.9	0.35	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Endosulfan sulfate	**0.81**	**J B**	1.9	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Endrin	ND		1.9	0.39	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Endrin aldehyde	ND		1.9	0.50	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Endrin ketone	ND		1.9	0.48	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
gamma-BHC (Lindane)	ND		1.9	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
trans-Chlordane	ND		1.9	0.62	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Heptachlor	ND		1.9	0.42	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Heptachlor epoxide	ND		1.9	0.50	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Methoxychlor	ND		1.9	0.40	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1
Toxaphene	ND		19	11	ug/Kg	☼	09/01/18 08:10	09/04/18 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*116*		*45 - 120*	*09/01/18 08:10*	*09/04/18 12:04*	*1*
DCB Decachlorobiphenyl	*97*		*45 - 120*	*09/01/18 08:10*	*09/04/18 12:04*	*1*
Tetrachloro-m-xylene	*87*		*30 - 124*	*09/01/18 08:10*	*09/04/18 12:04*	*1*
Tetrachloro-m-xylene	*75*		*30 - 124*	*09/01/18 08:10*	*09/04/18 12:04*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1
PCB-1221	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1
PCB-1232	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1
PCB-1242	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1
PCB-1248	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	09/01/18 08:27	09/03/18 05:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*60 - 154*	*09/01/18 08:27*	*09/03/18 05:17*	*1*
Tetrachloro-m-xylene	*87*		*60 - 154*	*09/01/18 08:27*	*09/03/18 05:17*	*1*
DCB Decachlorobiphenyl	*73*		*65 - 174*	*09/01/18 08:27*	*09/03/18 05:17*	*1*
DCB Decachlorobiphenyl	*54*	*X*	*65 - 174*	*09/01/18 08:27*	*09/03/18 05:17*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	6.2	ug/Kg	☼	09/04/18 07:12	09/07/18 12:08	1
Silvex (2,4,5-TP)	ND		20	7.0	ug/Kg	☼	09/04/18 07:12	09/07/18 12:08	1
2,4-D	ND		20	12	ug/Kg	☼	09/04/18 07:12	09/07/18 12:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*61*		*28 - 129*	*09/04/18 07:12*	*09/07/18 12:08*	*1*
2,4-Dichlorophenylacetic acid	*61*		*28 - 129*	*09/04/18 07:12*	*09/07/18 12:08*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**15500**	**B**	11.8	5.2	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Antimony	**1.3**	**J**	17.7	0.47	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-5 (6"-2')
Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.7		2.4	0.47	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Barium	93.0		0.59	0.13	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Beryllium	0.64		0.24	0.033	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Cadmium	0.11	J	0.24	0.035	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Calcium	65300	B	59.1	3.9	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Chromium	19.3		0.59	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Cobalt	10.6		0.59	0.059	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Copper	15.8		1.2	0.25	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Iron	18900	B	11.8	4.1	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Lead	16.3		1.2	0.28	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Magnesium	25500	B	23.7	1.1	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Manganese	487	B	0.24	0.038	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Nickel	22.8		5.9	0.27	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Potassium	5170		35.5	23.7	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Selenium	ND		4.7	0.47	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Silver	ND		0.71	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Sodium	391		166	15.4	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Thallium	0.36	J	7.1	0.35	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Vanadium	31.0		0.59	0.13	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1
Zinc	60.3	^	2.4	0.76	mg/Kg	☼	09/05/18 10:13	09/06/18 08:23	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	J	0.024	0.0096	mg/Kg	☼	09/13/18 14:55	09/14/18 10:57	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.7		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	85.3		0.1	0.1	%			08/31/18 07:05	1

Client Sample ID: SB-14 (8'-10')
Date Collected: 08/29/18 16:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-2
Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	52	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2,4-Dinitrophenol	ND		1900	890	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2,4-Dinitrotoluene	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2,6-Dinitrotoluene	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2-Chloronaphthalene	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2-Methylphenol	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
2-Nitrophenol	ND		190	54	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
3,3'-Dichlorobenzidine	ND		370	230	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
3-Nitroaniline	ND		370	53	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Methylphenol	ND		370	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Nitroaniline	ND		370	100	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Acenaphthylene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Acetophenone	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Anthracene	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Atrazine	ND		190	67	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Biphenyl	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Bis(2-chloroethoxy)methane	ND		190	41	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Bis(2-ethylhexyl) phthalate	ND		190	66	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Butyl benzyl phthalate	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Caprolactam	ND		190	58	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Carbazole	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Chrysene	ND		190	43	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Dibenzofuran	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Dimethyl phthalate	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Di-n-octyl phthalate	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-14 (8'-10')
Date Collected: 08/29/18 16:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-2
Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Fluorene	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Hexachloroethane	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Indeno[1,2,3-cd]pyrene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Isophorone	ND		190	41	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Naphthalene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
N-Nitrosodiphenylamine	ND		190	160	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Phenol	ND		190	29	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1
Pyrene	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*76*		*54 - 120*	*08/31/18 14:16*	*09/05/18 22:16*	*1*
2-Fluorobiphenyl	*77*		*60 - 120*	*08/31/18 14:16*	*09/05/18 22:16*	*1*
2-Fluorophenol	*68*		*52 - 120*	*08/31/18 14:16*	*09/05/18 22:16*	*1*
Nitrobenzene-d5	*72*		*53 - 120*	*08/31/18 14:16*	*09/05/18 22:16*	*1*
Phenol-d5	*75*		*54 - 120*	*08/31/18 14:16*	*09/05/18 22:16*	*1*
p-Terphenyl-d14	*91*		*65 - 121*	*08/31/18 14:16*	*09/05/18 22:16*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**12100**	**B**	11.3	5.0	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Antimony	**1.1**	**J**	16.9	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Arsenic	**3.1**		2.3	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Barium	**116**		0.56	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Beryllium	**0.50**		0.23	0.032	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Cadmium	**0.14**	**J**	0.23	0.034	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Calcium	**63200**	**B**	56.4	3.7	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Chromium	**16.7**		0.56	0.23	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Cobalt	**8.5**		0.56	0.056	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Copper	**15.6**		1.1	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Iron	**15500**	**B**	11.3	4.0	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Lead	**14.0**		1.1	0.27	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Magnesium	**26300**	**B**	22.6	1.0	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Manganese	**437**	**B**	0.23	0.036	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Nickel	**17.9**		5.6	0.26	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Potassium	**4170**		33.9	22.6	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Selenium	ND		4.5	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Silver	ND		0.68	0.23	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Sodium	**330**		158	14.7	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Thallium	**0.38**	**J**	6.8	0.34	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Vanadium	**27.0**		0.56	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1
Zinc	**60.2**	**^**	2.3	0.72	mg/Kg	☼	09/05/18 10:13	09/06/18 08:27	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-14 (8'-10')
Date Collected: 08/29/18 16:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-2
Matrix: Solid
Percent Solids: 88.5

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.023	0.0091	mg/Kg	☼	09/13/18 14:55	09/14/18 10:58	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.5		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	88.5		0.1	0.1	%			08/31/18 07:05	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-16 (10'-12')
Date Collected: 08/29/18 14:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-3
Matrix: Solid
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.3	0.31	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,1,2,2-Tetrachloroethane	ND		4.3	0.69	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.97	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,1,2-Trichloroethane	ND		4.3	0.55	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,1-Dichloroethane	ND		4.3	0.52	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,1-Dichloroethene	ND		4.3	0.52	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2,4-Trichlorobenzene	ND		4.3	0.26	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2,4-Trimethylbenzene	ND		4.3	0.82	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2-Dibromo-3-Chloropropane	ND		4.3	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2-Dibromoethane	ND		4.3	0.55	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2-Dichlorobenzene	ND		4.3	0.33	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2-Dichloroethane	ND		4.3	0.21	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,2-Dichloropropane	ND		4.3	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,3,5-Trimethylbenzene	ND		4.3	0.27	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,3-Dichlorobenzene	ND		4.3	0.22	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
1,4-Dichlorobenzene	ND		4.3	0.60	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
2-Butanone (MEK)	ND		21	1.6	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
2-Hexanone	ND		21	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
4-Isopropyltoluene	ND		4.3	0.34	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
4-Methyl-2-pentanone (MIBK)	ND		21	1.4	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Acetone	**6.0**	**J**	21	3.6	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Benzene	ND		4.3	0.21	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Bromodichloromethane	ND		4.3	0.57	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Bromoform	ND		4.3	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Bromomethane	ND		4.3	0.38	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Carbon disulfide	ND		4.3	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Carbon tetrachloride	ND		4.3	0.41	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Chlorobenzene	ND		4.3	0.56	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Chloroethane	ND		4.3	0.96	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Chloroform	ND		4.3	0.26	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Chloromethane	ND		4.3	0.26	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
cis-1,2-Dichloroethene	ND		4.3	0.55	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
cis-1,3-Dichloropropene	ND		4.3	0.61	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Cyclohexane	ND		4.3	0.60	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Dibromochloromethane	ND		4.3	0.55	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Dichlorodifluoromethane	ND		4.3	0.35	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Ethylbenzene	ND		4.3	0.29	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Isopropylbenzene	ND		4.3	0.64	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
m,p-Xylene	ND		8.5	0.72	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Methyl acetate	ND		21	2.6	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Methyl tert-butyl ether	ND		4.3	0.42	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Methylcyclohexane	ND		4.3	0.65	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Methylene Chloride	ND		4.3	2.0	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
n-Butylbenzene	ND		4.3	0.37	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
N-Propylbenzene	ND		4.3	0.34	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
o-Xylene	ND		4.3	0.56	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
sec-Butylbenzene	ND		4.3	0.37	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Styrene	ND		4.3	0.21	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
tert-Butylbenzene	ND		4.3	0.44	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1

Client Sample ID: SB-16 (10'-12')
Date Collected: 08/29/18 14:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-3
Matrix: Solid
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.3	0.57	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Toluene	ND		4.3	0.32	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
trans-1,2-Dichloroethene	ND		4.3	0.44	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
trans-1,3-Dichloropropene	ND		4.3	1.9	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Trichloroethene	ND		4.3	0.94	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Trichlorofluoromethane	ND		4.3	0.40	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Vinyl chloride	ND		4.3	0.52	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1
Xylenes, Total	ND		8.5	0.72	ug/Kg	☼	08/31/18 07:51	09/04/18 11:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*08/31/18 07:51*	*09/04/18 11:46*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 126*	*08/31/18 07:51*	*09/04/18 11:46*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*08/31/18 07:51*	*09/04/18 11:46*	*1*
Toluene-d8 (Surr)	*106*		*71 - 125*	*08/31/18 07:51*	*09/04/18 11:46*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2,4-Dimethylphenol	ND		190	45	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2,4-Dinitrophenol	ND		1800	870	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2-Chlorophenol	ND		190	34	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
3-Nitroaniline	ND		370	52	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Nitroaniline	ND		370	99	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Acenaphthene	**63**	**J**	190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Acenaphthylene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Acetophenone	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Anthracene	**110**	**J**	190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Atrazine	ND		190	65	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Benzo[a]anthracene	**400**		190	19	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Benzo[a]pyrene	**370**		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Benzo[b]fluoranthene	**430**		190	30	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Benzo[g,h,i]perylene	**330**		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-16 (10'-12')
Date Collected: 08/29/18 14:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-3
Matrix: Solid
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Biphenyl	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Bis(2-ethylhexyl) phthalate	**230**		190	64	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Caprolactam	ND		190	56	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Carbazole	**45**	**J**	190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Chrysene	**440**		190	42	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Dibenzofuran	**28**	**J**	190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Fluoranthene	**830**		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Fluorene	**32**	**J**	190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Hexachlorobenzene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Hexachlorocyclopentadiene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Hexachloroethane	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Indeno[1,2,3-cd]pyrene	**220**		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Isophorone	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Naphthalene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Phenanthrene	**740**		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Phenol	ND		190	29	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1
Pyrene	**1000**		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 22:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*92*		*54 - 120*	*08/31/18 14:16*	*09/05/18 22:45*	*1*
2-Fluorobiphenyl	*77*		*60 - 120*	*08/31/18 14:16*	*09/05/18 22:45*	*1*
2-Fluorophenol	*66*		*52 - 120*	*08/31/18 14:16*	*09/05/18 22:45*	*1*
Nitrobenzene-d5	*72*		*53 - 120*	*08/31/18 14:16*	*09/05/18 22:45*	*1*
Phenol-d5	*74*		*54 - 120*	*08/31/18 14:16*	*09/05/18 22:45*	*1*
p-Terphenyl-d14	*95*		*65 - 121*	*08/31/18 14:16*	*09/05/18 22:45*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		3.8	0.73	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
4,4'-DDE	ND		3.8	0.79	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
4,4'-DDT	**1.7**	**J**	3.8	0.88	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Aldrin	ND		3.8	0.92	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
alpha-BHC	ND		3.8	0.67	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
cis-Chlordane	ND		3.8	1.9	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
beta-BHC	ND		3.8	0.67	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2

Client Sample ID: SB-16 (10'-12')
Date Collected: 08/29/18 14:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-3
Matrix: Solid
Percent Solids: 88.7

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		3.8	0.70	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Dieldrin	ND		3.8	0.90	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Endosulfan I	ND		3.8	0.72	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Endosulfan II	ND		3.8	0.67	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Endosulfan sulfate	ND		3.8	0.70	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Endrin	ND		3.8	0.74	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Endrin aldehyde	ND		3.8	0.96	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Endrin ketone	ND		3.8	0.92	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
gamma-BHC (Lindane)	ND		3.8	0.69	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
trans-Chlordane	ND		3.8	1.2	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Heptachlor	ND		3.8	0.81	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Heptachlor epoxide	ND		3.8	0.97	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Methoxychlor	ND		3.8	0.76	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2
Toxaphene	ND		38	22	ug/Kg	☼	09/01/18 08:10	09/04/18 12:24	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*88*		*45 - 120*	*09/01/18 08:10*	*09/04/18 12:24*	*2*
DCB Decachlorobiphenyl	*112*		*45 - 120*	*09/01/18 08:10*	*09/04/18 12:24*	*2*
Tetrachloro-m-xylene	*76*		*30 - 124*	*09/01/18 08:10*	*09/04/18 12:24*	*2*
Tetrachloro-m-xylene	*53*		*30 - 124*	*09/01/18 08:10*	*09/04/18 12:24*	*2*

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	☼	09/01/18 08:27	09/03/18 02:54	1
PCB-1221	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 02:54	1
PCB-1232	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 02:54	1
PCB-1242	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 02:54	1
PCB-1248	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 02:54	1
PCB-1254	ND		0.27	0.13	mg/Kg	☼	09/01/18 08:27	09/03/18 02:54	1
PCB-1260	ND		0.27	0.13	mg/Kg	☼	09/01/18 08:27	09/03/18 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*115*		*60 - 154*	*09/01/18 08:27*	*09/03/18 02:54*	*1*
Tetrachloro-m-xylene	*97*		*60 - 154*	*09/01/18 08:27*	*09/03/18 02:54*	*1*
DCB Decachlorobiphenyl	*112*		*65 - 174*	*09/01/18 08:27*	*09/03/18 02:54*	*1*
DCB Decachlorobiphenyl	*102*		*65 - 174*	*09/01/18 08:27*	*09/03/18 02:54*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		18	5.9	ug/Kg	☼	09/04/18 07:12	09/10/18 08:17	1
Silvex (2,4,5-TP)	ND		18	6.6	ug/Kg	☼	09/04/18 07:12	09/10/18 08:17	1
2,4-D	ND		18	12	ug/Kg	☼	09/04/18 07:12	09/10/18 08:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*55*		*28 - 129*	*09/04/18 07:12*	*09/10/18 08:17*	*1*
2,4-Dichlorophenylacetic acid	*56*		*28 - 129*	*09/04/18 07:12*	*09/10/18 08:17*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**10600**	**B**	11.2	4.9	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Antimony	**0.72**	**J**	16.8	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1

Client Sample ID: SB-16 (10'-12')
Date Collected: 08/29/18 14:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-3
Matrix: Solid
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		2.2	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Barium	74.9		0.56	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Beryllium	0.44		0.22	0.031	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Cadmium	0.12	J	0.22	0.034	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Calcium	74200	B	56.1	3.7	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Chromium	14.3		0.56	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Cobalt	6.2		0.56	0.056	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Copper	13.4		1.1	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Iron	14200	B	11.2	3.9	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Lead	10.7		1.1	0.27	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Magnesium	31800	B	22.5	1.0	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Manganese	524	B	0.22	0.036	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Nickel	14.4		5.6	0.26	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Potassium	3640		33.7	22.5	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Selenium	ND		4.5	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Silver	ND		0.67	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Sodium	293		157	14.6	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Thallium	ND		6.7	0.34	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Vanadium	23.5		0.56	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1
Zinc	49.8	^	2.2	0.72	mg/Kg	☼	09/05/18 10:13	09/06/18 08:31	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	J	0.023	0.0091	mg/Kg	☼	09/13/18 14:55	09/14/18 11:00	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.3		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	88.7		0.1	0.1	%			08/31/18 07:05	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-13 (8-10')
Date Collected: 08/29/18 11:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-4
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2,4-Dimethylphenol	ND		190	45	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2,4-Dinitrophenol	ND		1800	860	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2-Chlorophenol	ND		190	34	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2-Nitroaniline	ND		360	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
3,3'-Dichlorobenzidine	ND		360	220	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
3-Nitroaniline	ND		360	52	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4,6-Dinitro-2-methylphenol	ND		360	190	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Bromophenyl phenyl ether	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Chloro-3-methylphenol	ND		190	46	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Chloroaniline	ND		190	46	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Methylphenol	ND		360	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Nitroaniline	ND		360	98	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
4-Nitrophenol	ND		360	130	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Acenaphthylene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Acetophenone	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Anthracene	ND		190	46	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Atrazine	ND		190	65	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Biphenyl	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Bis(2-ethylhexyl) phthalate	ND		190	64	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Caprolactam	ND		190	56	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Carbazole	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Chrysene	ND		190	42	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-13 (8-10')
Date Collected: 08/29/18 11:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-4
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Fluorene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Hexachlorobenzene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Hexachlorocyclopentadiene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Hexachloroethane	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Indeno[1,2,3-cd]pyrene	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Isophorone	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Naphthalene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Pentachlorophenol	ND		360	190	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Phenol	ND		190	29	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1
Pyrene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*97*		*54 - 120*	*08/31/18 14:16*	*09/05/18 21:20*	*1*
2-Fluorobiphenyl	*80*		*60 - 120*	*08/31/18 14:16*	*09/05/18 21:20*	*1*
2-Fluorophenol	*65*		*52 - 120*	*08/31/18 14:16*	*09/05/18 21:20*	*1*
Nitrobenzene-d5	*75*		*53 - 120*	*08/31/18 14:16*	*09/05/18 21:20*	*1*
Phenol-d5	*67*		*54 - 120*	*08/31/18 14:16*	*09/05/18 21:20*	*1*
p-Terphenyl-d14	*94*		*65 - 121*	*08/31/18 14:16*	*09/05/18 21:20*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**11600**	**B**	10.8	4.7	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Antimony	**0.70**	**J F1**	16.2	0.43	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Arsenic	**2.4**		2.2	0.43	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Barium	**72.8**	**F1**	0.54	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Beryllium	**0.49**		0.22	0.030	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Cadmium	**0.15**	**J**	0.22	0.032	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Calcium	**67300**	**B**	53.9	3.6	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Chromium	**15.8**		0.54	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Cobalt	**7.8**		0.54	0.054	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Copper	**27.5**	**F1**	1.1	0.23	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Iron	**14400**	**B**	10.8	3.8	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Lead	**14.6**		1.1	0.26	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Magnesium	**29000**	**B F2**	21.6	1.0	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Manganese	**423**	**B**	0.22	0.035	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Nickel	**15.9**		5.4	0.25	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Potassium	**3960**	**F1**	32.3	21.6	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Selenium	ND		4.3	0.43	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Silver	ND		0.65	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Sodium	**301**		151	14.0	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Thallium	ND		6.5	0.32	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Vanadium	**24.8**		0.54	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1
Zinc	**52.9**	**^**	2.2	0.69	mg/Kg	☼	09/05/18 10:13	09/06/18 08:34	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-13 (8-10')
Date Collected: 08/29/18 11:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-4
Matrix: Solid
Percent Solids: 88.4

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0098	J	0.023	0.0094	mg/Kg	☼	09/13/18 14:55	09/14/18 11:01	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.6		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	88.4		0.1	0.1	%			08/31/18 07:05	1

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid
Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9	0.36	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,1,2,2-Tetrachloroethane	ND		4.9	0.80	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,1,2-Trichloroethane	ND		4.9	0.64	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,1-Dichloroethane	ND		4.9	0.60	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,1-Dichloroethene	ND		4.9	0.60	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2,4-Trichlorobenzene	ND		4.9	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2,4-Trimethylbenzene	ND		4.9	0.94	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2-Dibromo-3-Chloropropane	ND		4.9	2.5	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2-Dibromoethane	ND		4.9	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2-Dichlorobenzene	ND		4.9	0.38	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2-Dichloroethane	ND		4.9	0.25	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,2-Dichloropropane	ND		4.9	2.5	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,3,5-Trimethylbenzene	ND		4.9	0.32	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,3-Dichlorobenzene	ND		4.9	0.25	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
1,4-Dichlorobenzene	ND		4.9	0.69	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
2-Hexanone	ND		25	2.5	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
4-Isopropyltoluene	ND		4.9	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Acetone	**6.9**	**J**	25	4.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Benzene	ND		4.9	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Bromodichloromethane	ND		4.9	0.66	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Bromoform	ND		4.9	2.5	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Bromomethane	ND		4.9	0.44	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Carbon disulfide	ND		4.9	2.5	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Carbon tetrachloride	ND		4.9	0.48	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Chlorobenzene	ND		4.9	0.65	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Chloroethane	ND		4.9	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Chloroform	ND		4.9	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Chloromethane	ND		4.9	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
cis-1,2-Dichloroethene	ND		4.9	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
cis-1,3-Dichloropropene	ND		4.9	0.71	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Cyclohexane	ND		4.9	0.69	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Dibromochloromethane	ND		4.9	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Dichlorodifluoromethane	ND		4.9	0.41	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Ethylbenzene	ND		4.9	0.34	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Isopropylbenzene	ND		4.9	0.74	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
m,p-Xylene	ND		9.8	0.82	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Methyl acetate	ND		25	3.0	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Methyl tert-butyl ether	ND		4.9	0.48	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Methylcyclohexane	ND		4.9	0.75	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Methylene Chloride	ND		4.9	2.3	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
n-Butylbenzene	ND		4.9	0.43	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
N-Propylbenzene	ND		4.9	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
o-Xylene	ND		4.9	0.64	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
sec-Butylbenzene	ND		4.9	0.43	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Styrene	ND		4.9	0.25	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
tert-Butylbenzene	ND		4.9	0.51	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid
Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.9	0.66	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Toluene	ND		4.9	0.37	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
trans-1,2-Dichloroethene	ND		4.9	0.51	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
trans-1,3-Dichloropropene	ND		4.9	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Trichloroethene	ND		4.9	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Trichlorofluoromethane	ND		4.9	0.46	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Vinyl chloride	ND		4.9	0.60	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1
Xylenes, Total	ND		9.8	0.82	ug/Kg	☼	08/31/18 07:51	09/04/18 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*64 - 126*	*08/31/18 07:51*	*09/04/18 12:12*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 126*	*08/31/18 07:51*	*09/04/18 12:12*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*08/31/18 07:51*	*09/04/18 12:12*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*08/31/18 07:51*	*09/04/18 12:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		200	54	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2,4,6-Trichlorophenol	ND		200	40	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2,4-Dichlorophenol	ND		200	21	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2,4-Dimethylphenol	ND		200	48	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2,4-Dinitrophenol	ND		2000	920	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2,4-Dinitrotoluene	ND		200	41	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2,6-Dinitrotoluene	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2-Chloronaphthalene	ND		200	33	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2-Chlorophenol	ND		200	36	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2-Methylnaphthalene	ND		200	40	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2-Methylphenol	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2-Nitroaniline	ND		390	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
2-Nitrophenol	ND		200	56	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
3,3'-Dichlorobenzidine	ND		390	240	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
3-Nitroaniline	ND		390	55	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4,6-Dinitro-2-methylphenol	ND		390	200	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Bromophenyl phenyl ether	ND		200	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Chloro-3-methylphenol	ND		200	49	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Chloroaniline	ND		200	49	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Chlorophenyl phenyl ether	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Methylphenol	ND		390	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Nitroaniline	ND		390	100	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
4-Nitrophenol	ND		390	140	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Acenaphthene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Acenaphthylene	ND		200	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Acetophenone	ND		200	27	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Anthracene	ND		200	49	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Atrazine	ND		200	69	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Benzaldehyde	ND		200	160	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Benzo[a]anthracene	ND		200	20	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Benzo[a]pyrene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Benzo[b]fluoranthene	ND		200	32	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Benzo[g,h,i]perylene	ND		200	21	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid
Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		200	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Biphenyl	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
bis (2-chloroisopropyl) ether	ND		200	40	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Bis(2-chloroethoxy)methane	ND		200	42	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Bis(2-chloroethyl)ether	ND		200	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Bis(2-ethylhexyl) phthalate	**2800**		200	68	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Butyl benzyl phthalate	ND		200	33	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Caprolactam	ND		200	60	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Carbazole	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Chrysene	ND		200	45	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Dibenz(a,h)anthracene	ND		200	35	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Dibenzofuran	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Diethyl phthalate	ND		200	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Dimethyl phthalate	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Di-n-butyl phthalate	ND		200	34	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Di-n-octyl phthalate	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Fluoranthene	ND		200	21	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Fluorene	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Hexachlorobenzene	ND		200	27	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Hexachlorobutadiene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Hexachlorocyclopentadiene	ND		200	27	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Hexachloroethane	ND		200	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Indeno[1,2,3-cd]pyrene	ND		200	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Isophorone	ND		200	42	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Naphthalene	ND		200	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Nitrobenzene	ND		200	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
N-Nitrosodi-n-propylamine	ND		200	34	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
N-Nitrosodiphenylamine	ND		200	160	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Pentachlorophenol	ND		390	200	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Phenanthrene	ND		200	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Phenol	ND		200	31	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1
Pyrene	ND		200	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*88*		*54 - 120*	*08/31/18 14:16*	*09/05/18 23:13*	*1*
2-Fluorobiphenyl	*80*		*60 - 120*	*08/31/18 14:16*	*09/05/18 23:13*	*1*
2-Fluorophenol	*65*		*52 - 120*	*08/31/18 14:16*	*09/05/18 23:13*	*1*
Nitrobenzene-d5	*74*		*53 - 120*	*08/31/18 14:16*	*09/05/18 23:13*	*1*
Phenol-d5	*70*		*54 - 120*	*08/31/18 14:16*	*09/05/18 23:13*	*1*
p-Terphenyl-d14	*98*		*65 - 121*	*08/31/18 14:16*	*09/05/18 23:13*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.0	0.39	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
4,4'-DDE	ND		2.0	0.42	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
4,4'-DDT	ND		2.0	0.47	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Aldrin	ND		2.0	0.49	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
alpha-BHC	ND		2.0	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
cis-Chlordane	ND		2.0	0.99	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
beta-BHC	ND		2.0	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid
Percent Solids: 83.1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		2.0	0.37	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Dieldrin	ND		2.0	0.48	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Endosulfan I	ND		2.0	0.38	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Endosulfan II	ND		2.0	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Endosulfan sulfate	ND		2.0	0.37	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Endrin	ND		2.0	0.40	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Endrin aldehyde	ND		2.0	0.51	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Endrin ketone	ND		2.0	0.49	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
gamma-BHC (Lindane)	ND		2.0	0.37	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
trans-Chlordane	ND		2.0	0.64	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Heptachlor	ND		2.0	0.43	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Heptachlor epoxide	ND		2.0	0.52	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Methoxychlor	ND		2.0	0.41	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1
Toxaphene	ND		20	12	ug/Kg	☼	09/01/18 08:10	09/04/18 12:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*112*		*45 - 120*	*09/01/18 08:10*	*09/04/18 12:44*	*1*
DCB Decachlorobiphenyl	*88*		*45 - 120*	*09/01/18 08:10*	*09/04/18 12:44*	*1*
Tetrachloro-m-xylene	*76*		*30 - 124*	*09/01/18 08:10*	*09/04/18 12:44*	*1*
Tetrachloro-m-xylene	*63*		*30 - 124*	*09/01/18 08:10*	*09/04/18 12:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1
PCB-1221	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1
PCB-1232	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1
PCB-1242	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1
PCB-1248	ND		0.27	0.053	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1
PCB-1254	ND		0.27	0.13	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1
PCB-1260	ND		0.27	0.13	mg/Kg	☼	09/01/18 08:27	09/03/18 05:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*105*		*60 - 154*	*09/01/18 08:27*	*09/03/18 05:33*	*1*
Tetrachloro-m-xylene	*86*		*60 - 154*	*09/01/18 08:27*	*09/03/18 05:33*	*1*
DCB Decachlorobiphenyl	*76*		*65 - 174*	*09/01/18 08:27*	*09/03/18 05:33*	*1*
DCB Decachlorobiphenyl	*58*	*X*	*65 - 174*	*09/01/18 08:27*	*09/03/18 05:33*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		20	6.3	ug/Kg	☼	09/04/18 07:12	09/10/18 08:46	1
Silvex (2,4,5-TP)	ND		20	7.1	ug/Kg	☼	09/04/18 07:12	09/10/18 08:46	1
2,4-D	ND		20	12	ug/Kg	☼	09/04/18 07:12	09/10/18 08:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*52*		*28 - 129*	*09/04/18 07:12*	*09/10/18 08:46*	*1*
2,4-Dichlorophenylacetic acid	*53*		*28 - 129*	*09/04/18 07:12*	*09/10/18 08:46*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**18000**	**B**	11.9	5.2	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Antimony	**0.98**	**J**	17.8	0.47	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid
Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.5		2.4	0.47	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Barium	80.2		0.59	0.13	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Beryllium	0.72		0.24	0.033	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Cadmium	0.14	J	0.24	0.036	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Calcium	72100	B	59.3	3.9	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Chromium	21.7		0.59	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Cobalt	9.9		0.59	0.059	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Copper	17.3		1.2	0.25	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Iron	20200	B	11.9	4.1	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Lead	19.1		1.2	0.28	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Magnesium	28500	B	23.7	1.1	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Manganese	473	B	0.24	0.038	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Nickel	23.6		5.9	0.27	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Potassium	6230		35.6	23.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Selenium	ND		4.7	0.47	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Silver	ND		0.71	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Sodium	420		166	15.4	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Thallium	ND		7.1	0.36	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Vanadium	33.8		0.59	0.13	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1
Zinc	68.0	^	2.4	0.76	mg/Kg	☼	09/05/18 10:13	09/06/18 09:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.024	0.0096	mg/Kg	☼	09/13/18 14:55	09/14/18 11:09	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.9		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	83.1		0.1	0.1	%			08/31/18 07:05	1

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9	0.35	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,1,2,2-Tetrachloroethane	ND		4.9	0.79	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,1,2-Trichloroethane	ND		4.9	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,1-Dichloroethane	ND		4.9	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,1-Dichloroethene	ND		4.9	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2,4-Trichlorobenzene	ND		4.9	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2,4-Trimethylbenzene	ND		4.9	0.93	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2-Dibromo-3-Chloropropane	ND		4.9	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2-Dibromoethane	ND		4.9	0.62	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2-Dichlorobenzene	ND		4.9	0.38	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2-Dichloroethane	ND		4.9	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,2-Dichloropropane	ND		4.9	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,3,5-Trimethylbenzene	ND		4.9	0.31	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,3-Dichlorobenzene	ND		4.9	0.25	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
1,4-Dichlorobenzene	ND		4.9	0.68	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
2-Butanone (MEK)	ND		24	1.8	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
2-Hexanone	ND		24	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
4-Isopropyltoluene	ND		4.9	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
4-Methyl-2-pentanone (MIBK)	ND		24	1.6	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Acetone	**8.1**	**J**	24	4.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Benzene	ND		4.9	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Bromodichloromethane	ND		4.9	0.65	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Bromoform	ND		4.9	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Bromomethane	ND		4.9	0.44	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Carbon disulfide	ND		4.9	2.4	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Carbon tetrachloride	ND		4.9	0.47	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Chlorobenzene	ND		4.9	0.64	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Chloroethane	ND		4.9	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Chloroform	ND		4.9	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Chloromethane	ND		4.9	0.29	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
cis-1,2-Dichloroethene	ND		4.9	0.62	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
cis-1,3-Dichloropropene	ND		4.9	0.70	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Cyclohexane	ND		4.9	0.68	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Dibromochloromethane	ND		4.9	0.62	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Dichlorodifluoromethane	ND		4.9	0.40	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Ethylbenzene	ND		4.9	0.33	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Isopropylbenzene	ND		4.9	0.73	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
m,p-Xylene	ND		9.7	0.82	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Methyl acetate	ND		24	2.9	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Methyl tert-butyl ether	ND		4.9	0.48	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Methylcyclohexane	ND		4.9	0.74	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Methylene Chloride	ND		4.9	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
n-Butylbenzene	ND		4.9	0.42	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
N-Propylbenzene	ND		4.9	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
o-Xylene	ND		4.9	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
sec-Butylbenzene	ND		4.9	0.42	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Styrene	ND		4.9	0.24	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
tert-Butylbenzene	ND		4.9	0.50	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.9	0.65	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Toluene	ND		4.9	0.37	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
trans-1,2-Dichloroethene	ND		4.9	0.50	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
trans-1,3-Dichloropropene	ND		4.9	2.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Trichloroethene	ND		4.9	1.1	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Trichlorofluoromethane	ND		4.9	0.46	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Vinyl chloride	ND		4.9	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1
Xylenes, Total	ND		9.7	0.82	ug/Kg	☼	08/31/18 07:51	09/04/18 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*08/31/18 07:51*	*09/04/18 12:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*08/31/18 07:51*	*09/04/18 12:38*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*	*08/31/18 07:51*	*09/04/18 12:38*	*1*
Toluene-d8 (Surr)	*104*		*71 - 125*	*08/31/18 07:51*	*09/04/18 12:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	52	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2,4-Dinitrophenol	ND		1900	880	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
2-Nitrophenol	ND		190	54	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
3-Nitroaniline	ND		370	53	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Nitroaniline	ND		370	100	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Acenaphthylene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Acetophenone	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Anthracene	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Atrazine	ND		190	66	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Biphenyl	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Bis(2-ethylhexyl) phthalate	ND		190	65	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Caprolactam	ND		190	57	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Carbazole	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Chrysene	ND		190	43	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Fluoranthene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Fluorene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Hexachloroethane	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Indeno[1,2,3-cd]pyrene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Isophorone	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Naphthalene	ND		190	25	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
N-Nitrosodiphenylamine	ND		190	160	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Phenol	ND		190	29	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1
Pyrene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/05/18 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*87*		*54 - 120*	*08/31/18 14:16*	*09/05/18 23:41*	*1*
2-Fluorobiphenyl	*82*		*60 - 120*	*08/31/18 14:16*	*09/05/18 23:41*	*1*
2-Fluorophenol	*73*		*52 - 120*	*08/31/18 14:16*	*09/05/18 23:41*	*1*
Nitrobenzene-d5	*81*		*53 - 120*	*08/31/18 14:16*	*09/05/18 23:41*	*1*
Phenol-d5	*82*		*54 - 120*	*08/31/18 14:16*	*09/05/18 23:41*	*1*
p-Terphenyl-d14	*90*		*65 - 121*	*08/31/18 14:16*	*09/05/18 23:41*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.9	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
4,4'-DDE	ND		1.9	0.39	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
4,4'-DDT	ND		1.9	0.44	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Aldrin	ND		1.9	0.46	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
alpha-BHC	ND		1.9	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
cis-Chlordane	ND		1.9	0.93	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
beta-BHC	ND		1.9	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid
Percent Solids: 87.3

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		1.9	0.35	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Dieldrin	ND		1.9	0.45	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Endosulfan I	ND		1.9	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Endosulfan II	ND		1.9	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Endosulfan sulfate	ND		1.9	0.35	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Endrin	ND		1.9	0.37	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Endrin aldehyde	ND		1.9	0.48	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Endrin ketone	ND		1.9	0.46	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
gamma-BHC (Lindane)	ND		1.9	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
trans-Chlordane	ND		1.9	0.60	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Heptachlor	ND		1.9	0.41	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Heptachlor epoxide	ND		1.9	0.48	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Methoxychlor	ND		1.9	0.38	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1
Toxaphene	ND		19	11	ug/Kg	☼	09/01/18 08:10	09/04/18 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*45 - 120*	*09/01/18 08:10*	*09/04/18 13:03*	*1*
DCB Decachlorobiphenyl	*77*		*45 - 120*	*09/01/18 08:10*	*09/04/18 13:03*	*1*
Tetrachloro-m-xylene	*68*		*30 - 124*	*09/01/18 08:10*	*09/04/18 13:03*	*1*
Tetrachloro-m-xylene	*50*		*30 - 124*	*09/01/18 08:10*	*09/04/18 13:03*	*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	☼	09/01/18 08:27	09/03/18 05:49	1
PCB-1221	ND		0.22	0.043	mg/Kg	☼	09/01/18 08:27	09/03/18 05:49	1
PCB-1232	ND		0.22	0.043	mg/Kg	☼	09/01/18 08:27	09/03/18 05:49	1
PCB-1242	ND		0.22	0.043	mg/Kg	☼	09/01/18 08:27	09/03/18 05:49	1
PCB-1248	ND		0.22	0.043	mg/Kg	☼	09/01/18 08:27	09/03/18 05:49	1
PCB-1254	ND		0.22	0.10	mg/Kg	☼	09/01/18 08:27	09/03/18 05:49	1
PCB-1260	ND		0.22	0.10	mg/Kg	☼	09/01/18 08:27	09/03/18 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*111*		*60 - 154*	*09/01/18 08:27*	*09/03/18 05:49*	*1*
Tetrachloro-m-xylene	*95*		*60 - 154*	*09/01/18 08:27*	*09/03/18 05:49*	*1*
DCB Decachlorobiphenyl	*85*		*65 - 174*	*09/01/18 08:27*	*09/03/18 05:49*	*1*
DCB Decachlorobiphenyl	*66*		*65 - 174*	*09/01/18 08:27*	*09/03/18 05:49*	*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	☼	09/04/18 07:12	09/10/18 09:16	1
Silvex (2,4,5-TP)	ND		19	6.7	ug/Kg	☼	09/04/18 07:12	09/10/18 09:16	1
2,4-D	ND		19	12	ug/Kg	☼	09/04/18 07:12	09/10/18 09:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*63*		*28 - 129*	*09/04/18 07:12*	*09/10/18 09:16*	*1*
2,4-Dichlorophenylacetic acid	*54*		*28 - 129*	*09/04/18 07:12*	*09/10/18 09:16*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**12100**	**B**	11.2	4.9	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Antimony	**0.84**	**J**	16.8	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		2.2	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Barium	72.6		0.56	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Beryllium	0.48		0.22	0.031	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Cadmium	0.12	J	0.22	0.034	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Calcium	70800	B	55.9	3.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Chromium	15.9		0.56	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Cobalt	7.4		0.56	0.056	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Copper	14.0		1.1	0.23	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Iron	15000	B	11.2	3.9	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Lead	13.5		1.1	0.27	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Magnesium	30400	B	22.3	1.0	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Manganese	429	B	0.22	0.036	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Nickel	16.0		5.6	0.26	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Potassium	4240		33.5	22.3	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Selenium	ND		4.5	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Silver	ND		0.67	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Sodium	289		156	14.5	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Thallium	ND		6.7	0.34	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Vanadium	26.5		0.56	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1
Zinc	50.7	^	2.2	0.71	mg/Kg	☼	09/05/18 10:13	09/06/18 09:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	J	0.022	0.0090	mg/Kg	☼	09/13/18 14:55	09/14/18 11:14	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.7		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	87.3		0.1	0.1	%			08/31/18 07:05	1

Client Sample ID: SB-15 (1-3')
Date Collected: 08/30/18 14:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-7
Matrix: Solid
Percent Solids: 95.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		180	48	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2,4,6-Trichlorophenol	ND		180	36	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2,4-Dichlorophenol	ND		180	19	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2,4-Dimethylphenol	ND		180	43	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2,4-Dinitrophenol	ND		1700	820	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2,4-Dinitrotoluene	ND		180	37	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2,6-Dinitrotoluene	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2-Chloronaphthalene	ND		180	29	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2-Chlorophenol	ND		180	32	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2-Methylnaphthalene	ND		180	36	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2-Methylphenol	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2-Nitroaniline	ND		340	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
2-Nitrophenol	ND		180	50	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
3,3'-Dichlorobenzidine	ND		340	210	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
3-Nitroaniline	ND		340	49	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4,6-Dinitro-2-methylphenol	ND		340	180	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Bromophenyl phenyl ether	ND		180	25	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Chloro-3-methylphenol	ND		180	44	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Chloroaniline	ND		180	44	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Chlorophenyl phenyl ether	ND		180	22	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Methylphenol	ND		340	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Nitroaniline	ND		340	93	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
4-Nitrophenol	ND		340	120	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Acenaphthene	ND		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Acenaphthylene	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Acetophenone	ND		180	24	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Anthracene	**55**	**J**	180	44	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Atrazine	ND		180	62	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Benzaldehyde	ND		180	140	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Benzo[a]anthracene	**160**	**J**	180	18	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Benzo[a]pyrene	**130**	**J**	180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Benzo[b]fluoranthene	**180**		180	28	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Benzo[g,h,i]perylene	**110**	**J**	180	19	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Benzo[k]fluoranthene	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Biphenyl	ND		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
bis (2-chloroisopropyl) ether	ND		180	36	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Bis(2-chloroethoxy)methane	ND		180	38	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Bis(2-chloroethyl)ether	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Bis(2-ethylhexyl) phthalate	ND		180	61	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Butyl benzyl phthalate	ND		180	29	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Caprolactam	ND		180	53	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Carbazole	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Chrysene	**140**	**J**	180	40	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Dibenz(a,h)anthracene	ND		180	31	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Dibenzofuran	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Diethyl phthalate	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Dimethyl phthalate	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Di-n-butyl phthalate	ND		180	30	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Di-n-octyl phthalate	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1

Client Sample ID: SB-15 (1-3')
Date Collected: 08/30/18 14:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-7
Matrix: Solid
Percent Solids: 95.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**250**		180	19	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Fluorene	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Hexachlorobenzene	ND		180	24	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Hexachlorobutadiene	ND		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Hexachlorocyclopentadiene	ND		180	24	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Hexachloroethane	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Indeno[1,2,3-cd]pyrene	**98**	**J**	180	22	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Isophorone	ND		180	38	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Naphthalene	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Nitrobenzene	ND		180	20	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
N-Nitrosodi-n-propylamine	ND		180	30	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
N-Nitrosodiphenylamine	ND		180	140	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Pentachlorophenol	ND		340	180	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Phenanthrene	**160**	**J**	180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Phenol	ND		180	27	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1
Pyrene	**210**		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*80*		*54 - 120*	*08/31/18 14:16*	*09/06/18 00:08*	*1*
2-Fluorobiphenyl	*75*		*60 - 120*	*08/31/18 14:16*	*09/06/18 00:08*	*1*
2-Fluorophenol	*70*		*52 - 120*	*08/31/18 14:16*	*09/06/18 00:08*	*1*
Nitrobenzene-d5	*67*		*53 - 120*	*08/31/18 14:16*	*09/06/18 00:08*	*1*
Phenol-d5	*67*		*54 - 120*	*08/31/18 14:16*	*09/06/18 00:08*	*1*
p-Terphenyl-d14	*90*		*65 - 121*	*08/31/18 14:16*	*09/06/18 00:08*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**4210**	**B**	10.3	4.5	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Antimony	**0.61**	**J**	15.5	0.41	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Arsenic	**3.5**		2.1	0.41	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Barium	**28.4**		0.52	0.11	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Beryllium	**0.20**	**J**	0.21	0.029	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Cadmium	**0.12**	**J**	0.21	0.031	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Calcium	**40600**	**B**	51.7	3.4	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Chromium	**5.2**		0.52	0.21	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Cobalt	**3.0**		0.52	0.052	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Copper	**12.8**		1.0	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Iron	**8020**	**B**	10.3	3.6	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Lead	**31.8**		1.0	0.25	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Magnesium	**9160**	**B**	20.7	0.96	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Manganese	**273**	**B**	0.21	0.033	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Nickel	**7.9**		5.2	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Potassium	**958**		31.0	20.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Selenium	ND		4.1	0.41	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Silver	ND		0.62	0.21	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Sodium	**150**		145	13.4	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Thallium	**0.39**	**J**	6.2	0.31	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Vanadium	**9.6**		0.52	0.11	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1
Zinc	**38.0**	**^**	2.1	0.66	mg/Kg	☼	09/05/18 10:13	09/06/18 09:12	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-15 (1-3')
Date Collected: 08/30/18 14:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-7
Matrix: Solid
Percent Solids: 95.7

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.072		0.021	0.0085	mg/Kg	☼	09/13/18 14:55	09/14/18 11:16	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	95.7		0.1	0.1	%			08/31/18 07:05	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-17 (4-6')
Date Collected: 08/30/18 15:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-8
Matrix: Solid
Percent Solids: 92.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		180	48	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2,4,6-Trichlorophenol	ND		180	36	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2,4-Dichlorophenol	ND		180	19	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2,4-Dimethylphenol	ND		180	43	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2,4-Dinitrophenol	ND		1700	820	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2,4-Dinitrotoluene	ND		180	37	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2,6-Dinitrotoluene	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2-Chloronaphthalene	ND		180	29	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2-Chlorophenol	ND		180	32	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2-Methylnaphthalene	ND		180	36	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2-Methylphenol	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2-Nitroaniline	ND		350	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
2-Nitrophenol	ND		180	50	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
3,3'-Dichlorobenzidine	ND		350	210	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
3-Nitroaniline	ND		350	49	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4,6-Dinitro-2-methylphenol	ND		350	180	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Bromophenyl phenyl ether	ND		180	25	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Chloro-3-methylphenol	ND		180	44	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Chloroaniline	ND		180	44	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Chlorophenyl phenyl ether	ND		180	22	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Methylphenol	ND		350	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Nitroaniline	ND		350	93	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
4-Nitrophenol	ND		350	120	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Acenaphthene	**53**	**J**	180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Acenaphthylene	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Acetophenone	ND		180	24	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Anthracene	**120**	**J**	180	44	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Atrazine	ND		180	62	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Benzaldehyde	ND		180	140	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Benzo[a]anthracene	**380**		180	18	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Benzo[a]pyrene	**330**		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Benzo[b]fluoranthene	**380**		180	28	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Benzo[g,h,i]perylene	**280**		180	19	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Benzo[k]fluoranthene	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Biphenyl	ND		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
bis (2-chloroisopropyl) ether	ND		180	36	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Bis(2-chloroethoxy)methane	ND		180	38	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Bis(2-chloroethyl)ether	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Bis(2-ethylhexyl) phthalate	**750**		180	61	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Butyl benzyl phthalate	ND		180	29	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Caprolactam	ND		180	53	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Carbazole	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Chrysene	**360**		180	40	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Dibenz(a,h)anthracene	ND		180	31	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Dibenzofuran	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Diethyl phthalate	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Dimethyl phthalate	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Di-n-butyl phthalate	ND		180	30	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Di-n-octyl phthalate	ND		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-17 (4-6')
Date Collected: 08/30/18 15:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-8
Matrix: Solid
Percent Solids: 92.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	680		180	19	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Fluorene	43	J	180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Hexachlorobenzene	ND		180	24	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Hexachlorobutadiene	ND		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Hexachlorocyclopentadiene	ND		180	24	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Hexachloroethane	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Indeno[1,2,3-cd]pyrene	240		180	22	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Isophorone	ND		180	38	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Naphthalene	ND		180	23	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Nitrobenzene	ND		180	20	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
N-Nitrosodi-n-propylamine	ND		180	30	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
N-Nitrosodiphenylamine	ND		180	140	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Pentachlorophenol	ND		350	180	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Phenanthrene	540		180	26	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Phenol	ND		180	27	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1
Pyrene	710		180	21	ug/Kg	☼	08/31/18 14:16	09/06/18 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*86*		*54 - 120*	*08/31/18 14:16*	*09/06/18 00:36*	*1*
2-Fluorobiphenyl	*84*		*60 - 120*	*08/31/18 14:16*	*09/06/18 00:36*	*1*
2-Fluorophenol	*67*		*52 - 120*	*08/31/18 14:16*	*09/06/18 00:36*	*1*
Nitrobenzene-d5	*76*		*53 - 120*	*08/31/18 14:16*	*09/06/18 00:36*	*1*
Phenol-d5	*68*		*54 - 120*	*08/31/18 14:16*	*09/06/18 00:36*	*1*
p-Terphenyl-d14	*94*		*65 - 121*	*08/31/18 14:16*	*09/06/18 00:36*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	4020	B	10.6	4.6	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Antimony	0.95	J	15.8	0.42	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Arsenic	4.3		2.1	0.42	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Barium	39.5		0.53	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Beryllium	0.20	J	0.21	0.030	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Cadmium	0.14	J	0.21	0.032	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Calcium	49900	B	52.8	3.5	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Chromium	5.5		0.53	0.21	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Cobalt	3.9		0.53	0.053	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Copper	24.9		1.1	0.22	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Iron	11200	B	10.6	3.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Lead	31.0		1.1	0.25	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Magnesium	17600	B	21.1	0.98	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Manganese	355	B	0.21	0.034	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Nickel	9.0		5.3	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Potassium	998		31.7	21.1	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Selenium	ND		4.2	0.42	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Silver	ND		0.63	0.21	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Sodium	210		148	13.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Thallium	ND		6.3	0.32	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Vanadium	9.7		0.53	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1
Zinc	34.9	^	2.1	0.68	mg/Kg	☼	09/05/18 10:13	09/06/18 09:15	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-17 (4-6')
Date Collected: 08/30/18 15:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-8
Matrix: Solid
Percent Solids: 92.8

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.094		0.021	0.0087	mg/Kg	☼	09/13/18 14:55	09/14/18 11:18	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.2		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	92.8		0.1	0.1	%			08/31/18 07:05	1

Client Sample ID: MW-6 (2-4)

Date Collected: 08/30/18 17:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-9

Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	0.32	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,1,2,2-Tetrachloroethane	ND		4.4	0.71	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.4	1.0	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,1,2-Trichloroethane	ND		4.4	0.57	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,1-Dichloroethane	ND		4.4	0.53	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,1-Dichloroethene	ND		4.4	0.54	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2,4-Trichlorobenzene	ND		4.4	0.27	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2,4-Trimethylbenzene	ND		4.4	0.84	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2-Dibromo-3-Chloropropane	ND		4.4	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2-Dibromoethane	ND		4.4	0.56	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2-Dichlorobenzene	ND		4.4	0.34	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2-Dichloroethane	ND		4.4	0.22	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,2-Dichloropropane	ND		4.4	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,3,5-Trimethylbenzene	ND		4.4	0.28	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,3-Dichlorobenzene	ND		4.4	0.23	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
1,4-Dichlorobenzene	ND		4.4	0.61	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
2-Butanone (MEK)	ND		22	1.6	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
2-Hexanone	ND		22	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
4-Isopropyltoluene	ND		4.4	0.35	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
4-Methyl-2-pentanone (MIBK)	ND		22	1.4	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Acetone	**9.1**	**J**	22	3.7	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Benzene	ND		4.4	0.21	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Bromodichloromethane	ND		4.4	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Bromoform	ND		4.4	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Bromomethane	ND		4.4	0.39	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Carbon disulfide	ND		4.4	2.2	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Carbon tetrachloride	ND		4.4	0.42	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Chlorobenzene	ND		4.4	0.58	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Chloroethane	ND		4.4	0.99	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Chloroform	ND		4.4	0.27	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Chloromethane	ND		4.4	0.26	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
cis-1,2-Dichloroethene	ND		4.4	0.56	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
cis-1,3-Dichloropropene	ND		4.4	0.63	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Cyclohexane	ND		4.4	0.61	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Dibromochloromethane	ND		4.4	0.56	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Dichlorodifluoromethane	ND		4.4	0.36	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Ethylbenzene	ND		4.4	0.30	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Isopropylbenzene	ND		4.4	0.66	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
m,p-Xylene	ND		8.8	0.74	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Methyl acetate	ND		22	2.6	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Methyl tert-butyl ether	ND		4.4	0.43	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Methylcyclohexane	ND		4.4	0.67	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Methylene Chloride	ND		4.4	2.0	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
n-Butylbenzene	ND		4.4	0.38	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
N-Propylbenzene	ND		4.4	0.35	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
o-Xylene	ND		4.4	0.57	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
sec-Butylbenzene	ND		4.4	0.38	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Styrene	ND		4.4	0.22	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
tert-Butylbenzene	ND		4.4	0.46	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-6 (2-4)
Date Collected: 08/30/18 17:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-9
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.4	0.59	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Toluene	ND		4.4	0.33	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
trans-1,2-Dichloroethene	ND		4.4	0.45	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
trans-1,3-Dichloropropene	ND		4.4	1.9	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Trichloroethene	ND		4.4	0.96	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Trichlorofluoromethane	ND		4.4	0.41	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Vinyl chloride	ND		4.4	0.53	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1
Xylenes, Total	ND		8.8	0.74	ug/Kg	☼	08/31/18 07:51	09/04/18 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 126*	*08/31/18 07:51*	*09/04/18 13:04*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*08/31/18 07:51*	*09/04/18 13:04*	*1*
Dibromofluoromethane (Surr)	*100*		*60 - 140*	*08/31/18 07:51*	*09/04/18 13:04*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*08/31/18 07:51*	*09/04/18 13:04*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2,4-Dimethylphenol	ND		190	45	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2,4-Dinitrophenol	ND		1800	870	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2-Chlorophenol	ND		190	34	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2-Methylphenol	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
3,3'-Dichlorobenzidine	ND		370	220	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
3-Nitroaniline	ND		370	52	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Methylphenol	ND		370	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Nitroaniline	ND		370	99	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Acenaphthene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Acenaphthylene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Acetophenone	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Anthracene	ND		190	47	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Atrazine	ND		190	65	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Benzaldehyde	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-6 (2-4)
Date Collected: 08/30/18 17:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-9
Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Biphenyl	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Bis(2-ethylhexyl) phthalate	**200**		190	64	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Caprolactam	ND		190	57	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Carbazole	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Chrysene	ND		190	42	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Dibenzofuran	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Fluoranthene	ND		190	20	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Fluorene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Hexachloroethane	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Indeno[1,2,3-cd]pyrene	ND		190	23	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Isophorone	ND		190	40	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Naphthalene	ND		190	24	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Nitrobenzene	ND		190	21	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Phenanthrene	ND		190	28	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Phenol	ND		190	29	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1
Pyrene	ND		190	22	ug/Kg	☼	08/31/18 14:16	09/06/18 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*87*		*54 - 120*	*08/31/18 14:16*	*09/06/18 01:03*	*1*
2-Fluorobiphenyl	*83*		*60 - 120*	*08/31/18 14:16*	*09/06/18 01:03*	*1*
2-Fluorophenol	*72*		*52 - 120*	*08/31/18 14:16*	*09/06/18 01:03*	*1*
Nitrobenzene-d5	*73*		*53 - 120*	*08/31/18 14:16*	*09/06/18 01:03*	*1*
Phenol-d5	*68*		*54 - 120*	*08/31/18 14:16*	*09/06/18 01:03*	*1*
p-Terphenyl-d14	*92*		*65 - 121*	*08/31/18 14:16*	*09/06/18 01:03*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.8	0.36	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
4,4'-DDE	ND		1.8	0.39	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
4,4'-DDT	**0.57**	**J**	1.8	0.43	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Aldrin	ND		1.8	0.45	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
alpha-BHC	ND		1.8	0.33	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
cis-Chlordane	ND		1.8	0.92	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
beta-BHC	ND		1.8	0.33	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1

Client Sample ID: MW-6 (2-4)
Date Collected: 08/30/18 17:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-9
Matrix: Solid
Percent Solids: 88.4

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		1.8	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Dieldrin	ND		1.8	0.44	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Endosulfan I	ND		1.8	0.35	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Endosulfan II	ND		1.8	0.33	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Endosulfan sulfate	ND		1.8	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Endrin	ND		1.8	0.37	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Endrin aldehyde	ND		1.8	0.47	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Endrin ketone	ND		1.8	0.45	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
gamma-BHC (Lindane)	ND		1.8	0.34	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
trans-Chlordane	ND		1.8	0.59	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Heptachlor	ND		1.8	0.40	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Heptachlor epoxide	ND		1.8	0.48	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Methoxychlor	ND		1.8	0.38	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1
Toxaphene	ND		18	11	ug/Kg	☼	09/01/18 08:10	09/04/18 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*45 - 120*	*09/01/18 08:10*	*09/04/18 13:23*	*1*
DCB Decachlorobiphenyl	*95*		*45 - 120*	*09/01/18 08:10*	*09/04/18 13:23*	*1*
Tetrachloro-m-xylene	*86*		*30 - 124*	*09/01/18 08:10*	*09/04/18 13:23*	*1*
Tetrachloro-m-xylene	*71*		*30 - 124*	*09/01/18 08:10*	*09/04/18 13:23*	*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	☼	09/01/18 08:27	09/03/18 06:05	1
PCB-1221	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 06:05	1
PCB-1232	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 06:05	1
PCB-1242	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 06:05	1
PCB-1248	ND		0.26	0.051	mg/Kg	☼	09/01/18 08:27	09/03/18 06:05	1
PCB-1254	ND		0.26	0.12	mg/Kg	☼	09/01/18 08:27	09/03/18 06:05	1
PCB-1260	ND		0.26	0.12	mg/Kg	☼	09/01/18 08:27	09/03/18 06:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*103*		*60 - 154*	*09/01/18 08:27*	*09/03/18 06:05*	*1*
Tetrachloro-m-xylene	*85*		*60 - 154*	*09/01/18 08:27*	*09/03/18 06:05*	*1*
DCB Decachlorobiphenyl	*77*		*65 - 174*	*09/01/18 08:27*	*09/03/18 06:05*	*1*
DCB Decachlorobiphenyl	*61*	*X*	*65 - 174*	*09/01/18 08:27*	*09/03/18 06:05*	*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	☼	09/04/18 07:12	09/10/18 09:46	1
Silvex (2,4,5-TP)	ND		19	6.7	ug/Kg	☼	09/04/18 07:12	09/10/18 09:46	1
2,4-D	ND		19	12	ug/Kg	☼	09/04/18 07:12	09/10/18 09:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*51*		*28 - 129*	*09/04/18 07:12*	*09/10/18 09:46*	*1*
2,4-Dichlorophenylacetic acid	*52*		*28 - 129*	*09/04/18 07:12*	*09/10/18 09:46*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**13300**	**B**	11.3	5.0	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Antimony	**0.74**	**J**	17.0	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1

Client Sample ID: MW-6 (2-4)

Date Collected: 08/30/18 17:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-9

Matrix: Solid
Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		2.3	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Barium	76.7		0.57	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Beryllium	0.52		0.23	0.032	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Cadmium	0.15	J	0.23	0.034	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Calcium	11100	B	56.6	3.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Chromium	15.8		0.57	0.23	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Cobalt	7.4		0.57	0.057	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Copper	14.8		1.1	0.24	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Iron	14900	B	11.3	4.0	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Lead	18.8		1.1	0.27	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Magnesium	7250	B	22.6	1.0	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Manganese	430	B	0.23	0.036	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Nickel	13.8		5.7	0.26	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Potassium	2520		33.9	22.6	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Selenium	ND		4.5	0.45	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Silver	ND		0.68	0.23	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Sodium	356		158	14.7	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Thallium	ND		6.8	0.34	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Vanadium	25.2		0.57	0.12	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1
Zinc	118	^	2.3	0.72	mg/Kg	☼	09/05/18 10:13	09/06/18 09:19	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.083		0.022	0.0089	mg/Kg	☼	09/13/18 14:55	09/14/18 11:20	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.6		0.1	0.1	%			08/31/18 07:05	1
Percent Solids	88.4		0.1	0.1	%			08/31/18 07:05	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(60-140)	(71-125)
480-141069-1	MW-5 (6"-2')	105	100	102	102
480-141069-3	SB-16 (10'-12')	102	95	102	106
480-141069-5	BD-2	106	100	102	102
480-141069-6	MW-4 (16-18')	102	98	101	104
480-141069-9	MW-6 (2-4)	105	99	100	102
LCS 480-432362/1-A	Lab Control Sample	98	102	100	104
LCSD 480-432362/2-A	Lab Control Sample Dup	98	102	99	103
MB 480-432362/3-A	Method Blank	102	100	100	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(53-120)	(54-120)	(65-121)
480-141069-1	MW-5 (6"-2')	84	76	66	71	65	100
480-141069-2	SB-14 (8'-10')	76	77	68	72	75	91
480-141069-3	SB-16 (10'-12')	92	77	66	72	74	95
480-141069-4	SB-13 (8-10')	97	80	65	75	67	94
480-141069-4 MS	SB-13 (8-10')MS	96	79	66	79	71	107
480-141069-4 MSD	SB-13 (8-10')MSD	90	76	65	71	67	84
480-141069-5	BD-2	88	80	65	74	70	98
480-141069-6	MW-4 (16-18')	87	82	73	81	82	90
480-141069-7	SB-15 (1-3')	80	75	70	67	67	90
480-141069-8	SB-17 (4-6')	86	84	67	76	68	94
480-141069-9	MW-6 (2-4)	87	83	72	73	68	92
LCS 480-432460/2-A	Lab Control Sample	92	84	63	72	71	90
MB 480-432460/1-A	Method Blank	84	82	69	76	72	105

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHd14 = p-Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-141069-1	MW-5 (6"-2')	116	97	87	75

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-141069-1 MS	MW-5 (6"-2')	91	75	65	48
480-141069-1 MSD	MW-5 (6"-2')	90	76	66	49
480-141069-3	SB-16 (10'-12')	88	112	76	53
480-141069-5	BD-2	112	88	76	63
480-141069-6	MW-4 (16-18')	79	77	68	50
480-141069-9	MW-6 (2-4)	103	95	86	71
LCS 480-432528/2-A	Lab Control Sample	83	81	71	53
MB 480-432528/1-A	Method Blank	103	96	92	65

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-141069-1	MW-5 (6"-2')	86	87	73	54 X
480-141069-3	SB-16 (10'-12')	115	97	112	102
480-141069-3 MS	SB-16 (10'-12')	128	104	122	111
480-141069-3 MSD	SB-16 (10'-12')	141	120	130	120
480-141069-5	BD-2	105	86	76	58 X
480-141069-6	MW-4 (16-18')	111	95	85	66
480-141069-9	MW-6 (2-4)	103	85	77	61 X
LCS 480-432530/2-A	Lab Control Sample	133	102	129	118
MB 480-432530/1-A	Method Blank	103	89	99	90

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1	DCPAA2
Lab Sample ID	Client Sample ID	(28-129)	(28-129)
480-141069-1	MW-5 (6"-2')	61	61
480-141069-1 MS	MW-5 (6"-2')	55	53
480-141069-1 MSD	MW-5 (6"-2')	66	58
480-141069-3	SB-16 (10'-12')	55	56
480-141069-5	BD-2	52	53
480-141069-6	MW-4 (16-18')	63	54
480-141069-9	MW-6 (2-4)	51	52
LCS 480-432586/2-A	Lab Control Sample	73	65
MB 480-432586/1-A	Method Blank	54	52

Surrogate Legend

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 480-432362/3-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
2-Hexanone	ND		25	2.5	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Acetone	ND		25	4.2	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Benzene	ND		5.0	0.25	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Bromoform	ND		5.0	2.5	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Bromomethane	ND		5.0	0.45	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Chloroethane	ND		5.0	1.1	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Chloroform	ND		5.0	0.31	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Chloromethane	ND		5.0	0.30	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Cyclohexane	ND		5.0	0.70	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
m,p-Xylene	ND		10	0.84	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Methyl acetate	ND		25	3.0	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
o-Xylene	ND		5.0	0.65	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Styrene	ND		5.0	0.25	ug/Kg		08/31/18 07:51	09/04/18 10:34	1

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

Lab Sample ID: MB 480-432362/3-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		5.0	0.52	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Toluene	0.433	J	5.0	0.38	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Trichloroethene	ND		5.0	1.1	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		08/31/18 07:51	09/04/18 10:34	1
Xylenes, Total	ND		10	0.84	ug/Kg		08/31/18 07:51	09/04/18 10:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*08/31/18 07:51*	*09/04/18 10:34*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 126*	*08/31/18 07:51*	*09/04/18 10:34*	*1*
Dibromofluoromethane (Surr)	*100*		*60 - 140*	*08/31/18 07:51*	*09/04/18 10:34*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*08/31/18 07:51*	*09/04/18 10:34*	*1*

Lab Sample ID: LCS 480-432362/1-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	43.7		ug/Kg		87	77 - 121
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/Kg		98	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	43.6		ug/Kg		87	60 - 140
1,1,2-Trichloroethane	50.0	49.2		ug/Kg		98	78 - 122
1,1-Dichloroethane	50.0	46.1		ug/Kg		92	73 - 126
1,1-Dichloroethene	50.0	46.4		ug/Kg		93	59 - 125
1,2,4-Trichlorobenzene	50.0	44.8		ug/Kg		90	64 - 120
1,2,4-Trimethylbenzene	50.0	46.8		ug/Kg		94	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	44.2		ug/Kg		88	63 - 124
1,2-Dibromoethane	50.0	48.7		ug/Kg		97	78 - 120
1,2-Dichlorobenzene	50.0	46.8		ug/Kg		94	75 - 120
1,2-Dichloroethane	50.0	42.0		ug/Kg		84	77 - 122
1,2-Dichloropropane	50.0	48.2		ug/Kg		96	75 - 124
1,3,5-Trimethylbenzene	50.0	46.9		ug/Kg		94	74 - 120
1,3-Dichlorobenzene	50.0	47.1		ug/Kg		94	74 - 120
1,4-Dichlorobenzene	50.0	47.0		ug/Kg		94	73 - 120
2-Butanone (MEK)	250	243		ug/Kg		97	70 - 134
2-Hexanone	250	231		ug/Kg		93	59 - 130
4-Isopropyltoluene	50.0	47.3		ug/Kg		95	74 - 120
4-Methyl-2-pentanone (MIBK)	250	230		ug/Kg		92	65 - 133
Acetone	250	238		ug/Kg		95	61 - 137
Benzene	50.0	48.3		ug/Kg		97	79 - 127
Bromodichloromethane	50.0	46.2		ug/Kg		92	80 - 122
Bromoform	50.0	47.0		ug/Kg		94	68 - 126
Bromomethane	50.0	50.0		ug/Kg		100	37 - 149
Carbon disulfide	50.0	45.8		ug/Kg		92	64 - 131

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

Lab Sample ID: LCS 480-432362/1-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	50.0	43.4		ug/Kg		87	75 - 135
Chlorobenzene	50.0	48.3		ug/Kg		97	76 - 124
Chloroethane	50.0	59.7		ug/Kg		119	69 - 135
Chloroform	50.0	45.1		ug/Kg		90	80 - 120
Chloromethane	50.0	37.2		ug/Kg		74	63 - 127
cis-1,2-Dichloroethene	50.0	48.0		ug/Kg		96	81 - 120
cis-1,3-Dichloropropene	50.0	47.9		ug/Kg		96	80 - 120
Cyclohexane	50.0	46.6		ug/Kg		93	65 - 120
Dibromochloromethane	50.0	47.7		ug/Kg		95	76 - 125
Dichlorodifluoromethane	50.0	45.2		ug/Kg		90	57 - 142
Ethylbenzene	50.0	47.5		ug/Kg		95	80 - 120
Isopropylbenzene	50.0	47.1		ug/Kg		94	72 - 120
m,p-Xylene	50.0	48.2		ug/Kg		96	70 - 130
Methyl acetate	100	91.8		ug/Kg		92	55 - 136
Methyl tert-butyl ether	50.0	45.1		ug/Kg		90	63 - 125
Methylcyclohexane	50.0	47.4		ug/Kg		95	60 - 140
Methylene Chloride	50.0	43.2		ug/Kg		86	61 - 127
Naphthalene	50.0	45.3		ug/Kg		91	38 - 137
n-Butylbenzene	50.0	46.4		ug/Kg		93	70 - 120
N-Propylbenzene	50.0	47.5		ug/Kg		95	70 - 130
o-Xylene	50.0	48.0		ug/Kg		96	70 - 130
sec-Butylbenzene	50.0	47.0		ug/Kg		94	74 - 120
Styrene	50.0	48.9		ug/Kg		98	80 - 120
tert-Butylbenzene	50.0	47.3		ug/Kg		95	73 - 120
Tetrachloroethene	50.0	47.1		ug/Kg		94	74 - 122
Toluene	50.0	48.2		ug/Kg		96	74 - 128
trans-1,2-Dichloroethene	50.0	47.8		ug/Kg		96	78 - 126
trans-1,3-Dichloropropene	50.0	47.4		ug/Kg		95	73 - 123
Trichloroethene	50.0	46.2		ug/Kg		92	77 - 129
Trichlorofluoromethane	50.0	46.6		ug/Kg		93	65 - 146
Vinyl chloride	50.0	39.1		ug/Kg		78	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*
4-Bromofluorobenzene (Surr)	*102*		*72 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*104*		*71 - 125*

Lab Sample ID: LCSD 480-432362/2-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 432362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	42.2		ug/Kg		84	77 - 121	3	20
1,1,2,2-Tetrachloroethane	50.0	52.4		ug/Kg		105	80 - 120	6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	41.9		ug/Kg		84	60 - 140	4	20
1,1,2-Trichloroethane	50.0	50.8		ug/Kg		102	78 - 122	3	20

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

Lab Sample ID: LCSD 480-432362/2-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 432362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	50.0	45.2		ug/Kg		90	73 - 126	2	20
1,1-Dichloroethene	50.0	45.1		ug/Kg		90	59 - 125	3	20
1,2,4-Trichlorobenzene	50.0	45.2		ug/Kg		90	64 - 120	1	20
1,2,4-Trimethylbenzene	50.0	46.4		ug/Kg		93	74 - 120	1	20
1,2-Dibromo-3-Chloropropane	50.0	48.2		ug/Kg		96	63 - 124	9	20
1,2-Dibromoethane	50.0	51.3		ug/Kg		103	78 - 120	5	20
1,2-Dichlorobenzene	50.0	47.3		ug/Kg		95	75 - 120	1	20
1,2-Dichloroethane	50.0	43.3		ug/Kg		87	77 - 122	3	20
1,2-Dichloropropane	50.0	48.3		ug/Kg		97	75 - 124	0	20
1,3,5-Trimethylbenzene	50.0	46.4		ug/Kg		93	74 - 120	1	20
1,3-Dichlorobenzene	50.0	47.1		ug/Kg		94	74 - 120	0	20
1,4-Dichlorobenzene	50.0	47.3		ug/Kg		95	73 - 120	1	20
2-Butanone (MEK)	250	265		ug/Kg		106	70 - 134	9	20
2-Hexanone	250	255		ug/Kg		102	59 - 130	10	20
4-Isopropyltoluene	50.0	46.6		ug/Kg		93	74 - 120	2	20
4-Methyl-2-pentanone (MIBK)	250	249		ug/Kg		100	65 - 133	8	20
Acetone	250	258		ug/Kg		103	61 - 137	8	20
Benzene	50.0	47.8		ug/Kg		96	79 - 127	1	20
Bromodichloromethane	50.0	46.6		ug/Kg		93	80 - 122	1	20
Bromoform	50.0	49.0		ug/Kg		98	68 - 126	4	20
Bromomethane	50.0	46.6		ug/Kg		93	37 - 149	7	20
Carbon disulfide	50.0	44.6		ug/Kg		89	64 - 131	3	20
Carbon tetrachloride	50.0	41.9		ug/Kg		84	75 - 135	4	20
Chlorobenzene	50.0	47.9		ug/Kg		96	76 - 124	1	20
Chloroethane	50.0	56.5		ug/Kg		113	69 - 135	5	20
Chloroform	50.0	45.0		ug/Kg		90	80 - 120	0	20
Chloromethane	50.0	36.4		ug/Kg		73	63 - 127	2	20
cis-1,2-Dichloroethene	50.0	47.3		ug/Kg		95	81 - 120	1	20
cis-1,3-Dichloropropene	50.0	49.0		ug/Kg		98	80 - 120	2	20
Cyclohexane	50.0	44.5		ug/Kg		89	65 - 120	5	20
Dibromochloromethane	50.0	48.6		ug/Kg		97	76 - 125	2	20
Dichlorodifluoromethane	50.0	42.9		ug/Kg		86	57 - 142	5	20
Ethylbenzene	50.0	46.8		ug/Kg		94	80 - 120	1	20
Isopropylbenzene	50.0	46.4		ug/Kg		93	72 - 120	2	20
m,p-Xylene	50.0	47.4		ug/Kg		95	70 - 130	2	20
Methyl acetate	100	99.4		ug/Kg		99	55 - 136	8	20
Methyl tert-butyl ether	50.0	47.7		ug/Kg		95	63 - 125	6	20
Methylcyclohexane	50.0	45.4		ug/Kg		91	60 - 140	4	20
Methylene Chloride	50.0	43.5		ug/Kg		87	61 - 127	1	20
Naphthalene	50.0	47.9		ug/Kg		96	38 - 137	6	20
n-Butylbenzene	50.0	45.2		ug/Kg		90	70 - 120	3	20
N-Propylbenzene	50.0	46.6		ug/Kg		93	70 - 130	2	20
o-Xylene	50.0	47.5		ug/Kg		95	70 - 130	1	20
sec-Butylbenzene	50.0	46.3		ug/Kg		93	74 - 120	2	20
Styrene	50.0	48.9		ug/Kg		98	80 - 120	0	20
tert-Butylbenzene	50.0	46.5		ug/Kg		93	73 - 120	2	20
Tetrachloroethene	50.0	45.8		ug/Kg		92	74 - 122	3	20
Toluene	50.0	47.7		ug/Kg		95	74 - 128	1	20

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

Lab Sample ID: LCSD 480-432362/2-A
Matrix: Solid
Analysis Batch: 432572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 432362

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene			50.0	46.7		ug/Kg		93	78 - 126	2	20
trans-1,3-Dichloropropene			50.0	49.0		ug/Kg		98	73 - 123	3	20
Trichloroethene			50.0	45.1		ug/Kg		90	77 - 129	2	20
Trichlorofluoromethane			50.0	44.8		ug/Kg		90	65 - 146	4	20
Vinyl chloride			50.0	37.5		ug/Kg		75	61 - 133	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*
4-Bromofluorobenzene (Surr)	*102*		*72 - 126*
Dibromofluoromethane (Surr)	*99*		*60 - 140*
Toluene-d8 (Surr)	*103*		*71 - 125*

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

Lab Sample ID: MB 480-432460/1-A
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432460

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		170	46	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2,4-Dimethylphenol	ND		170	41	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2,4-Dinitrophenol	ND		1600	780	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2-Chloronaphthalene	ND		170	28	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2-Chlorophenol	ND		170	31	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2-Methylnaphthalene	ND		170	34	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2-Methylphenol	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2-Nitroaniline	ND		330	25	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
2-Nitrophenol	ND		170	48	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
3-Nitroaniline	ND		330	47	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Chloro-3-methylphenol	ND		170	42	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Chloroaniline	ND		170	42	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Methylphenol	ND		330	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Nitroaniline	ND		330	88	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
4-Nitrophenol	ND		330	120	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Acenaphthene	ND		170	25	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Acenaphthylene	ND		170	22	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Acetophenone	ND		170	23	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Anthracene	ND		170	42	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Atrazine	ND		170	58	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Benzaldehyde	ND		170	130	ug/Kg		08/31/18 14:16	09/05/18 19:28	1

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

Lab Sample ID: MB 480-432460/1-A
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432460

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		170	17	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Benzo[a]pyrene	ND		170	25	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Biphenyl	ND		170	25	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Bis(2-ethylhexyl) phthalate	ND		170	57	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Caprolactam	ND		170	50	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Carbazole	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Chrysene	ND		170	38	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Dibenzofuran	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Diethyl phthalate	ND		170	22	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Dimethyl phthalate	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Fluoranthene	ND		170	18	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Fluorene	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Hexachlorobenzene	ND		170	23	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Hexachlorobutadiene	ND		170	25	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Hexachloroethane	ND		170	22	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Isophorone	ND		170	36	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Naphthalene	ND		170	22	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Nitrobenzene	ND		170	19	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Pentachlorophenol	ND		330	170	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Phenanthrene	ND		170	25	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Phenol	ND		170	26	ug/Kg		08/31/18 14:16	09/05/18 19:28	1
Pyrene	ND		170	20	ug/Kg		08/31/18 14:16	09/05/18 19:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*84*		*54 - 120*	*08/31/18 14:16*	*09/05/18 19:28*	*1*
2-Fluorobiphenyl	*82*		*60 - 120*	*08/31/18 14:16*	*09/05/18 19:28*	*1*
2-Fluorophenol	*69*		*52 - 120*	*08/31/18 14:16*	*09/05/18 19:28*	*1*
Nitrobenzene-d5	*76*		*53 - 120*	*08/31/18 14:16*	*09/05/18 19:28*	*1*
Phenol-d5	*72*		*54 - 120*	*08/31/18 14:16*	*09/05/18 19:28*	*1*
p-Terphenyl-d14	*105*		*65 - 121*	*08/31/18 14:16*	*09/05/18 19:28*	*1*

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

Lab Sample ID: LCS 480-432460/2-A
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432460

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	1640	1590		ug/Kg		97	59 - 126
2,4,6-Trichlorophenol	1640	1600		ug/Kg		97	59 - 123
2,4-Dichlorophenol	1640	1340		ug/Kg		82	61 - 120
2,4-Dimethylphenol	1640	1440		ug/Kg		88	59 - 120
2,4-Dinitrophenol	3280	2340		ug/Kg		71	41 - 146
2,4-Dinitrotoluene	1640	1480		ug/Kg		90	63 - 120
2,6-Dinitrotoluene	1640	1550		ug/Kg		95	66 - 120
2-Chloronaphthalene	1640	1540		ug/Kg		94	57 - 120
2-Chlorophenol	1640	1230		ug/Kg		75	53 - 120
2-Methylnaphthalene	1640	1350		ug/Kg		82	59 - 120
2-Methylphenol	1640	1440		ug/Kg		88	54 - 120
2-Nitroaniline	1640	1500		ug/Kg		91	61 - 120
2-Nitrophenol	1640	1410		ug/Kg		86	56 - 120
3,3'-Dichlorobenzidine	3280	3000		ug/Kg		92	54 - 120
3-Nitroaniline	1640	1280		ug/Kg		78	48 - 120
4,6-Dinitro-2-methylphenol	3280	3110		ug/Kg		95	49 - 122
4-Bromophenyl phenyl ether	1640	1680		ug/Kg		102	58 - 120
4-Chloro-3-methylphenol	1640	1340		ug/Kg		82	61 - 120
4-Chloroaniline	1640	1330		ug/Kg		81	38 - 120
4-Chlorophenyl phenyl ether	1640	1540		ug/Kg		94	63 - 124
4-Methylphenol	1640	1400		ug/Kg		86	55 - 120
4-Nitroaniline	1640	1500		ug/Kg		91	56 - 120
4-Nitrophenol	3280	3140		ug/Kg		96	43 - 147
Acenaphthene	1640	1510		ug/Kg		92	62 - 120
Acenaphthylene	1640	1530		ug/Kg		93	58 - 121
Acetophenone	1640	1300		ug/Kg		79	54 - 120
Anthracene	1640	1600		ug/Kg		97	62 - 120
Atrazine	3280	3040		ug/Kg		93	60 - 127
Benzaldehyde	3280	2690		ug/Kg		82	10 - 150
Benzo[a]anthracene	1640	1600		ug/Kg		97	65 - 120
Benzo[a]pyrene	1640	1610		ug/Kg		98	64 - 120
Benzo[b]fluoranthene	1640	1550		ug/Kg		95	64 - 120
Benzo[g,h,i]perylene	1640	1880		ug/Kg		115	45 - 145
Benzo[k]fluoranthene	1640	1600		ug/Kg		98	65 - 120
Biphenyl	1640	1490		ug/Kg		91	59 - 120
bis (2-chloroisopropyl) ether	1640	1240		ug/Kg		76	44 - 120
Bis(2-chloroethoxy)methane	1640	1370		ug/Kg		84	55 - 120
Bis(2-chloroethyl)ether	1640	1200		ug/Kg		73	45 - 120
Bis(2-ethylhexyl) phthalate	1640	1450		ug/Kg		89	61 - 133
Butyl benzyl phthalate	1640	1570		ug/Kg		96	61 - 129
Caprolactam	3280	2720		ug/Kg		83	47 - 120
Carbazole	1640	1600		ug/Kg		98	65 - 120
Chrysene	1640	1610		ug/Kg		98	64 - 120
Dibenz(a,h)anthracene	1640	1760		ug/Kg		107	54 - 132
Dibenzofuran	1640	1580		ug/Kg		97	63 - 120
Diethyl phthalate	1640	1480		ug/Kg		90	66 - 120
Dimethyl phthalate	1640	1640		ug/Kg		100	65 - 124
Di-n-butyl phthalate	1640	1580		ug/Kg		96	58 - 130

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

Lab Sample ID: LCS 480-432460/2-A
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432460

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	1640	1460		ug/Kg		89	57 - 133
Fluoranthene	1640	1570		ug/Kg		96	62 - 120
Fluorene	1640	1490		ug/Kg		91	63 - 120
Hexachlorobenzene	1640	1660		ug/Kg		101	60 - 120
Hexachlorobutadiene	1640	1510		ug/Kg		92	45 - 120
Hexachlorocyclopentadiene	1640	1180		ug/Kg		72	47 - 120
Hexachloroethane	1640	1260		ug/Kg		77	41 - 120
Indeno[1,2,3-cd]pyrene	1640	1780		ug/Kg		109	56 - 134
Isophorone	1640	1450		ug/Kg		89	56 - 120
Naphthalene	1640	1350		ug/Kg		82	55 - 120
Nitrobenzene	1640	1320		ug/Kg		81	54 - 120
N-Nitrosodi-n-propylamine	1640	1230		ug/Kg		75	52 - 120
Pentachlorophenol	3280	3600		ug/Kg		110	51 - 120
Phenanthrene	1640	1650		ug/Kg		101	60 - 120
Phenol	1640	1270		ug/Kg		77	53 - 120
Pyrene	1640	1660		ug/Kg		101	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*92*		*54 - 120*
2-Fluorobiphenyl	*84*		*60 - 120*
2-Fluorophenol	*63*		*52 - 120*
Nitrobenzene-d5	*72*		*53 - 120*
Phenol-d5	*71*		*54 - 120*
p-Terphenyl-d14	*90*		*65 - 121*

Lab Sample ID: 480-141069-4 MS
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: SB-13 (8-10')MS
Prep Type: Total/NA
Prep Batch: 432460

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	ND		1860	1540		ug/Kg	☼	83	46 - 120
2,4,6-Trichlorophenol	ND		1860	1670		ug/Kg	☼	90	41 - 123
2,4-Dichlorophenol	ND		1860	1560		ug/Kg	☼	84	45 - 120
2,4-Dimethylphenol	ND		1860	1560		ug/Kg	☼	84	52 - 120
2,4-Dinitrophenol	ND		3720	2150		ug/Kg	☼	58	41 - 146
2,4-Dinitrotoluene	ND		1860	1480		ug/Kg	☼	80	63 - 125
2,6-Dinitrotoluene	ND		1860	1510		ug/Kg	☼	81	66 - 120
2-Chloronaphthalene	ND		1860	1650		ug/Kg	☼	89	57 - 120
2-Chlorophenol	ND		1860	1300		ug/Kg	☼	70	43 - 120
2-Methylnaphthalene	ND		1860	1550		ug/Kg	☼	83	55 - 120
2-Methylphenol	ND		1860	1390		ug/Kg	☼	75	48 - 120
2-Nitroaniline	ND		1860	1530		ug/Kg	☼	82	61 - 120
2-Nitrophenol	ND		1860	1450		ug/Kg	☼	78	37 - 120
3,3'-Dichlorobenzidine	ND		3720	3740		ug/Kg	☼	101	37 - 126
3-Nitroaniline	ND		1860	1340		ug/Kg	☼	72	48 - 120
4,6-Dinitro-2-methylphenol	ND		3720	3410		ug/Kg	☼	92	23 - 149
4-Bromophenyl phenyl ether	ND		1860	1740		ug/Kg	☼	94	58 - 120
4-Chloro-3-methylphenol	ND		1860	1590		ug/Kg	☼	85	49 - 125

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

Lab Sample ID: 480-141069-4 MS
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: SB-13 (8-10')MS
Prep Type: Total/NA
Prep Batch: 432460

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	ND		1860	1380		ug/Kg	☼	74	38 - 120
4-Chlorophenyl phenyl ether	ND		1860	1560		ug/Kg	☼	84	63 - 124
4-Methylphenol	ND		1860	1490		ug/Kg	☼	80	50 - 120
4-Nitroaniline	ND		1860	1430		ug/Kg	☼	77	47 - 120
4-Nitrophenol	ND		3720	3150		ug/Kg	☼	85	31 - 147
Acenaphthene	ND		1860	1540		ug/Kg	☼	83	60 - 120
Acenaphthylene	ND		1860	1590		ug/Kg	☼	86	58 - 121
Acetophenone	ND		1860	1380		ug/Kg	☼	74	47 - 120
Anthracene	ND		1860	1740		ug/Kg	☼	94	62 - 120
Atrazine	ND		3720	2910		ug/Kg	☼	78	60 - 150
Benzaldehyde	ND		3720	2920		ug/Kg	☼	79	10 - 150
Benzo[a]anthracene	ND		1860	1870		ug/Kg	☼	101	65 - 120
Benzo[a]pyrene	ND		1860	1810		ug/Kg	☼	97	64 - 120
Benzo[b]fluoranthene	ND		1860	1720		ug/Kg	☼	92	64 - 120
Benzo[g,h,i]perylene	ND		1860	2170		ug/Kg	☼	117	45 - 145
Benzo[k]fluoranthene	ND		1860	1710		ug/Kg	☼	92	65 - 120
Biphenyl	ND		1860	1570		ug/Kg	☼	85	58 - 120
bis (2-chloroisopropyl) ether	ND		1860	1380		ug/Kg	☼	74	31 - 120
Bis(2-chloroethoxy)methane	ND		1860	1440		ug/Kg	☼	77	52 - 120
Bis(2-chloroethyl)ether	ND		1860	1400		ug/Kg	☼	75	45 - 120
Bis(2-ethylhexyl) phthalate	ND		1860	1750		ug/Kg	☼	94	61 - 133
Butyl benzyl phthalate	ND		1860	1830		ug/Kg	☼	98	61 - 120
Caprolactam	ND		3720	3200		ug/Kg	☼	86	37 - 133
Carbazole	ND		1860	1740		ug/Kg	☼	93	59 - 120
Chrysene	ND		1860	1830		ug/Kg	☼	98	64 - 120
Dibenz(a,h)anthracene	ND		1860	2060		ug/Kg	☼	111	54 - 132
Dibenzofuran	ND		1860	1630		ug/Kg	☼	88	62 - 120
Diethyl phthalate	ND		1860	1470		ug/Kg	☼	79	66 - 120
Dimethyl phthalate	ND		1860	1630		ug/Kg	☼	88	65 - 124
Di-n-butyl phthalate	ND		1860	1690		ug/Kg	☼	91	58 - 130
Di-n-octyl phthalate	ND		1860	1690		ug/Kg	☼	91	57 - 133
Fluoranthene	ND		1860	1650		ug/Kg	☼	89	62 - 120
Fluorene	ND		1860	1570		ug/Kg	☼	84	63 - 120
Hexachlorobenzene	ND		1860	1920		ug/Kg	☼	103	60 - 120
Hexachlorobutadiene	ND		1860	1630		ug/Kg	☼	88	45 - 120
Hexachlorocyclopentadiene	ND		1860	1420		ug/Kg	☼	76	31 - 120
Hexachloroethane	ND		1860	1280		ug/Kg	☼	69	21 - 120
Indeno[1,2,3-cd]pyrene	ND		1860	2140		ug/Kg	☼	115	56 - 134
Isophorone	ND		1860	1630		ug/Kg	☼	88	56 - 120
Naphthalene	ND		1860	1530		ug/Kg	☼	82	46 - 120
Nitrobenzene	ND		1860	1510		ug/Kg	☼	81	49 - 120
N-Nitrosodi-n-propylamine	ND		1860	1390		ug/Kg	☼	75	46 - 120
Pentachlorophenol	ND		3720	3880		ug/Kg	☼	104	25 - 136
Phenanthrene	ND		1860	1790		ug/Kg	☼	96	60 - 122
Phenol	ND		1860	1340		ug/Kg	☼	72	50 - 120
Pyrene	ND		1860	2010		ug/Kg	☼	108	61 - 133

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

Lab Sample ID: 480-141069-4 MS
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: SB-13 (8-10')MS
Prep Type: Total/NA
Prep Batch: 432460

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol	*96*		*54 - 120*
2-Fluorobiphenyl	*79*		*60 - 120*
2-Fluorophenol	*66*		*52 - 120*
Nitrobenzene-d5	*79*		*53 - 120*
Phenol-d5	*71*		*54 - 120*
p-Terphenyl-d14	*107*		*65 - 121*

Lab Sample ID: 480-141069-4 MSD
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: SB-13 (8-10')MSD
Prep Type: Total/NA
Prep Batch: 432460

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	ND		1850	1580		ug/Kg	☼	85	46 - 120	2	18
2,4,6-Trichlorophenol	ND		1850	1450		ug/Kg	☼	79	41 - 123	14	19
2,4-Dichlorophenol	ND		1850	1500		ug/Kg	☼	81	45 - 120	4	19
2,4-Dimethylphenol	ND		1850	1490		ug/Kg	☼	81	52 - 120	5	42
2,4-Dinitrophenol	ND		3690	2330		ug/Kg	☼	63	41 - 146	8	22
2,4-Dinitrotoluene	ND		1850	1460		ug/Kg	☼	79	63 - 125	1	20
2,6-Dinitrotoluene	ND		1850	1540		ug/Kg	☼	84	66 - 120	2	15
2-Chloronaphthalene	ND		1850	1490		ug/Kg	☼	80	57 - 120	10	21
2-Chlorophenol	ND		1850	1340		ug/Kg	☼	72	43 - 120	3	25
2-Methylnaphthalene	ND		1850	1520		ug/Kg	☼	82	55 - 120	2	21
2-Methylphenol	ND		1850	1400		ug/Kg	☼	76	48 - 120	1	27
2-Nitroaniline	ND		1850	1430		ug/Kg	☼	78	61 - 120	7	15
2-Nitrophenol	ND		1850	1460		ug/Kg	☼	79	37 - 120	1	18
3,3'-Dichlorobenzidine	ND		3690	3330		ug/Kg	☼	90	37 - 126	12	25
3-Nitroaniline	ND		1850	1450		ug/Kg	☼	79	48 - 120	8	19
4,6-Dinitro-2-methylphenol	ND		3690	3380		ug/Kg	☼	91	23 - 149	1	15
4-Bromophenyl phenyl ether	ND		1850	1700		ug/Kg	☼	92	58 - 120	2	15
4-Chloro-3-methylphenol	ND		1850	1470		ug/Kg	☼	80	49 - 125	8	27
4-Chloroaniline	ND		1850	1450		ug/Kg	☼	78	38 - 120	5	22
4-Chlorophenyl phenyl ether	ND		1850	1580		ug/Kg	☼	85	63 - 124	1	16
4-Methylphenol	ND		1850	1350		ug/Kg	☼	73	50 - 120	10	24
4-Nitroaniline	ND		1850	1570		ug/Kg	☼	85	47 - 120	10	24
4-Nitrophenol	ND		3690	3120		ug/Kg	☼	84	31 - 147	1	25
Acenaphthene	ND		1850	1520		ug/Kg	☼	82	60 - 120	1	35
Acenaphthylene	ND		1850	1560		ug/Kg	☼	85	58 - 121	2	18
Acetophenone	ND		1850	1300		ug/Kg	☼	70	47 - 120	6	20
Anthracene	ND		1850	1780		ug/Kg	☼	96	62 - 120	2	15
Atrazine	ND		3690	3390		ug/Kg	☼	92	60 - 150	15	20
Benzaldehyde	ND		3690	2790		ug/Kg	☼	76	10 - 150	5	20
Benzo[a]anthracene	ND		1850	1730		ug/Kg	☼	93	65 - 120	8	15
Benzo[a]pyrene	ND		1850	1730		ug/Kg	☼	93	64 - 120	5	15
Benzo[b]fluoranthene	ND		1850	1680		ug/Kg	☼	91	64 - 120	2	15
Benzo[g,h,i]perylene	ND		1850	2000		ug/Kg	☼	108	45 - 145	8	15
Benzo[k]fluoranthene	ND		1850	1670		ug/Kg	☼	90	65 - 120	3	22
Biphenyl	ND		1850	1590		ug/Kg	☼	86	58 - 120	1	20
bis (2-chloroisopropyl) ether	ND		1850	1240		ug/Kg	☼	67	31 - 120	11	24

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

Lab Sample ID: 480-141069-4 MSD
Matrix: Solid
Analysis Batch: 432937

Client Sample ID: SB-13 (8-10')MSD
Prep Type: Total/NA
Prep Batch: 432460

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	ND		1850	1400		ug/Kg	☼	76	52 - 120	3	17
Bis(2-chloroethyl)ether	ND		1850	1330		ug/Kg	☼	72	45 - 120	5	21
Bis(2-ethylhexyl) phthalate	ND		1850	1590		ug/Kg	☼	86	61 - 133	10	15
Butyl benzyl phthalate	ND		1850	1560		ug/Kg	☼	84	61 - 120	16	16
Caprolactam	ND		3690	3220		ug/Kg	☼	87	37 - 133	1	20
Carbazole	ND		1850	1740		ug/Kg	☼	94	59 - 120	0	20
Chrysene	ND		1850	1750		ug/Kg	☼	95	64 - 120	4	15
Dibenz(a,h)anthracene	ND		1850	1940		ug/Kg	☼	105	54 - 132	6	15
Dibenzofuran	ND		1850	1600		ug/Kg	☼	87	62 - 120	2	15
Diethyl phthalate	ND		1850	1570		ug/Kg	☼	85	66 - 120	7	15
Dimethyl phthalate	ND		1850	1680		ug/Kg	☼	91	65 - 124	3	15
Di-n-butyl phthalate	ND		1850	1680		ug/Kg	☼	91	58 - 130	1	15
Di-n-octyl phthalate	ND		1850	1560		ug/Kg	☼	85	57 - 133	8	16
Fluoranthene	ND		1850	1720		ug/Kg	☼	93	62 - 120	4	15
Fluorene	ND		1850	1590		ug/Kg	☼	86	63 - 120	2	15
Hexachlorobenzene	ND		1850	1810		ug/Kg	☼	98	60 - 120	6	15
Hexachlorobutadiene	ND		1850	1590		ug/Kg	☼	86	45 - 120	3	44
Hexachlorocyclopentadiene	ND		1850	1230		ug/Kg	☼	67	31 - 120	14	49
Hexachloroethane	ND		1850	1260		ug/Kg	☼	68	21 - 120	2	46
Indeno[1,2,3-cd]pyrene	ND		1850	1960		ug/Kg	☼	106	56 - 134	9	15
Isophorone	ND		1850	1530		ug/Kg	☼	83	56 - 120	6	17
Naphthalene	ND		1850	1440		ug/Kg	☼	78	46 - 120	6	29
Nitrobenzene	ND		1850	1480		ug/Kg	☼	80	49 - 120	2	24
N-Nitrosodi-n-propylamine	ND		1850	1300		ug/Kg	☼	70	46 - 120	6	31
Pentachlorophenol	ND		3690	3800		ug/Kg	☼	103	25 - 136	2	35
Phenanthrene	ND		1850	1770		ug/Kg	☼	96	60 - 122	1	15
Phenol	ND		1850	1300		ug/Kg	☼	70	50 - 120	3	35
Pyrene	ND		1850	1740		ug/Kg	☼	94	61 - 133	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*90*		*54 - 120*
2-Fluorobiphenyl	*76*		*60 - 120*
2-Fluorophenol	*65*		*52 - 120*
Nitrobenzene-d5	*71*		*53 - 120*
Phenol-d5	*67*		*54 - 120*
p-Terphenyl-d14	*84*		*65 - 121*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-432528/1-A
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432528

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.32	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
4,4'-DDE	ND		1.7	0.35	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
4,4'-DDT	ND		1.7	0.39	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Aldrin	ND		1.7	0.41	ug/Kg		09/01/18 08:10	09/04/18 10:46	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-432528/1-A
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432528

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		1.7	0.30	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
cis-Chlordane	ND		1.7	0.83	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
beta-BHC	ND		1.7	0.30	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
delta-BHC	ND		1.7	0.31	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Dieldrin	ND		1.7	0.40	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Endosulfan I	ND		1.7	0.32	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Endosulfan II	ND		1.7	0.30	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Endosulfan sulfate	0.630	J	1.7	0.31	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Endrin	ND		1.7	0.33	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Endrin aldehyde	ND		1.7	0.43	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Endrin ketone	ND		1.7	0.41	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
gamma-BHC (Lindane)	ND		1.7	0.31	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
trans-Chlordane	ND		1.7	0.53	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Heptachlor	ND		1.7	0.36	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Heptachlor epoxide	ND		1.7	0.43	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Methoxychlor	ND		1.7	0.34	ug/Kg		09/01/18 08:10	09/04/18 10:46	1
Toxaphene	ND		17	9.7	ug/Kg		09/01/18 08:10	09/04/18 10:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*45 - 120*	*09/01/18 08:10*	*09/04/18 10:46*	*1*
DCB Decachlorobiphenyl	*96*		*45 - 120*	*09/01/18 08:10*	*09/04/18 10:46*	*1*
Tetrachloro-m-xylene	*92*		*30 - 124*	*09/01/18 08:10*	*09/04/18 10:46*	*1*
Tetrachloro-m-xylene	*65*		*30 - 124*	*09/01/18 08:10*	*09/04/18 10:46*	*1*

Lab Sample ID: LCS 480-432528/2-A
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	16.4	13.7		ug/Kg		84	56 - 120
4,4'-DDE	16.4	12.6		ug/Kg		76	44 - 120
4,4'-DDT	16.4	13.6		ug/Kg		83	38 - 120
Aldrin	16.4	10.2		ug/Kg		62	38 - 120
alpha-BHC	16.4	10.7		ug/Kg		65	39 - 120
cis-Chlordane	16.4	10.5		ug/Kg		64	47 - 120
beta-BHC	16.4	12.7		ug/Kg		77	40 - 120
delta-BHC	16.4	12.5		ug/Kg		76	45 - 120
Dieldrin	16.4	13.3		ug/Kg		81	58 - 120
Endosulfan I	16.4	13.0		ug/Kg		79	49 - 120
Endosulfan II	16.4	14.5		ug/Kg		88	55 - 120
Endosulfan sulfate	16.4	14.1		ug/Kg		86	49 - 124
Endrin	16.4	13.6		ug/Kg		83	58 - 120
Endrin aldehyde	16.4	12.4		ug/Kg		75	37 - 121
Endrin ketone	16.4	14.7		ug/Kg		89	46 - 123
gamma-BHC (Lindane)	16.4	11.5		ug/Kg		70	50 - 120
trans-Chlordane	16.4	11.8		ug/Kg		72	48 - 120
Heptachlor	16.4	12.1		ug/Kg		74	50 - 120
Heptachlor epoxide	16.4	13.0		ug/Kg		79	50 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-432528/2-A
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432528

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methoxychlor			16.4	14.5		ug/Kg		88	58 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*83*		*45 - 120*
DCB Decachlorobiphenyl	*81*		*45 - 120*
Tetrachloro-m-xylene	*71*		*30 - 124*
Tetrachloro-m-xylene	*53*		*30 - 124*

Lab Sample ID: 480-141069-1 MS
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: MW-5 (6"-2')
Prep Type: Total/NA
Prep Batch: 432528

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		19.5	14.6		ug/Kg	☼	75	37 - 126		
4,4'-DDE	ND		19.5	13.2		ug/Kg	☼	68	34 - 120		
4,4'-DDT	0.57	J	19.5	14.8		ug/Kg	☼	73	43 - 123		
Aldrin	ND		19.5	11.8		ug/Kg	☼	61	37 - 125		
alpha-BHC	ND		19.5	12.2		ug/Kg	☼	63	39 - 120		
cis-Chlordane	ND		19.5	11.3		ug/Kg	☼	58	35 - 120		
beta-BHC	ND		19.5	12.8		ug/Kg	☼	66	36 - 120		
delta-BHC	ND		19.5	13.9		ug/Kg	☼	72	34 - 120		
Dieldrin	ND		19.5	14.4		ug/Kg	☼	74	45 - 120		
Endosulfan I	ND		19.5	14.1		ug/Kg	☼	73	39 - 120		
Endosulfan II	ND		19.5	15.5		ug/Kg	☼	80	34 - 126		
Endosulfan sulfate	0.81	J B	19.5	15.6		ug/Kg	☼	76	27 - 130		
Endrin	ND		19.5	14.8		ug/Kg	☼	76	47 - 121		
Endrin aldehyde	ND		19.5	13.6		ug/Kg	☼	70	33 - 123		
Endrin ketone	ND		19.5	15.9		ug/Kg	☼	82	43 - 126		
gamma-BHC (Lindane)	ND		19.5	13.0		ug/Kg	☼	67	50 - 120		
trans-Chlordane	ND		19.5	13.2		ug/Kg	☼	68	31 - 120		
Heptachlor	ND		19.5	13.7		ug/Kg	☼	71	42 - 120		
Heptachlor epoxide	ND		19.5	14.4		ug/Kg	☼	74	40 - 120		
Methoxychlor	ND		19.5	15.2		ug/Kg	☼	78	44 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*91*		*45 - 120*
DCB Decachlorobiphenyl	*75*		*45 - 120*
Tetrachloro-m-xylene	*65*		*30 - 124*
Tetrachloro-m-xylene	*48*		*30 - 124*

Lab Sample ID: 480-141069-1 MSD
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: MW-5 (6"-2')
Prep Type: Total/NA
Prep Batch: 432528

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		19.2	14.4		ug/Kg	☼	75	37 - 126	1	21
4,4'-DDE	ND		19.2	13.3		ug/Kg	☼	69	34 - 120	1	18
4,4'-DDT	0.57	J	19.2	14.4		ug/Kg	☼	72	43 - 123	3	25

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 480-141069-1 MSD
Matrix: Solid
Analysis Batch: 432605

Client Sample ID: MW-5 (6"-2')
Prep Type: Total/NA
Prep Batch: 432528

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	ND		19.2	11.5		ug/Kg	☼	60	37 - 125	3	12
alpha-BHC	ND		19.2	11.7		ug/Kg	☼	61	39 - 120	5	15
cis-Chlordane	ND		19.2	11.8		ug/Kg	☼	62	35 - 120	4	23
beta-BHC	ND		19.2	12.8		ug/Kg	☼	67	36 - 120	0	19
delta-BHC	ND		19.2	14.0		ug/Kg	☼	73	34 - 120	1	14
Dieldrin	ND		19.2	14.2		ug/Kg	☼	74	45 - 120	1	12
Endosulfan I	ND		19.2	14.3		ug/Kg	☼	74	39 - 120	1	18
Endosulfan II	ND		19.2	15.2		ug/Kg	☼	79	34 - 126	2	26
Endosulfan sulfate	0.81	J B	19.2	15.7		ug/Kg	☼	78	27 - 130	1	35
Endrin	ND		19.2	14.4		ug/Kg	☼	75	47 - 121	3	20
Endrin aldehyde	ND		19.2	13.4		ug/Kg	☼	70	33 - 123	1	47
Endrin ketone	ND		19.2	15.8		ug/Kg	☼	82	43 - 126	1	37
gamma-BHC (Lindane)	ND		19.2	12.7		ug/Kg	☼	66	50 - 120	3	12
trans-Chlordane	ND		19.2	13.5		ug/Kg	☼	71	31 - 120	3	15
Heptachlor	ND		19.2	13.2		ug/Kg	☼	69	42 - 120	4	22
Heptachlor epoxide	ND		19.2	14.1		ug/Kg	☼	74	40 - 120	2	15
Methoxychlor	ND		19.2	15.0		ug/Kg	☼	78	44 - 150	2	24

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*90*		*45 - 120*
DCB Decachlorobiphenyl	*76*		*45 - 120*
Tetrachloro-m-xylene	*66*		*30 - 124*
Tetrachloro-m-xylene	*49*		*30 - 124*

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

Lab Sample ID: MB 480-432530/1-A
Matrix: Solid
Analysis Batch: 432560

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432530

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.20	0.039	mg/Kg		09/01/18 08:27	09/03/18 01:50	1
PCB-1221	ND		0.20	0.039	mg/Kg		09/01/18 08:27	09/03/18 01:50	1
PCB-1232	ND		0.20	0.039	mg/Kg		09/01/18 08:27	09/03/18 01:50	1
PCB-1242	ND		0.20	0.039	mg/Kg		09/01/18 08:27	09/03/18 01:50	1
PCB-1248	ND		0.20	0.039	mg/Kg		09/01/18 08:27	09/03/18 01:50	1
PCB-1254	ND		0.20	0.093	mg/Kg		09/01/18 08:27	09/03/18 01:50	1
PCB-1260	ND		0.20	0.093	mg/Kg		09/01/18 08:27	09/03/18 01:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*103*		*60 - 154*	*09/01/18 08:27*	*09/03/18 01:50*	*1*
Tetrachloro-m-xylene	*89*		*60 - 154*	*09/01/18 08:27*	*09/03/18 01:50*	*1*
DCB Decachlorobiphenyl	*99*		*65 - 174*	*09/01/18 08:27*	*09/03/18 01:50*	*1*
DCB Decachlorobiphenyl	*90*		*65 - 174*	*09/01/18 08:27*	*09/03/18 01:50*	*1*

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

Lab Sample ID: LCS 480-432530/2-A
Matrix: Solid
Analysis Batch: 432560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432530

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.46	3.58		mg/Kg		146	51 - 185
PCB-1260	2.46	3.73		mg/Kg		152	61 - 184

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*133*		*60 - 154*
Tetrachloro-m-xylene	*102*		*60 - 154*
DCB Decachlorobiphenyl	*129*		*65 - 174*
DCB Decachlorobiphenyl	*118*		*65 - 174*

Lab Sample ID: 480-141069-3 MS
Matrix: Solid
Analysis Batch: 432560

Client Sample ID: SB-16 (10'-12')
Prep Type: Total/NA
Prep Batch: 432530

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		2.67	3.24		mg/Kg	☼	121	50 - 177
PCB-1260	ND		2.67	3.50		mg/Kg	☼	131	33 - 200

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*128*		*60 - 154*
Tetrachloro-m-xylene	*104*		*60 - 154*
DCB Decachlorobiphenyl	*122*		*65 - 174*
DCB Decachlorobiphenyl	*111*		*65 - 174*

Lab Sample ID: 480-141069-3 MSD
Matrix: Solid
Analysis Batch: 432560

Client Sample ID: SB-16 (10'-12')
Prep Type: Total/NA
Prep Batch: 432530

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		2.38	3.20		mg/Kg	☼	134	50 - 177	1	50
PCB-1260	ND		2.38	3.41		mg/Kg	☼	143	33 - 200	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*141*		*60 - 154*
Tetrachloro-m-xylene	*120*		*60 - 154*
DCB Decachlorobiphenyl	*130*		*65 - 174*
DCB Decachlorobiphenyl	*120*		*65 - 174*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-432586/1-A
Matrix: Solid
Analysis Batch: 433270

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		16	5.2	ug/Kg		09/04/18 07:12	09/07/18 10:08	1
Silvex (2,4,5-TP)	ND		16	5.8	ug/Kg		09/04/18 07:12	09/07/18 10:08	1
2,4-D	ND		16	10	ug/Kg		09/04/18 07:12	09/07/18 10:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	54		28 - 129	09/04/18 07:12	09/07/18 10:08	1
2,4-Dichlorophenylacetic acid	52		28 - 129	09/04/18 07:12	09/07/18 10:08	1

Lab Sample ID: LCS 480-432586/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 433270 — **Prep Batch: 432586**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			66.1	47.1		ug/Kg		71	41 - 120		
Silvex (2,4,5-TP)			66.1	47.7		ug/Kg		72	39 - 125		
2,4-D			66.1	50.5		ug/Kg		76	40 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	73		28 - 129
2,4-Dichlorophenylacetic acid	65		28 - 129

Lab Sample ID: 480-141069-1 MS — **Client Sample ID: MW-5 (6"-2')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 433270 — **Prep Batch: 432586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T	ND		78.0	47.4		ug/Kg	☼	61	29 - 123		
Silvex (2,4,5-TP)	ND		78.0	47.0		ug/Kg	☼	60	22 - 140		
2,4-D	ND		78.0	51.8		ug/Kg	☼	66	32 - 115		

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	55		28 - 129
2,4-Dichlorophenylacetic acid	53		28 - 129

Lab Sample ID: 480-141069-1 MSD — **Client Sample ID: MW-5 (6"-2')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 433270 — **Prep Batch: 432586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		77.4	52.1		ug/Kg	☼	67	29 - 123	9	50
Silvex (2,4,5-TP)	ND		77.4	51.1		ug/Kg	☼	66	22 - 140	8	50
2,4-D	ND		77.4	52.7		ug/Kg	☼	68	32 - 115	2	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	66		28 - 129
2,4-Dichlorophenylacetic acid	58		28 - 129

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-432641/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 433119 — **Prep Batch: 432641**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5.15	J	10	4.4	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Antimony	ND		14.9	0.40	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Arsenic	ND		2.0	0.40	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Barium	ND		0.50	0.11	mg/Kg		09/05/18 10:13	09/06/18 08:16	1

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

Lab Sample ID: MB 480-432641/1-A
Matrix: Solid
Analysis Batch: 433119

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.20	0.028	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Cadmium	ND		0.20	0.030	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Calcium	12.50	J	49.8	3.3	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Chromium	ND		0.50	0.20	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Cobalt	ND		0.50	0.050	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Copper	ND		1.0	0.21	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Iron	9.39	J	10	3.5	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Lead	ND		1.0	0.24	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Magnesium	2.24	J	19.9	0.92	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Manganese	0.286		0.20	0.032	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Nickel	ND		5.0	0.23	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Potassium	ND		29.9	19.9	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Selenium	ND		4.0	0.40	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Silver	ND		0.60	0.20	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Sodium	ND		140	13.0	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Thallium	ND		6.0	0.30	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Vanadium	ND		0.50	0.11	mg/Kg		09/05/18 10:13	09/06/18 08:16	1
Zinc	ND	^	2.0	0.64	mg/Kg		09/05/18 10:13	09/06/18 08:16	1

Lab Sample ID: LCSSRM 480-432641/2-A
Matrix: Solid
Analysis Batch: 433119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432641

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10100	8300		mg/Kg		82.2	30.4 - 125.7
Antimony	184	57.09		mg/Kg		31.0	10.0 - 137.5
Arsenic	178	139.4		mg/Kg		78.3	65.7 - 120.8
Barium	228	172.0		mg/Kg		75.4	68.4 - 118.4
Beryllium	61.3	47.35		mg/Kg		77.2	69.3 - 120.1
Cadmium	143	105.0		mg/Kg		73.4	65.9 - 114.0
Calcium	5190	4096		mg/Kg		78.9	65.9 - 115.8
Chromium	107	85.75		mg/Kg		80.1	65.9 - 123.4
Cobalt	71.4	65.65		mg/Kg		92.0	71.3 - 120.4
Copper	116	96.05		mg/Kg		82.8	70.6 - 119.0
Iron	15000	12390		mg/Kg		82.6	33.0 - 155.3
Lead	210	194.2		mg/Kg		92.5	71.9 - 121.0
Magnesium	2570	2107		mg/Kg		82.0	55.3 - 123.0
Manganese	383	333.0		mg/Kg		86.9	73.1 - 120.1

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

Lab Sample ID: LCSSRM 480-432641/2-A
Matrix: Solid
Analysis Batch: 433119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432641

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Nickel	95.4	83.75		mg/Kg		87.8	65.6 - 117.4
Potassium	2420	1889		mg/Kg		78.1	47.9 - 116.9
Selenium	130	99.69		mg/Kg		76.7	59.2 - 120.0
Silver	91.2	74.71		mg/Kg		81.9	64.0 - 126.1
Sodium	690	512.4		mg/Kg		74.3	49.0 - 131.0
Thallium	156	137.0		mg/Kg		87.8	61.9 - 119.9
Vanadium	104	85.63		mg/Kg		82.3	61.4 - 126.0
Zinc	254	194.4	^	mg/Kg		76.5	66.9 - 122.4

Lab Sample ID: 480-141069-4 MS
Matrix: Solid
Analysis Batch: 433119

Client Sample ID: SB-13 (8-10')MS
Prep Type: Total/NA
Prep Batch: 432641

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	11600	B	2270	19330	4	mg/Kg	☼	340	75 - 125
Antimony	0.70	J F1	45.5	26.47	F1	mg/Kg	☼	57	75 - 125
Arsenic	2.4		45.5	44.08		mg/Kg	☼	92	75 - 125
Barium	72.8	F1	45.5	152.7	F1	mg/Kg	☼	176	75 - 125
Beryllium	0.49		45.5	39.46		mg/Kg	☼	86	75 - 125
Cadmium	0.15	J	45.5	40.15		mg/Kg	☼	88	75 - 125
Calcium	67300	B	2270	83680	4	mg/Kg	☼	719	75 - 125
Chromium	15.8		45.5	57.14		mg/Kg	☼	91	75 - 125
Cobalt	7.8		45.5	51.52		mg/Kg	☼	96	75 - 125
Copper	27.5	F1	45.5	55.60	F1	mg/Kg	☼	62	75 - 125
Iron	14400	B	2270	16920	4	mg/Kg	☼	111	75 - 125
Lead	14.6		45.5	58.71		mg/Kg	☼	97	75 - 125
Magnesium	29000	B F2	2270	40120	4	mg/Kg	☼	488	75 - 125
Manganese	423	B	45.5	603.4	4	mg/Kg	☼	397	75 - 125
Nickel	15.9		45.5	63.65		mg/Kg	☼	105	75 - 125
Potassium	3960	F1	2270	8965	F1	mg/Kg	☼	220	75 - 125
Selenium	ND		45.5	39.64		mg/Kg	☼	87	75 - 125
Silver	ND		11.4	10.38		mg/Kg	☼	91	75 - 125
Sodium	301		2280	2502		mg/Kg	☼	97	75 - 125
Thallium	ND		45.5	45.69		mg/Kg	☼	100	75 - 125
Vanadium	24.8		45.5	72.70		mg/Kg	☼	105	75 - 125
Zinc	52.9	^	45.5	88.84	^	mg/Kg	☼	79	75 - 125

Lab Sample ID: 480-141069-4 MSD
Matrix: Solid
Analysis Batch: 433119

Client Sample ID: SB-13 (8-10')MSD
Prep Type: Total/NA
Prep Batch: 432641

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	11600	B	2230	21810	4	mg/Kg	☼	458	75 - 125	12	20

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

Lab Sample ID: 480-141069-4 MSD — **Client Sample ID: SB-13 (8-10')MSD**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 433119 — **Prep Batch: 432641**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.70	J F1	44.5	23.73	F1	mg/Kg	☼	52	75 - 125	11	20
Arsenic	2.4		44.5	44.06		mg/Kg	☼	93	75 - 125	0	20
Barium	72.8	F1	44.5	142.2	F1	mg/Kg	☼	156	75 - 125	7	20
Beryllium	0.49		44.5	38.58		mg/Kg	☼	86	75 - 125	2	20
Cadmium	0.15	J	44.5	39.38		mg/Kg	☼	88	75 - 125	2	20
Calcium	67300	B	2230	68650	4	mg/Kg	☼	59	75 - 125	20	20
Chromium	15.8		44.5	59.52		mg/Kg	☼	98	75 - 125	4	20
Cobalt	7.8		44.5	53.79		mg/Kg	☼	103	75 - 125	4	20
Copper	27.5	F1	44.5	56.69	F1	mg/Kg	☼	66	75 - 125	2	20
Iron	14400	B	2230	18400	4	mg/Kg	☼	179	75 - 125	8	20
Lead	14.6		44.5	62.29		mg/Kg	☼	107	75 - 125	6	20
Magnesium	29000	B F2	2230	30270	4 F2	mg/Kg	☼	56	75 - 125	28	20
Manganese	423	B	44.5	543.3	4	mg/Kg	☼	271	75 - 125	10	20
Nickel	15.9		44.5	66.38		mg/Kg	☼	113	75 - 125	4	20
Potassium	3960	F1	2230	9775	F1	mg/Kg	☼	261	75 - 125	9	20
Selenium	ND		44.5	39.37		mg/Kg	☼	88	75 - 125	1	20
Silver	ND		11.1	10.25		mg/Kg	☼	92	75 - 125	1	20
Sodium	301		2230	2474		mg/Kg	☼	97	75 - 125	1	20
Thallium	ND		44.5	45.51		mg/Kg	☼	102	75 - 125	0	20
Vanadium	24.8		44.5	76.99		mg/Kg	☼	117	75 - 125	6	20
Zinc	52.9	^	44.5	97.02	^	mg/Kg	☼	99	75 - 125	9	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-433809/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 434465 — **Prep Batch: 433809**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.0082	mg/Kg		09/13/18 14:55	09/14/18 10:54	1

Lab Sample ID: LCSSRM 480-433809/2-A ^10 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 434465 — **Prep Batch: 433809**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	23.7	13.98		mg/Kg		59.0	27.7 - 110.1

Lab Sample ID: 480-141069-4 MS — **Client Sample ID: SB-13 (8-10')MS**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 434465 — **Prep Batch: 433809**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0098	J	0.374	0.415		mg/Kg	☼	108	80 - 120

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 480-141069-4 MSD
Matrix: Solid
Analysis Batch: 434465

Client Sample ID: SB-13 (8-10')MSD
Prep Type: Total/NA
Prep Batch: 433809

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0098	J	0.368	0.419		mg/Kg	☼	111	80 - 120	1	20

GC/MS VOA

Prep Batch: 432362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	5035A_L	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	5035A_L	
480-141069-5	BD-2	Total/NA	Solid	5035A_L	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	5035A_L	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	5035A_L	
MB 480-432362/3-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-432362/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	
LCSD 480-432362/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_L	

Analysis Batch: 432572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	8260C	432362
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	8260C	432362
480-141069-5	BD-2	Total/NA	Solid	8260C	432362
480-141069-6	MW-4 (16-18')	Total/NA	Solid	8260C	432362
480-141069-9	MW-6 (2-4)	Total/NA	Solid	8260C	432362
MB 480-432362/3-A	Method Blank	Total/NA	Solid	8260C	432362
LCS 480-432362/1-A	Lab Control Sample	Total/NA	Solid	8260C	432362
LCSD 480-432362/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	432362

GC/MS Semi VOA

Prep Batch: 432460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	3550C	
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	3550C	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	3550C	
480-141069-4	SB-13 (8-10')	Total/NA	Solid	3550C	
480-141069-5	BD-2	Total/NA	Solid	3550C	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	3550C	
480-141069-7	SB-15 (1-3')	Total/NA	Solid	3550C	
480-141069-8	SB-17 (4-6')	Total/NA	Solid	3550C	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	3550C	
MB 480-432460/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-432460/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	3550C	
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	3550C	

Analysis Batch: 432937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	8270D	432460
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	8270D	432460
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	8270D	432460
480-141069-4	SB-13 (8-10')	Total/NA	Solid	8270D	432460
480-141069-5	BD-2	Total/NA	Solid	8270D	432460
480-141069-6	MW-4 (16-18')	Total/NA	Solid	8270D	432460
480-141069-7	SB-15 (1-3')	Total/NA	Solid	8270D	432460
480-141069-8	SB-17 (4-6')	Total/NA	Solid	8270D	432460
480-141069-9	MW-6 (2-4)	Total/NA	Solid	8270D	432460
MB 480-432460/1-A	Method Blank	Total/NA	Solid	8270D	432460

GC/MS Semi VOA (Continued)

Analysis Batch: 432937 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-432460/2-A	Lab Control Sample	Total/NA	Solid	8270D	432460
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	8270D	432460
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	8270D	432460

GC Semi VOA

Prep Batch: 432528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	3550C	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	3550C	
480-141069-5	BD-2	Total/NA	Solid	3550C	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	3550C	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	3550C	
MB 480-432528/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-432528/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141069-1 MS	MW-5 (6"-2')	Total/NA	Solid	3550C	
480-141069-1 MSD	MW-5 (6"-2')	Total/NA	Solid	3550C	

Prep Batch: 432530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	3550C	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	3550C	
480-141069-5	BD-2	Total/NA	Solid	3550C	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	3550C	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	3550C	
MB 480-432530/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-432530/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141069-3 MS	SB-16 (10'-12')	Total/NA	Solid	3550C	
480-141069-3 MSD	SB-16 (10'-12')	Total/NA	Solid	3550C	

Analysis Batch: 432560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	8082A	432530
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	8082A	432530
480-141069-5	BD-2	Total/NA	Solid	8082A	432530
480-141069-6	MW-4 (16-18')	Total/NA	Solid	8082A	432530
480-141069-9	MW-6 (2-4)	Total/NA	Solid	8082A	432530
MB 480-432530/1-A	Method Blank	Total/NA	Solid	8082A	432530
LCS 480-432530/2-A	Lab Control Sample	Total/NA	Solid	8082A	432530
480-141069-3 MS	SB-16 (10'-12')	Total/NA	Solid	8082A	432530
480-141069-3 MSD	SB-16 (10'-12')	Total/NA	Solid	8082A	432530

Prep Batch: 432586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	8151A	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	8151A	
480-141069-5	BD-2	Total/NA	Solid	8151A	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	8151A	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	8151A	
MB 480-432586/1-A	Method Blank	Total/NA	Solid	8151A	

GC Semi VOA (Continued)

Prep Batch: 432586 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-432586/2-A	Lab Control Sample	Total/NA	Solid	8151A	
480-141069-1 MS	MW-5 (6"-2')	Total/NA	Solid	8151A	
480-141069-1 MSD	MW-5 (6"-2')	Total/NA	Solid	8151A	

Analysis Batch: 432605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	8081B	432528
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	8081B	432528
480-141069-5	BD-2	Total/NA	Solid	8081B	432528
480-141069-6	MW-4 (16-18')	Total/NA	Solid	8081B	432528
480-141069-9	MW-6 (2-4)	Total/NA	Solid	8081B	432528
MB 480-432528/1-A	Method Blank	Total/NA	Solid	8081B	432528
LCS 480-432528/2-A	Lab Control Sample	Total/NA	Solid	8081B	432528
480-141069-1 MS	MW-5 (6"-2')	Total/NA	Solid	8081B	432528
480-141069-1 MSD	MW-5 (6"-2')	Total/NA	Solid	8081B	432528

Analysis Batch: 433270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	8151A	432586
MB 480-432586/1-A	Method Blank	Total/NA	Solid	8151A	432586
LCS 480-432586/2-A	Lab Control Sample	Total/NA	Solid	8151A	432586
480-141069-1 MS	MW-5 (6"-2')	Total/NA	Solid	8151A	432586
480-141069-1 MSD	MW-5 (6"-2')	Total/NA	Solid	8151A	432586

Analysis Batch: 433521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	8151A	432586
480-141069-5	BD-2	Total/NA	Solid	8151A	432586
480-141069-6	MW-4 (16-18')	Total/NA	Solid	8151A	432586
480-141069-9	MW-6 (2-4)	Total/NA	Solid	8151A	432586

Metals

Prep Batch: 432641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	3050B	
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	3050B	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	3050B	
480-141069-4	SB-13 (8-10')	Total/NA	Solid	3050B	
480-141069-5	BD-2	Total/NA	Solid	3050B	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	3050B	
480-141069-7	SB-15 (1-3')	Total/NA	Solid	3050B	
480-141069-8	SB-17 (4-6')	Total/NA	Solid	3050B	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	3050B	
MB 480-432641/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-432641/2-A	Lab Control Sample	Total/NA	Solid	3050B	
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	3050B	
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	3050B	

Metals (Continued)

Analysis Batch: 433119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	6010C	432641
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	6010C	432641
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	6010C	432641
480-141069-4	SB-13 (8-10')	Total/NA	Solid	6010C	432641
480-141069-5	BD-2	Total/NA	Solid	6010C	432641
480-141069-6	MW-4 (16-18')	Total/NA	Solid	6010C	432641
480-141069-7	SB-15 (1-3')	Total/NA	Solid	6010C	432641
480-141069-8	SB-17 (4-6')	Total/NA	Solid	6010C	432641
480-141069-9	MW-6 (2-4)	Total/NA	Solid	6010C	432641
MB 480-432641/1-A	Method Blank	Total/NA	Solid	6010C	432641
LCSSRM 480-432641/2-A	Lab Control Sample	Total/NA	Solid	6010C	432641
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	6010C	432641
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	6010C	432641

Prep Batch: 433809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	7471B	
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	7471B	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	7471B	
480-141069-4	SB-13 (8-10')	Total/NA	Solid	7471B	
480-141069-5	BD-2	Total/NA	Solid	7471B	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	7471B	
480-141069-7	SB-15 (1-3')	Total/NA	Solid	7471B	
480-141069-8	SB-17 (4-6')	Total/NA	Solid	7471B	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	7471B	
MB 480-433809/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-433809/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	7471B	
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	7471B	

Analysis Batch: 434465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	7471B	433809
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	7471B	433809
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	7471B	433809
480-141069-4	SB-13 (8-10')	Total/NA	Solid	7471B	433809
480-141069-5	BD-2	Total/NA	Solid	7471B	433809
480-141069-6	MW-4 (16-18')	Total/NA	Solid	7471B	433809
480-141069-7	SB-15 (1-3')	Total/NA	Solid	7471B	433809
480-141069-8	SB-17 (4-6')	Total/NA	Solid	7471B	433809
480-141069-9	MW-6 (2-4)	Total/NA	Solid	7471B	433809
MB 480-433809/1-A	Method Blank	Total/NA	Solid	7471B	433809
LCSSRM 480-433809/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	433809
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	7471B	433809
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	7471B	433809

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

General Chemistry

Analysis Batch: 432340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141069-1	MW-5 (6"-2')	Total/NA	Solid	Moisture	
480-141069-2	SB-14 (8'-10')	Total/NA	Solid	Moisture	
480-141069-3	SB-16 (10'-12')	Total/NA	Solid	Moisture	
480-141069-4	SB-13 (8-10')	Total/NA	Solid	Moisture	
480-141069-5	BD-2	Total/NA	Solid	Moisture	
480-141069-6	MW-4 (16-18')	Total/NA	Solid	Moisture	
480-141069-7	SB-15 (1-3')	Total/NA	Solid	Moisture	
480-141069-8	SB-17 (4-6')	Total/NA	Solid	Moisture	
480-141069-9	MW-6 (2-4)	Total/NA	Solid	Moisture	
480-141069-4 MS	SB-13 (8-10')MS	Total/NA	Solid	Moisture	
480-141069-4 MSD	SB-13 (8-10')MSD	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-5 (6"-2')

Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: MW-5 (6"-2')

Date Collected: 08/29/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-1
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			432362	08/31/18 07:51	AEM	TAL BUF
Total/NA	Analysis	8260C		1	432572	09/04/18 11:21	AEM	TAL BUF
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/05/18 21:48	PJQ	TAL BUF
Total/NA	Prep	3550C			432528	09/01/18 08:10	JRD	TAL BUF
Total/NA	Analysis	8081B		1	432605	09/04/18 12:04	JLS	TAL BUF
Total/NA	Prep	3550C			432530	09/01/18 08:27	JRD	TAL BUF
Total/NA	Analysis	8082A		1	432560	09/03/18 05:17	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433270	09/07/18 12:08	MAN	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 08:23	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 10:57	BMB	TAL BUF

Client Sample ID: SB-14 (8'-10')

Date Collected: 08/29/18 16:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: SB-14 (8'-10')

Date Collected: 08/29/18 16:00
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-2
Matrix: Solid
Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/05/18 22:16	PJQ	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 08:27	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 10:58	BMB	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: SB-16 (10'-12')

Lab Sample ID: 480-141069-3
Date Collected: 08/29/18 14:30
Matrix: Solid
Date Received: 08/30/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: SB-16 (10'-12')

Lab Sample ID: 480-141069-3
Date Collected: 08/29/18 14:30
Matrix: Solid
Date Received: 08/30/18 18:00
Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			432362	08/31/18 07:51	AEM	TAL BUF
Total/NA	Analysis	8260C		1	432572	09/04/18 11:46	AEM	TAL BUF
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/05/18 22:45	PJQ	TAL BUF
Total/NA	Prep	3550C			432528	09/01/18 08:10	JRD	TAL BUF
Total/NA	Analysis	8081B		2	432605	09/04/18 12:24	JLS	TAL BUF
Total/NA	Prep	3550C			432530	09/01/18 08:27	JRD	TAL BUF
Total/NA	Analysis	8082A		1	432560	09/03/18 02:54	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433521	09/10/18 08:17	MAN	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 08:31	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:00	BMB	TAL BUF

Client Sample ID: SB-13 (8-10')

Lab Sample ID: 480-141069-4
Date Collected: 08/29/18 11:00
Matrix: Solid
Date Received: 08/30/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: SB-13 (8-10')

Lab Sample ID: 480-141069-4
Date Collected: 08/29/18 11:00
Matrix: Solid
Date Received: 08/30/18 18:00
Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/05/18 21:20	PJQ	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 08:34	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:01	BMB	TAL BUF

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: BD-2
Date Collected: 08/29/18 12:45
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-5
Matrix: Solid
Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			432362	08/31/18 07:51	AEM	TAL BUF
Total/NA	Analysis	8260C		1	432572	09/04/18 12:12	AEM	TAL BUF
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/05/18 23:13	PJQ	TAL BUF
Total/NA	Prep	3550C			432528	09/01/18 08:10	JRD	TAL BUF
Total/NA	Analysis	8081B		1	432605	09/04/18 12:44	JLS	TAL BUF
Total/NA	Prep	3550C			432530	09/01/18 08:27	JRD	TAL BUF
Total/NA	Analysis	8082A		1	432560	09/03/18 05:33	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433521	09/10/18 08:46	MAN	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 09:04	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:09	BMB	TAL BUF

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: MW-4 (16-18')
Date Collected: 08/30/18 12:30
Date Received: 08/30/18 18:00

Lab Sample ID: 480-141069-6
Matrix: Solid
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			432362	08/31/18 07:51	AEM	TAL BUF
Total/NA	Analysis	8260C		1	432572	09/04/18 12:38	AEM	TAL BUF
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/05/18 23:41	PJQ	TAL BUF
Total/NA	Prep	3550C			432528	09/01/18 08:10	JRD	TAL BUF
Total/NA	Analysis	8081B		1	432605	09/04/18 13:03	JLS	TAL BUF
Total/NA	Prep	3550C			432530	09/01/18 08:27	JRD	TAL BUF
Total/NA	Analysis	8082A		1	432560	09/03/18 05:49	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-4 (16-18')

Lab Sample ID: 480-141069-6
Date Collected: 08/30/18 12:30
Matrix: Solid
Date Received: 08/30/18 18:00
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8151A		1	433521	09/10/18 09:16	MAN	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 09:08	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:14	BMB	TAL BUF

Client Sample ID: SB-15 (1-3')

Lab Sample ID: 480-141069-7
Date Collected: 08/30/18 14:00
Matrix: Solid
Date Received: 08/30/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: SB-15 (1-3')

Lab Sample ID: 480-141069-7
Date Collected: 08/30/18 14:00
Matrix: Solid
Date Received: 08/30/18 18:00
Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/06/18 00:08	PJQ	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 09:12	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:16	BMB	TAL BUF

Client Sample ID: SB-17 (4-6')

Lab Sample ID: 480-141069-8
Date Collected: 08/30/18 15:00
Matrix: Solid
Date Received: 08/30/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: SB-17 (4-6')

Lab Sample ID: 480-141069-8
Date Collected: 08/30/18 15:00
Matrix: Solid
Date Received: 08/30/18 18:00
Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/06/18 00:36	PJQ	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 09:15	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:18	BMB	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Client Sample ID: MW-6 (2-4)

Lab Sample ID: 480-141069-9
Matrix: Solid
Date Collected: 08/30/18 17:00
Date Received: 08/30/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	432340	08/31/18 07:05	CSW	TAL BUF

Client Sample ID: MW-6 (2-4)

Lab Sample ID: 480-141069-9
Matrix: Solid
Date Collected: 08/30/18 17:00
Percent Solids: 88.4
Date Received: 08/30/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			432362	08/31/18 07:51	AEM	TAL BUF
Total/NA	Analysis	8260C		1	432572	09/04/18 13:04	AEM	TAL BUF
Total/NA	Prep	3550C			432460	08/31/18 14:16	SGD	TAL BUF
Total/NA	Analysis	8270D		1	432937	09/06/18 01:03	PJQ	TAL BUF
Total/NA	Prep	3550C			432528	09/01/18 08:10	JRD	TAL BUF
Total/NA	Analysis	8081B		1	432605	09/04/18 13:23	JLS	TAL BUF
Total/NA	Prep	3550C			432530	09/01/18 08:27	JRD	TAL BUF
Total/NA	Analysis	8082A		1	432560	09/03/18 06:05	W1T	TAL BUF
Total/NA	Prep	8151A			432586	09/04/18 07:12	SMP	TAL BUF
Total/NA	Analysis	8151A		1	433521	09/10/18 09:46	MAN	TAL BUF
Total/NA	Prep	3050B			432641	09/05/18 10:13	KMP	TAL BUF
Total/NA	Analysis	6010C		1	433119	09/06/18 09:19	EMB	TAL BUF
Total/NA	Prep	7471B			433809	09/13/18 14:55	VEG	TAL BUF
Total/NA	Analysis	7471B		1	434465	09/14/18 11:20	BMB	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

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 (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5035A_L	Closed System Purge and Trap	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF
8151A	Extraction (Herbicides)	SW846	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 - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141069-1	MW-5 (6"-2')	Solid	08/29/18 12:30	08/30/18 18:00
480-141069-2	SB-14 (8'-10')	Solid	08/29/18 16:00	08/30/18 18:00
480-141069-3	SB-16 (10'-12')	Solid	08/29/18 14:30	08/30/18 18:00
480-141069-4	SB-13 (8-10')	Solid	08/29/18 11:00	08/30/18 18:00
480-141069-5	BD-2	Solid	08/29/18 12:45	08/30/18 18:00
480-141069-6	MW-4 (16-18')	Solid	08/30/18 12:30	08/30/18 18:00
480-141069-7	SB-15 (1-3')	Solid	08/30/18 14:00	08/30/18 18:00
480-141069-8	SB-17 (4-6')	Solid	08/30/18 15:00	08/30/18 18:00
480-141069-9	MW-6 (2-4)	Solid	08/30/18 17:00	08/30/18 18:00

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Mike Sorace	Lab PM: Fischer, Brian J	Carrie
Client Contact: Bryan Mayback	Phone: 716-913-3937	E-Mail: brian.fischer@testamericainc.com	
Company: Benchmark Env. Eng. & Science, PLLC			
Address: 2558 Hamburg Turnpike	Due Date Requested: Standard		
City: Lackawanna	TAT Requested (days): B0462-01B-001		
State, Zip: NY, 14218			
Phone: 716-856-0599(Tel)	PO #: Purchase Order Requested		
Email: bmayback@turnkeyllc.com	WO #:		
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286		
Site: 990 Niagara St	SSOW#:		

480-141069 COC

COC No: 480-114782-26554.2
Page: Page 2 of 5
Job #:

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Request

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270D TCL SVOC's + TAL Metals	8081B, 8082A, 8151A Herb. Pest, PCB's	Moisture - Percent Moisture	Arsenic	TCLP-ST VOC's	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	N				
MW-5 (6'-21')	8/29/18	12:30	G	Solid			X	X	X	X	X	7	encores
SB-14 (8'-10')		16:00		Solid			X					1	
SB-16 (10'-12')		14:30		Solid			X	X	X	X	X	7	encores
SB-13 (8'-10')		11:30		Solid		X	X					3	MS/MSD
BD-2		12:45		Solid			X	X	X	X	X	7	encores
MW-4 (16-18')	8/30/18	12:30	G	Solid			X	X	X	X	X	7	Hexadecane encores
SB-15 (1-3')	8/30/18	1400	G	Solid			X					1	
SB-17 (4-6')	8/30/18	1500	G	Solid			X						
MW-6 (2-4')	8/30/18	1700	G	Solid			X	X	X		X		encores
				Solid									
				Solid									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat. B, NYSDec equis

Special Instructions/QC Requirements: Cat B, NYSDec equis

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		8/30/18 18:00			8/30/18 1800	TAB
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.3 #1

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-141069-1

Login Number: 141069

List Source: TestAmerica Buffalo

List Number: 1

Creator: Williams, Christopher S

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 (Excluding tests with immediate HTs)..	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	BENCHMARK
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	

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: 480-141620-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Joseph V. Giacomazza

Authorized for release by:
9/26/2018 9:50:48 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

LINKS

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Visit us at: 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 - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

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.

GC/MS Semi VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds 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

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-141620-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-141620-1

Comments
No additional comments.

Receipt
The sample was received on 9/12/2018 3:53 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The following compound has been spiked at a level above the upper range of the initial calibration due to upper calibration points being dropped: Benzaldehyde. The laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) associated with preparation batch 480-434274 and analytical batch 480-434774 recovered within acceptable limits for this analyte and has been qualified with an "E" flag. (LCS 480-434274/2-A).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 480-435413 recovered above the upper control limit for 4,6-Dinitro-2-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: MW-3 (20-22') (480-141620-1).

Method(s) 8270D: The initial calibration curve analyzed in analytical batch 480-434111 associated with analytical batches 480-434774 and 480-435413 was outside method criteria for the analyte 4,6-Dinitro-2-methylphenol. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for this analyte is considered an estimated concentration. The following sample is impacted: MW-3 (20-22') (480-141620-1).

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 matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 480-434275 and analytical batch 480-434412 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected. MW-3 (20-22') (480-141620-1).

Method(s) 8081B: 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) 8081B: All primary data for analytical batch 434412 is reported from the RTX-CLPI 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) 8082A: All primary data for analytical batch 434440 is reported from the ZB-5 column.

Method(s) 8151A: The surrogate recovery for the associated method blank (MB 480-434362/1-A) for preparation batch 480-434362 was below the Quality Control limit. All samples had surrogate recoveries within acceptable limits therefore the data has been reported. MW-3 (20-22') (480-141620-1), (480-141620-A-1-A MS) and (480-141620-A-1-B MSD).

Method(s) 8151A: All primary data for analytical batch 434907 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
Method(s) 6010C: The method blank for preparation batch 480-434514 and analytical batch 480-434884 contained Total Zinc above the

Job ID: 480-141620-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

reporting limit (RL). Associated sample(s) MW-3 (20-22') (480-141620-1) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3550C: The following samples required a Florisil clean-up, via 3620C, to reduce matrix interferences: MW-3 (20-22') (480-141620-1), (480-141620-B-1 MS) and (480-141620-B-1 MSD).

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 - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Client Sample ID: MW-3 (20-22')

Lab Sample ID: 480-141620-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.2	J	19	3.3	ug/Kg	1	☼	8260C	Total/NA
Aluminum	12700		11.5	5.1	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.3		2.3	0.46	mg/Kg	1	☼	6010C	Total/NA
Barium	96.6		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.56		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.23	0.035	mg/Kg	1	☼	6010C	Total/NA
Calcium	63000		57.7	3.8	mg/Kg	1	☼	6010C	Total/NA
Chromium	16.3		0.58	0.23	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.9		0.58	0.058	mg/Kg	1	☼	6010C	Total/NA
Copper	14.0		1.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Iron	16400		11.5	4.0	mg/Kg	1	☼	6010C	Total/NA
Lead	12.0		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Magnesium	27100		23.1	1.1	mg/Kg	1	☼	6010C	Total/NA
Manganese	379		0.23	0.037	mg/Kg	1	☼	6010C	Total/NA
Nickel	17.6		5.8	0.27	mg/Kg	1	☼	6010C	Total/NA
Potassium	4560		34.6	23.1	mg/Kg	1	☼	6010C	Total/NA
Sodium	260		162	15.0	mg/Kg	1	☼	6010C	Total/NA
Vanadium	25.4		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Zinc	54.3		2.3	0.74	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Client Sample ID: MW-3 (20-22')
Date Collected: 09/11/18 13:00
Date Received: 09/12/18 15:53

Lab Sample ID: 480-141620-1
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		3.9	0.28	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,1,2,2-Tetrachloroethane	ND		3.9	0.63	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9	0.88	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,1,2-Trichloroethane	ND		3.9	0.50	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,1-Dichloroethane	ND		3.9	0.47	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,1-Dichloroethene	ND		3.9	0.47	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2,4-Trichlorobenzene	ND		3.9	0.24	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2,4-Trimethylbenzene	ND		3.9	0.74	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2-Dibromo-3-Chloropropane	ND		3.9	1.9	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2-Dibromoethane	ND		3.9	0.50	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2-Dichlorobenzene	ND		3.9	0.30	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2-Dichloroethane	ND		3.9	0.19	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,2-Dichloropropane	ND		3.9	1.9	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,3,5-Trimethylbenzene	ND		3.9	0.25	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,3-Dichlorobenzene	ND		3.9	0.20	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
1,4-Dichlorobenzene	ND		3.9	0.54	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
2-Butanone (MEK)	ND		19	1.4	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
2-Hexanone	ND		19	1.9	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
4-Isopropyltoluene	ND		3.9	0.31	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
4-Methyl-2-pentanone (MIBK)	ND		19	1.3	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Acetone	**8.2**	**J**	19	3.3	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Benzene	ND		3.9	0.19	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Bromodichloromethane	ND		3.9	0.52	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Bromoform	ND		3.9	1.9	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Bromomethane	ND		3.9	0.35	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Carbon disulfide	ND		3.9	1.9	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Carbon tetrachloride	ND		3.9	0.38	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Chlorobenzene	ND		3.9	0.51	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Chloroethane	ND		3.9	0.88	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Chloroform	ND		3.9	0.24	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Chloromethane	ND		3.9	0.23	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
cis-1,2-Dichloroethene	ND		3.9	0.50	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
cis-1,3-Dichloropropene	ND		3.9	0.56	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Cyclohexane	ND		3.9	0.54	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Dibromochloromethane	ND		3.9	0.50	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Dichlorodifluoromethane	ND		3.9	0.32	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Ethylbenzene	ND		3.9	0.27	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Isopropylbenzene	ND		3.9	0.58	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
m,p-Xylene	ND		7.8	0.65	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Methyl acetate	ND		19	2.3	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Methyl tert-butyl ether	ND		3.9	0.38	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Methylcyclohexane	ND		3.9	0.59	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Methylene Chloride	ND		3.9	1.8	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
n-Butylbenzene	ND		3.9	0.34	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
N-Propylbenzene	ND		3.9	0.31	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
o-Xylene	ND		3.9	0.51	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
sec-Butylbenzene	ND		3.9	0.34	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Styrene	ND		3.9	0.19	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
tert-Butylbenzene	ND		3.9	0.40	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Client Sample ID: MW-3 (20-22')
Date Collected: 09/11/18 13:00
Date Received: 09/12/18 15:53

Lab Sample ID: 480-141620-1
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		3.9	0.52	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Toluene	ND		3.9	0.29	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
trans-1,2-Dichloroethene	ND		3.9	0.40	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
trans-1,3-Dichloropropene	ND		3.9	1.7	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Trichloroethene	ND		3.9	0.85	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Trichlorofluoromethane	ND		3.9	0.37	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Vinyl chloride	ND		3.9	0.47	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1
Xylenes, Total	ND		7.8	0.65	ug/Kg	☼	09/13/18 00:38	09/13/18 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*	*09/13/18 00:38*	*09/13/18 14:42*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*09/13/18 00:38*	*09/13/18 14:42*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*09/13/18 00:38*	*09/13/18 14:42*	*1*
Toluene-d8 (Surr)	*104*		*71 - 125*	*09/13/18 00:38*	*09/13/18 14:42*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	52	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2,4,6-Trichlorophenol	ND		190	38	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2,4-Dimethylphenol	ND		190	46	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2,4-Dinitrophenol	ND		1900	880	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2,6-Dinitrotoluene	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2-Chloronaphthalene	ND		190	32	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2-Chlorophenol	ND		190	35	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2-Methylnaphthalene	ND		190	38	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2-Methylphenol	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2-Nitroaniline	ND		370	28	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
2-Nitrophenol	ND		190	54	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
3,3'-Dichlorobenzidine	ND		370	230	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
3-Nitroaniline	ND		370	53	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4,6-Dinitro-2-methylphenol	ND		370	190	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Bromophenyl phenyl ether	ND		190	27	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Chloro-3-methylphenol	ND		190	47	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Chloroaniline	ND		190	47	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Chlorophenyl phenyl ether	ND		190	24	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Methylphenol	ND		370	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Nitroaniline	ND		370	100	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
4-Nitrophenol	ND		370	130	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Acenaphthene	ND		190	28	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Acenaphthylene	ND		190	25	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Acetophenone	ND		190	26	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Anthracene	ND		190	47	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Atrazine	ND		190	66	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Benzaldehyde	ND		190	150	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Benzo[a]anthracene	ND		190	19	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Benzo[b]fluoranthene	ND		190	30	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Client Sample ID: MW-3 (20-22')
Date Collected: 09/11/18 13:00
Date Received: 09/12/18 15:53

Lab Sample ID: 480-141620-1
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	25	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Biphenyl	ND		190	28	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
bis (2-chloroisopropyl) ether	ND		190	38	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Bis(2-chloroethoxy)methane	ND		190	41	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Bis(2-chloroethyl)ether	ND		190	25	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Bis(2-ethylhexyl) phthalate	ND		190	65	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Butyl benzyl phthalate	ND		190	32	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Caprolactam	ND		190	57	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Carbazole	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Chrysene	ND		190	43	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Dibenz(a,h)anthracene	ND		190	34	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Dibenzofuran	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Diethyl phthalate	ND		190	25	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Dimethyl phthalate	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Di-n-butyl phthalate	ND		190	33	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Di-n-octyl phthalate	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Fluoranthene	ND		190	20	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Fluorene	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Hexachlorobenzene	ND		190	26	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Hexachlorocyclopentadiene	ND		190	26	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Hexachloroethane	ND		190	25	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Indeno[1,2,3-cd]pyrene	ND		190	24	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Isophorone	ND		190	41	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Naphthalene	ND		190	25	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Nitrobenzene	ND		190	21	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
N-Nitrosodi-n-propylamine	ND		190	33	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
N-Nitrosodiphenylamine	ND		190	160	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Pentachlorophenol	ND		370	190	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Phenanthrene	ND		190	28	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Phenol	ND		190	29	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1
Pyrene	ND		190	23	ug/Kg	☼	09/13/18 14:28	09/20/18 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*85*		*54 - 120*	*09/13/18 14:28*	*09/20/18 17:14*	*1*
2-Fluorobiphenyl	*83*		*60 - 120*	*09/13/18 14:28*	*09/20/18 17:14*	*1*
2-Fluorophenol	*73*		*52 - 120*	*09/13/18 14:28*	*09/20/18 17:14*	*1*
Nitrobenzene-d5	*73*		*53 - 120*	*09/13/18 14:28*	*09/20/18 17:14*	*1*
Phenol-d5	*70*		*54 - 120*	*09/13/18 14:28*	*09/20/18 17:14*	*1*
p-Terphenyl-d14	*105*		*65 - 121*	*09/13/18 14:28*	*09/20/18 17:14*	*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	☼	09/13/18 14:36	09/14/18 15:13	1
4,4'-DDE	ND		1.9	0.40	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
4,4'-DDT	ND		1.9	0.44	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Aldrin	ND	F2	1.9	0.47	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
alpha-BHC	ND	F2	1.9	0.34	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
cis-Chlordane	ND		1.9	0.95	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
beta-BHC	ND		1.9	0.34	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1

Client Sample ID: MW-3 (20-22')
Date Collected: 09/11/18 13:00
Date Received: 09/12/18 15:53

Lab Sample ID: 480-141620-1
Matrix: Solid
Percent Solids: 87.3

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND	F2	1.9	0.35	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Dieldrin	ND	F2	1.9	0.46	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Endosulfan I	ND		1.9	0.36	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Endosulfan II	ND		1.9	0.34	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Endosulfan sulfate	ND		1.9	0.35	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Endrin	ND		1.9	0.38	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Endrin aldehyde	ND		1.9	0.49	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Endrin ketone	ND		1.9	0.47	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
gamma-BHC (Lindane)	ND	F2	1.9	0.35	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
trans-Chlordane	ND	F2	1.9	0.60	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Heptachlor	ND		1.9	0.41	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Heptachlor epoxide	ND		1.9	0.49	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Methoxychlor	ND		1.9	0.39	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1
Toxaphene	ND		19	11	ug/Kg	☼	09/13/18 14:36	09/14/18 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*91*		*45 - 120*	*09/13/18 14:36*	*09/14/18 15:13*	*1*
DCB Decachlorobiphenyl	*82*		*45 - 120*	*09/13/18 14:36*	*09/14/18 15:13*	*1*
Tetrachloro-m-xylene	*72*		*30 - 124*	*09/13/18 14:36*	*09/14/18 15:13*	*1*
Tetrachloro-m-xylene	*56*		*30 - 124*	*09/13/18 14:36*	*09/14/18 15:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.21	0.041	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1
PCB-1221	ND		0.21	0.041	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1
PCB-1232	ND		0.21	0.041	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1
PCB-1242	ND		0.21	0.041	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1
PCB-1248	ND		0.21	0.041	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1
PCB-1254	ND		0.21	0.098	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1
PCB-1260	ND		0.21	0.098	mg/Kg	☼	09/13/18 14:50	09/14/18 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*60 - 154*	*09/13/18 14:50*	*09/14/18 15:39*	*1*
Tetrachloro-m-xylene	*76*		*60 - 154*	*09/13/18 14:50*	*09/14/18 15:39*	*1*
DCB Decachlorobiphenyl	*84*		*65 - 174*	*09/13/18 14:50*	*09/14/18 15:39*	*1*
DCB Decachlorobiphenyl	*83*		*65 - 174*	*09/13/18 14:50*	*09/14/18 15:39*	*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	☼	09/14/18 06:32	09/18/18 14:07	1
Silvex (2,4,5-TP)	ND		19	6.8	ug/Kg	☼	09/14/18 06:32	09/18/18 14:07	1
2,4-D	ND		19	12	ug/Kg	☼	09/14/18 06:32	09/18/18 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*37*		*28 - 129*	*09/14/18 06:32*	*09/18/18 14:07*	*1*
2,4-Dichlorophenylacetic acid	*41*		*28 - 129*	*09/14/18 06:32*	*09/18/18 14:07*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**12700**		11.5	5.1	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Antimony	ND		17.3	0.46	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Client Sample ID: MW-3 (20-22')
Date Collected: 09/11/18 13:00
Date Received: 09/12/18 15:53

Lab Sample ID: 480-141620-1
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		2.3	0.46	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Barium	96.6		0.58	0.13	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Beryllium	0.56		0.23	0.032	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Cadmium	0.14	J	0.23	0.035	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Calcium	63000		57.7	3.8	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Chromium	16.3		0.58	0.23	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Cobalt	7.9		0.58	0.058	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Copper	14.0		1.2	0.24	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Iron	16400		11.5	4.0	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Lead	12.0		1.2	0.28	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Magnesium	27100		23.1	1.1	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Manganese	379		0.23	0.037	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Nickel	17.6		5.8	0.27	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Potassium	4560		34.6	23.1	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Selenium	ND		4.6	0.46	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Silver	ND		0.69	0.23	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Sodium	260		162	15.0	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Thallium	ND		6.9	0.35	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Vanadium	25.4		0.58	0.13	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1
Zinc	54.3		2.3	0.74	mg/Kg	☼	09/15/18 09:45	09/18/18 00:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.023	0.0094	mg/Kg	☼	09/18/18 11:20	09/18/18 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.7		0.1	0.1	%			09/13/18 07:49	1
Percent Solids	87.3		0.1	0.1	%			09/13/18 07:49	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(60-140)	(71-125)
480-141620-1	MW-3 (20-22')	104	98	102	104
LCS 480-434143/1-A	Lab Control Sample	99	101	102	103
LCSD 480-434143/2-A	Lab Control Sample Dup	103	102	104	102
MB 480-434143/3-A	Method Blank	102	99	101	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(53-120)	(54-120)	(65-121)
480-141620-1	MW-3 (20-22')	85	83	73	73	70	105
480-141620-1 MS	MW-3 (20-22')	98	79	70	72	69	105
480-141620-1 MSD	MW-3 (20-22')	97	78	69	69	68	101
LCS 480-434274/2-A	Lab Control Sample	105	87	78	94	81	106
MB 480-434274/1-A	Method Blank	72	76	74	80	72	97

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHd14 = p-Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-141620-1	MW-3 (20-22')	91	82	72	56
480-141620-1 MS	MW-3 (20-22')	76	71	62	45
480-141620-1 MSD	MW-3 (20-22')	92	82	74	55
LCS 480-434275/2-A	Lab Control Sample	95	88	78	58
MB 480-434275/1-A	Method Blank	93	88	77	57

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-141620-1	MW-3 (20-22')	91	76	84	83
LCS 480-434277/2-A	Lab Control Sample	125	113	116	115
MB 480-434277/1-A	Method Blank	109	93	108	97

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1	DCPAA2
Lab Sample ID	Client Sample ID	(28-129)	(28-129)
480-141620-1	MW-3 (20-22')	37	41
480-141620-1 MS	MW-3 (20-22')	37	47
480-141620-1 MSD	MW-3 (20-22')	36	40
LCS 480-434362/2-A	Lab Control Sample	37	51
MB 480-434362/1-A	Method Blank	21 X	24 X

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 480-434143/3-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
2-Hexanone	ND		25	2.5	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Acetone	ND		25	4.2	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Benzene	ND		5.0	0.25	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Bromoform	ND		5.0	2.5	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Bromomethane	ND		5.0	0.45	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Chloroethane	ND		5.0	1.1	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Chloroform	ND		5.0	0.31	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Chloromethane	ND		5.0	0.30	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Cyclohexane	ND		5.0	0.70	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
m,p-Xylene	ND		10	0.84	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Methyl acetate	ND		25	3.0	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
o-Xylene	ND		5.0	0.65	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Styrene	ND		5.0	0.25	ug/Kg		09/13/18 00:38	09/13/18 13:38	1

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

Lab Sample ID: MB 480-434143/3-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		5.0	0.52	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Toluene	ND		5.0	0.38	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Trichloroethene	ND		5.0	1.1	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		09/13/18 00:38	09/13/18 13:38	1
Xylenes, Total	ND		10	0.84	ug/Kg		09/13/18 00:38	09/13/18 13:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*09/13/18 00:38*	*09/13/18 13:38*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*09/13/18 00:38*	*09/13/18 13:38*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*	*09/13/18 00:38*	*09/13/18 13:38*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*09/13/18 00:38*	*09/13/18 13:38*	*1*

Lab Sample ID: LCS 480-434143/1-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	41.9		ug/Kg		84	77 - 121
1,1,2,2-Tetrachloroethane	50.0	45.9		ug/Kg		92	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	42.0		ug/Kg		84	60 - 140
1,1,2-Trichloroethane	50.0	46.1		ug/Kg		92	78 - 122
1,1-Dichloroethane	50.0	44.4		ug/Kg		89	73 - 126
1,1-Dichloroethene	50.0	43.5		ug/Kg		87	59 - 125
1,2,4-Trichlorobenzene	50.0	40.5		ug/Kg		81	64 - 120
1,2,4-Trimethylbenzene	50.0	43.7		ug/Kg		87	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	38.0		ug/Kg		76	63 - 124
1,2-Dibromoethane	50.0	46.1		ug/Kg		92	78 - 120
1,2-Dichlorobenzene	50.0	43.5		ug/Kg		87	75 - 120
1,2-Dichloroethane	50.0	42.0		ug/Kg		84	77 - 122
1,2-Dichloropropane	50.0	46.1		ug/Kg		92	75 - 124
1,3,5-Trimethylbenzene	50.0	44.6		ug/Kg		89	74 - 120
1,3-Dichlorobenzene	50.0	44.4		ug/Kg		89	74 - 120
1,4-Dichlorobenzene	50.0	44.0		ug/Kg		88	73 - 120
2-Butanone (MEK)	250	225		ug/Kg		90	70 - 134
2-Hexanone	250	213		ug/Kg		85	59 - 130
4-Isopropyltoluene	50.0	44.5		ug/Kg		89	74 - 120
4-Methyl-2-pentanone (MIBK)	250	211		ug/Kg		84	65 - 133
Acetone	250	225		ug/Kg		90	61 - 137
Benzene	50.0	46.5		ug/Kg		93	79 - 127
Bromodichloromethane	50.0	44.9		ug/Kg		90	80 - 122
Bromoform	50.0	41.4		ug/Kg		83	68 - 126
Bromomethane	50.0	57.6		ug/Kg		115	37 - 149
Carbon disulfide	50.0	40.8		ug/Kg		82	64 - 131

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

Lab Sample ID: LCS 480-434143/1-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	50.0	40.9		ug/Kg		82	75 - 135
Chlorobenzene	50.0	45.5		ug/Kg		91	76 - 124
Chloroethane	50.0	58.1		ug/Kg		116	69 - 135
Chloroform	50.0	44.1		ug/Kg		88	80 - 120
Chloromethane	50.0	36.6		ug/Kg		73	63 - 127
cis-1,2-Dichloroethene	50.0	45.5		ug/Kg		91	81 - 120
cis-1,3-Dichloropropene	50.0	45.7		ug/Kg		91	80 - 120
Cyclohexane	50.0	43.4		ug/Kg		87	65 - 120
Dibromochloromethane	50.0	43.5		ug/Kg		87	76 - 125
Dichlorodifluoromethane	50.0	40.9		ug/Kg		82	57 - 142
Ethylbenzene	50.0	45.3		ug/Kg		91	80 - 120
Isopropylbenzene	50.0	44.8		ug/Kg		90	72 - 120
m,p-Xylene	50.0	45.6		ug/Kg		91	70 - 130
Methyl acetate	100	84.4		ug/Kg		84	55 - 136
Methyl tert-butyl ether	50.0	42.8		ug/Kg		86	63 - 125
Methylcyclohexane	50.0	44.7		ug/Kg		89	60 - 140
Methylene Chloride	50.0	41.5		ug/Kg		83	61 - 127
Naphthalene	50.0	40.4		ug/Kg		81	38 - 137
n-Butylbenzene	50.0	43.7		ug/Kg		87	70 - 120
N-Propylbenzene	50.0	45.2		ug/Kg		90	70 - 130
o-Xylene	50.0	44.6		ug/Kg		89	70 - 130
sec-Butylbenzene	50.0	44.7		ug/Kg		89	74 - 120
Styrene	50.0	46.2		ug/Kg		92	80 - 120
tert-Butylbenzene	50.0	44.2		ug/Kg		88	73 - 120
Tetrachloroethene	50.0	44.5		ug/Kg		89	74 - 122
Toluene	50.0	45.9		ug/Kg		92	74 - 128
trans-1,2-Dichloroethene	50.0	45.2		ug/Kg		90	78 - 126
trans-1,3-Dichloropropene	50.0	44.5		ug/Kg		89	73 - 123
Trichloroethene	50.0	44.3		ug/Kg		89	77 - 129
Trichlorofluoromethane	50.0	44.6		ug/Kg		89	65 - 146
Vinyl chloride	50.0	37.6		ug/Kg		75	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 126*
4-Bromofluorobenzene (Surr)	*101*		*72 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*103*		*71 - 125*

Lab Sample ID: LCSD 480-434143/2-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434143

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	39.1		ug/Kg		78	77 - 121	7	20
1,1,2,2-Tetrachloroethane	50.0	43.8		ug/Kg		88	80 - 120	5	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	38.8		ug/Kg		78	60 - 140	8	20
1,1,2-Trichloroethane	50.0	43.7		ug/Kg		87	78 - 122	5	20

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

Lab Sample ID: LCSD 480-434143/2-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434143

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	50.0	41.8		ug/Kg		84	73 - 126	6	20
1,1-Dichloroethene	50.0	40.5		ug/Kg		81	59 - 125	7	20
1,2,4-Trichlorobenzene	50.0	37.5		ug/Kg		75	64 - 120	8	20
1,2,4-Trimethylbenzene	50.0	40.9		ug/Kg		82	74 - 120	7	20
1,2-Dibromo-3-Chloropropane	50.0	37.8		ug/Kg		76	63 - 124	1	20
1,2-Dibromoethane	50.0	43.9		ug/Kg		88	78 - 120	5	20
1,2-Dichlorobenzene	50.0	41.0		ug/Kg		82	75 - 120	6	20
1,2-Dichloroethane	50.0	40.3		ug/Kg		81	77 - 122	4	20
1,2-Dichloropropane	50.0	43.7		ug/Kg		87	75 - 124	5	20
1,3,5-Trimethylbenzene	50.0	41.4		ug/Kg		83	74 - 120	8	20
1,3-Dichlorobenzene	50.0	41.6		ug/Kg		83	74 - 120	7	20
1,4-Dichlorobenzene	50.0	41.2		ug/Kg		82	73 - 120	6	20
2-Butanone (MEK)	250	224		ug/Kg		90	70 - 134	0	20
2-Hexanone	250	209		ug/Kg		83	59 - 130	2	20
4-Isopropyltoluene	50.0	41.2		ug/Kg		82	74 - 120	8	20
4-Methyl-2-pentanone (MIBK)	250	208		ug/Kg		83	65 - 133	1	20
Acetone	250	221		ug/Kg		88	61 - 137	2	20
Benzene	50.0	43.6		ug/Kg		87	79 - 127	7	20
Bromodichloromethane	50.0	42.6		ug/Kg		85	80 - 122	5	20
Bromoform	50.0	39.4		ug/Kg		79	68 - 126	5	20
Bromomethane	50.0	53.7		ug/Kg		107	37 - 149	7	20
Carbon disulfide	50.0	37.5		ug/Kg		75	64 - 131	8	20
Carbon tetrachloride	50.0	38.2		ug/Kg		76	75 - 135	7	20
Chlorobenzene	50.0	42.3		ug/Kg		85	76 - 124	7	20
Chloroethane	50.0	55.5		ug/Kg		111	69 - 135	5	20
Chloroform	50.0	41.5		ug/Kg		83	80 - 120	6	20
Chloromethane	50.0	34.7		ug/Kg		69	63 - 127	5	20
cis-1,2-Dichloroethene	50.0	43.3		ug/Kg		87	81 - 120	5	20
cis-1,3-Dichloropropene	50.0	43.6		ug/Kg		87	80 - 120	5	20
Cyclohexane	50.0	40.2		ug/Kg		80	65 - 120	8	20
Dibromochloromethane	50.0	41.6		ug/Kg		83	76 - 125	4	20
Dichlorodifluoromethane	50.0	37.3		ug/Kg		75	57 - 142	9	20
Ethylbenzene	50.0	42.0		ug/Kg		84	80 - 120	8	20
Isopropylbenzene	50.0	41.3		ug/Kg		83	72 - 120	8	20
m,p-Xylene	50.0	42.0		ug/Kg		84	70 - 130	8	20
Methyl acetate	100	84.2		ug/Kg		84	55 - 136	0	20
Methyl tert-butyl ether	50.0	42.0		ug/Kg		84	63 - 125	2	20
Methylcyclohexane	50.0	41.8		ug/Kg		84	60 - 140	7	20
Methylene Chloride	50.0	39.6		ug/Kg		79	61 - 127	5	20
Naphthalene	50.0	38.3		ug/Kg		77	38 - 137	5	20
n-Butylbenzene	50.0	40.3		ug/Kg		81	70 - 120	8	20
N-Propylbenzene	50.0	42.0		ug/Kg		84	70 - 130	7	20
o-Xylene	50.0	41.3		ug/Kg		83	70 - 130	7	20
sec-Butylbenzene	50.0	41.2		ug/Kg		82	74 - 120	8	20
Styrene	50.0	43.0		ug/Kg		86	80 - 120	7	20
tert-Butylbenzene	50.0	41.0		ug/Kg		82	73 - 120	8	20
Tetrachloroethene	50.0	40.7		ug/Kg		81	74 - 122	9	20
Toluene	50.0	42.4		ug/Kg		85	74 - 128	8	20

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

Lab Sample ID: LCSD 480-434143/2-A
Matrix: Solid
Analysis Batch: 434221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434143

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene			50.0	42.1		ug/Kg		84	78 - 126	7	20
trans-1,3-Dichloropropene			50.0	42.0		ug/Kg		84	73 - 123	6	20
Trichloroethene			50.0	41.7		ug/Kg		83	77 - 129	6	20
Trichlorofluoromethane			50.0	41.2		ug/Kg		82	65 - 146	8	20
Vinyl chloride			50.0	35.8		ug/Kg		72	61 - 133	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*
4-Bromofluorobenzene (Surr)	*102*		*72 - 126*
Dibromofluoromethane (Surr)	*104*		*60 - 140*
Toluene-d8 (Surr)	*102*		*71 - 125*

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

Lab Sample ID: MB 480-434274/1-A
Matrix: Solid
Analysis Batch: 434774

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		170	46	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2,4-Dimethylphenol	ND		170	41	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2,4-Dinitrophenol	ND		1700	780	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2-Chloronaphthalene	ND		170	28	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2-Chlorophenol	ND		170	31	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2-Methylnaphthalene	ND		170	34	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2-Methylphenol	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2-Nitroaniline	ND		330	25	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
2-Nitrophenol	ND		170	48	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
3-Nitroaniline	ND		330	47	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Chloro-3-methylphenol	ND		170	42	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Chloroaniline	ND		170	42	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Methylphenol	ND		330	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Nitroaniline	ND		330	89	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
4-Nitrophenol	ND		330	120	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Acenaphthene	ND		170	25	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Acenaphthylene	ND		170	22	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Acetophenone	ND		170	23	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Anthracene	ND		170	42	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Atrazine	ND		170	59	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Benzaldehyde	ND		170	130	ug/Kg		09/13/18 14:28	09/17/18 16:32	1

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

Lab Sample ID: MB 480-434274/1-A
Matrix: Solid
Analysis Batch: 434774

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		170	17	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Benzo[a]pyrene	ND		170	25	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Biphenyl	ND		170	25	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Bis(2-ethylhexyl) phthalate	ND		170	58	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Caprolactam	ND		170	51	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Carbazole	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Chrysene	ND		170	38	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Dibenzofuran	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Diethyl phthalate	ND		170	22	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Dimethyl phthalate	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Fluoranthene	ND		170	18	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Fluorene	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Hexachlorobenzene	ND		170	23	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Hexachlorobutadiene	ND		170	25	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Hexachloroethane	ND		170	22	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Isophorone	ND		170	36	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Naphthalene	ND		170	22	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Nitrobenzene	ND		170	19	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Pentachlorophenol	ND		330	170	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Phenanthrene	ND		170	25	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Phenol	ND		170	26	ug/Kg		09/13/18 14:28	09/17/18 16:32	1
Pyrene	ND		170	20	ug/Kg		09/13/18 14:28	09/17/18 16:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*72*		*54 - 120*	*09/13/18 14:28*	*09/17/18 16:32*	*1*
2-Fluorobiphenyl	*76*		*60 - 120*	*09/13/18 14:28*	*09/17/18 16:32*	*1*
2-Fluorophenol	*74*		*52 - 120*	*09/13/18 14:28*	*09/17/18 16:32*	*1*
Nitrobenzene-d5	*80*		*53 - 120*	*09/13/18 14:28*	*09/17/18 16:32*	*1*
Phenol-d5	*72*		*54 - 120*	*09/13/18 14:28*	*09/17/18 16:32*	*1*
p-Terphenyl-d14	*97*		*65 - 121*	*09/13/18 14:28*	*09/17/18 16:32*	*1*

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

Lab Sample ID: LCS 480-434274/2-A
Matrix: Solid
Analysis Batch: 434774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	1620	1570		ug/Kg		97	59 - 126
2,4,6-Trichlorophenol	1620	1560		ug/Kg		97	59 - 123
2,4-Dichlorophenol	1620	1480		ug/Kg		92	61 - 120
2,4-Dimethylphenol	1620	1540		ug/Kg		95	59 - 120
2,4-Dinitrophenol	3240	3140		ug/Kg		97	41 - 146
2,4-Dinitrotoluene	1620	1720		ug/Kg		106	63 - 120
2,6-Dinitrotoluene	1620	1690		ug/Kg		104	66 - 120
2-Chloronaphthalene	1620	1550		ug/Kg		96	57 - 120
2-Chlorophenol	1620	1370		ug/Kg		84	53 - 120
2-Methylnaphthalene	1620	1530		ug/Kg		94	59 - 120
2-Methylphenol	1620	1520		ug/Kg		94	54 - 120
2-Nitroaniline	1620	1790		ug/Kg		111	61 - 120
2-Nitrophenol	1620	1500		ug/Kg		92	56 - 120
3,3'-Dichlorobenzidine	3240	3220		ug/Kg		100	54 - 120
3-Nitroaniline	1620	1560		ug/Kg		97	48 - 120
4,6-Dinitro-2-methylphenol	3240	3730		ug/Kg		115	49 - 122
4-Bromophenyl phenyl ether	1620	1650		ug/Kg		102	58 - 120
4-Chloro-3-methylphenol	1620	1620		ug/Kg		100	61 - 120
4-Chloroaniline	1620	1450		ug/Kg		90	38 - 120
4-Chlorophenyl phenyl ether	1620	1680		ug/Kg		104	63 - 124
4-Methylphenol	1620	1520		ug/Kg		94	55 - 120
4-Nitroaniline	1620	1590		ug/Kg		98	56 - 120
4-Nitrophenol	3240	3380		ug/Kg		105	43 - 147
Acenaphthene	1620	1580		ug/Kg		98	62 - 120
Acenaphthylene	1620	1580		ug/Kg		98	58 - 121
Acetophenone	1620	1510		ug/Kg		93	54 - 120
Anthracene	1620	1650		ug/Kg		102	62 - 120
Atrazine	3240	3370		ug/Kg		104	60 - 127
Benzaldehyde	3240	3150	E	ug/Kg		97	10 - 150
Benzo[a]anthracene	1620	1700		ug/Kg		105	65 - 120
Benzo[a]pyrene	1620	1680		ug/Kg		104	64 - 120
Benzo[b]fluoranthene	1620	1660		ug/Kg		102	64 - 120
Benzo[g,h,i]perylene	1620	1510		ug/Kg		93	45 - 145
Benzo[k]fluoranthene	1620	1840		ug/Kg		114	65 - 120
Biphenyl	1620	1560		ug/Kg		96	59 - 120
bis (2-chloroisopropyl) ether	1620	1840		ug/Kg		114	44 - 120
Bis(2-chloroethoxy)methane	1620	1560		ug/Kg		97	55 - 120
Bis(2-chloroethyl)ether	1620	1470		ug/Kg		91	45 - 120
Bis(2-ethylhexyl) phthalate	1620	1780		ug/Kg		110	61 - 133
Butyl benzyl phthalate	1620	1740		ug/Kg		107	61 - 129
Caprolactam	3240	3330		ug/Kg		103	47 - 120
Carbazole	1620	1730		ug/Kg		107	65 - 120
Chrysene	1620	1710		ug/Kg		106	64 - 120
Dibenz(a,h)anthracene	1620	1560		ug/Kg		97	54 - 132
Dibenzofuran	1620	1660		ug/Kg		102	63 - 120
Diethyl phthalate	1620	1690		ug/Kg		104	66 - 120
Dimethyl phthalate	1620	1520		ug/Kg		94	65 - 124
Di-n-butyl phthalate	1620	1650		ug/Kg		102	58 - 130

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

Lab Sample ID: LCS 480-434274/2-A
Matrix: Solid
Analysis Batch: 434774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	1620	1750		ug/Kg		108	57 - 133
Fluoranthene	1620	1690		ug/Kg		105	62 - 120
Fluorene	1620	1660		ug/Kg		103	63 - 120
Hexachlorobenzene	1620	1650		ug/Kg		102	60 - 120
Hexachlorobutadiene	1620	1380		ug/Kg		85	45 - 120
Hexachlorocyclopentadiene	1620	1300		ug/Kg		80	47 - 120
Hexachloroethane	1620	1430		ug/Kg		89	41 - 120
Indeno[1,2,3-cd]pyrene	1620	1560		ug/Kg		96	56 - 134
Isophorone	1620	1660		ug/Kg		103	56 - 120
Naphthalene	1620	1450		ug/Kg		89	55 - 120
Nitrobenzene	1620	1640		ug/Kg		101	54 - 120
N-Nitrosodi-n-propylamine	1620	1690		ug/Kg		104	52 - 120
Pentachlorophenol	3240	3190		ug/Kg		99	51 - 120
Phenanthrene	1620	1680		ug/Kg		104	60 - 120
Phenol	1620	1520		ug/Kg		94	53 - 120
Pyrene	1620	1840		ug/Kg		114	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*105*		*54 - 120*
2-Fluorobiphenyl	*87*		*60 - 120*
2-Fluorophenol	*78*		*52 - 120*
Nitrobenzene-d5	*94*		*53 - 120*
Phenol-d5	*81*		*54 - 120*
p-Terphenyl-d14	*106*		*65 - 121*

Lab Sample ID: 480-141620-1 MS
Matrix: Solid
Analysis Batch: 435413

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434274

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	ND		1870	1630		ug/Kg	☼	87	46 - 120
2,4,6-Trichlorophenol	ND		1870	1610		ug/Kg	☼	86	41 - 123
2,4-Dichlorophenol	ND		1870	1500		ug/Kg	☼	80	45 - 120
2,4-Dimethylphenol	ND		1870	1480		ug/Kg	☼	79	52 - 120
2,4-Dinitrophenol	ND		3740	3190		ug/Kg	☼	85	41 - 146
2,4-Dinitrotoluene	ND		1870	1650		ug/Kg	☼	88	63 - 125
2,6-Dinitrotoluene	ND		1870	1720		ug/Kg	☼	92	66 - 120
2-Chloronaphthalene	ND		1870	1560		ug/Kg	☼	84	57 - 120
2-Chlorophenol	ND		1870	1420		ug/Kg	☼	76	43 - 120
2-Methylnaphthalene	ND		1870	1490		ug/Kg	☼	80	55 - 120
2-Methylphenol	ND		1870	1500		ug/Kg	☼	80	48 - 120
2-Nitroaniline	ND		1870	1560		ug/Kg	☼	84	61 - 120
2-Nitrophenol	ND		1870	1540		ug/Kg	☼	82	37 - 120
3,3'-Dichlorobenzidine	ND		3740	3350		ug/Kg	☼	90	37 - 126
3-Nitroaniline	ND		1870	1670		ug/Kg	☼	89	48 - 120
4,6-Dinitro-2-methylphenol	ND		3740	4490		ug/Kg	☼	120	23 - 149
4-Bromophenyl phenyl ether	ND		1870	1970		ug/Kg	☼	105	58 - 120
4-Chloro-3-methylphenol	ND		1870	1630		ug/Kg	☼	87	49 - 125

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

Lab Sample ID: 480-141620-1 MS
Matrix: Solid
Analysis Batch: 435413

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434274

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	ND		1870	1440		ug/Kg	☼	77	38 - 120
4-Chlorophenyl phenyl ether	ND		1870	1620		ug/Kg	☼	87	63 - 124
4-Methylphenol	ND		1870	1470		ug/Kg	☼	79	50 - 120
4-Nitroaniline	ND		1870	1570		ug/Kg	☼	84	47 - 120
4-Nitrophenol	ND		3740	3720		ug/Kg	☼	100	31 - 147
Acenaphthene	ND		1870	1550		ug/Kg	☼	83	60 - 120
Acenaphthylene	ND		1870	1560		ug/Kg	☼	84	58 - 121
Acetophenone	ND		1870	1460		ug/Kg	☼	78	47 - 120
Anthracene	ND		1870	1860		ug/Kg	☼	100	62 - 120
Atrazine	ND		3740	3350		ug/Kg	☼	90	60 - 150
Benzaldehyde	ND		3740	2690		ug/Kg	☼	72	10 - 150
Benzo[a]anthracene	ND		1870	1790		ug/Kg	☼	96	65 - 120
Benzo[a]pyrene	ND		1870	1800		ug/Kg	☼	96	64 - 120
Benzo[b]fluoranthene	ND		1870	1670		ug/Kg	☼	89	64 - 120
Benzo[g,h,i]perylene	ND		1870	1710		ug/Kg	☼	92	45 - 145
Benzo[k]fluoranthene	ND		1870	1880		ug/Kg	☼	101	65 - 120
Biphenyl	ND		1870	1580		ug/Kg	☼	85	58 - 120
bis (2-chloroisopropyl) ether	ND		1870	1280		ug/Kg	☼	68	31 - 120
Bis(2-chloroethoxy)methane	ND		1870	1420		ug/Kg	☼	76	52 - 120
Bis(2-chloroethyl)ether	ND		1870	1360		ug/Kg	☼	73	45 - 120
Bis(2-ethylhexyl) phthalate	ND		1870	1830		ug/Kg	☼	98	61 - 133
Butyl benzyl phthalate	ND		1870	1840		ug/Kg	☼	99	61 - 120
Caprolactam	ND		3740	3340		ug/Kg	☼	89	37 - 133
Carbazole	ND		1870	1880		ug/Kg	☼	100	59 - 120
Chrysene	ND		1870	1920		ug/Kg	☼	103	64 - 120
Dibenz(a,h)anthracene	ND		1870	1720		ug/Kg	☼	92	54 - 132
Dibenzofuran	ND		1870	1650		ug/Kg	☼	88	62 - 120
Diethyl phthalate	ND		1870	1720		ug/Kg	☼	92	66 - 120
Dimethyl phthalate	ND		1870	1580		ug/Kg	☼	84	65 - 124
Di-n-butyl phthalate	ND		1870	1780		ug/Kg	☼	95	58 - 130
Di-n-octyl phthalate	ND		1870	1730		ug/Kg	☼	93	57 - 133
Fluoranthene	ND		1870	1870		ug/Kg	☼	100	62 - 120
Fluorene	ND		1870	1670		ug/Kg	☼	89	63 - 120
Hexachlorobenzene	ND		1870	1880		ug/Kg	☼	101	60 - 120
Hexachlorobutadiene	ND		1870	1370		ug/Kg	☼	73	45 - 120
Hexachlorocyclopentadiene	ND		1870	1170		ug/Kg	☼	62	31 - 120
Hexachloroethane	ND		1870	1300		ug/Kg	☼	70	21 - 120
Indeno[1,2,3-cd]pyrene	ND		1870	1700		ug/Kg	☼	91	56 - 134
Isophorone	ND		1870	1520		ug/Kg	☼	81	56 - 120
Naphthalene	ND		1870	1470		ug/Kg	☼	79	46 - 120
Nitrobenzene	ND		1870	1420		ug/Kg	☼	76	49 - 120
N-Nitrosodi-n-propylamine	ND		1870	1370		ug/Kg	☼	73	46 - 120
Pentachlorophenol	ND		3740	3560		ug/Kg	☼	95	25 - 136
Phenanthrene	ND		1870	1960		ug/Kg	☼	105	60 - 122
Phenol	ND		1870	1460		ug/Kg	☼	78	50 - 120
Pyrene	ND		1870	2080		ug/Kg	☼	111	61 - 133

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

Lab Sample ID: 480-141620-1 MS
Matrix: Solid
Analysis Batch: 435413

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434274

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*98*		*54 - 120*
2-Fluorobiphenyl	*79*		*60 - 120*
2-Fluorophenol	*70*		*52 - 120*
Nitrobenzene-d5	*72*		*53 - 120*
Phenol-d5	*69*		*54 - 120*
p-Terphenyl-d14	*105*		*65 - 121*

Lab Sample ID: 480-141620-1 MSD
Matrix: Solid
Analysis Batch: 435413

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434274

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	ND		1900	1610		ug/Kg	☼	85	46 - 120	2	18
2,4,6-Trichlorophenol	ND		1900	1760		ug/Kg	☼	92	41 - 123	9	19
2,4-Dichlorophenol	ND		1900	1580		ug/Kg	☼	83	45 - 120	5	19
2,4-Dimethylphenol	ND		1900	1530		ug/Kg	☼	80	52 - 120	3	42
2,4-Dinitrophenol	ND		3800	3250		ug/Kg	☼	86	41 - 146	2	22
2,4-Dinitrotoluene	ND		1900	1860		ug/Kg	☼	98	63 - 125	12	20
2,6-Dinitrotoluene	ND		1900	1740		ug/Kg	☼	92	66 - 120	1	15
2-Chloronaphthalene	ND		1900	1600		ug/Kg	☼	84	57 - 120	2	21
2-Chlorophenol	ND		1900	1450		ug/Kg	☼	76	43 - 120	2	25
2-Methylnaphthalene	ND		1900	1580		ug/Kg	☼	83	55 - 120	6	21
2-Methylphenol	ND		1900	1560		ug/Kg	☼	82	48 - 120	4	27
2-Nitroaniline	ND		1900	1540		ug/Kg	☼	81	61 - 120	2	15
2-Nitrophenol	ND		1900	1580		ug/Kg	☼	83	37 - 120	3	18
3,3'-Dichlorobenzidine	ND		3800	3590		ug/Kg	☼	95	37 - 126	7	25
3-Nitroaniline	ND		1900	1670		ug/Kg	☼	88	48 - 120	0	19
4,6-Dinitro-2-methylphenol	ND		3800	4230		ug/Kg	☼	111	23 - 149	6	15
4-Bromophenyl phenyl ether	ND		1900	1770		ug/Kg	☼	93	58 - 120	11	15
4-Chloro-3-methylphenol	ND		1900	1660		ug/Kg	☼	87	49 - 125	2	27
4-Chloroaniline	ND		1900	1480		ug/Kg	☼	78	38 - 120	3	22
4-Chlorophenyl phenyl ether	ND		1900	1700		ug/Kg	☼	90	63 - 124	5	16
4-Methylphenol	ND		1900	1490		ug/Kg	☼	79	50 - 120	1	24
4-Nitroaniline	ND		1900	1670		ug/Kg	☼	88	47 - 120	6	24
4-Nitrophenol	ND		3800	4030		ug/Kg	☼	106	31 - 147	8	25
Acenaphthene	ND		1900	1610		ug/Kg	☼	85	60 - 120	4	35
Acenaphthylene	ND		1900	1600		ug/Kg	☼	84	58 - 121	2	18
Acetophenone	ND		1900	1410		ug/Kg	☼	74	47 - 120	3	20
Anthracene	ND		1900	1760		ug/Kg	☼	93	62 - 120	6	15
Atrazine	ND		3800	3430		ug/Kg	☼	90	60 - 150	2	20
Benzaldehyde	ND		3800	2790		ug/Kg	☼	73	10 - 150	3	20
Benzo[a]anthracene	ND		1900	1860		ug/Kg	☼	98	65 - 120	4	15
Benzo[a]pyrene	ND		1900	1700		ug/Kg	☼	89	64 - 120	6	15
Benzo[b]fluoranthene	ND		1900	1710		ug/Kg	☼	90	64 - 120	2	15
Benzo[g,h,i]perylene	ND		1900	1670		ug/Kg	☼	88	45 - 145	2	15
Benzo[k]fluoranthene	ND		1900	1850		ug/Kg	☼	97	65 - 120	2	22
Biphenyl	ND		1900	1600		ug/Kg	☼	84	58 - 120	1	20
bis (2-chloroisopropyl) ether	ND		1900	1270		ug/Kg	☼	67	31 - 120	0	24

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

Lab Sample ID: 480-141620-1 MSD
Matrix: Solid
Analysis Batch: 435413

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434274

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	ND		1900	1430		ug/Kg	☼	75	52 - 120	0	17
Bis(2-chloroethyl)ether	ND		1900	1350		ug/Kg	☼	71	45 - 120	1	21
Bis(2-ethylhexyl) phthalate	ND		1900	1850		ug/Kg	☼	98	61 - 133	1	15
Butyl benzyl phthalate	ND		1900	1900		ug/Kg	☼	100	61 - 120	3	16
Caprolactam	ND		3800	3450		ug/Kg	☼	91	37 - 133	3	20
Carbazole	ND		1900	1770		ug/Kg	☼	93	59 - 120	6	20
Chrysene	ND		1900	1800		ug/Kg	☼	95	64 - 120	6	15
Dibenz(a,h)anthracene	ND		1900	1690		ug/Kg	☼	89	54 - 132	2	15
Dibenzofuran	ND		1900	1670		ug/Kg	☼	88	62 - 120	1	15
Diethyl phthalate	ND		1900	1790		ug/Kg	☼	94	66 - 120	4	15
Dimethyl phthalate	ND		1900	1670		ug/Kg	☼	88	65 - 124	6	15
Di-n-butyl phthalate	ND		1900	1690		ug/Kg	☼	89	58 - 130	5	15
Di-n-octyl phthalate	ND		1900	1780		ug/Kg	☼	94	57 - 133	3	16
Fluoranthene	ND		1900	1760		ug/Kg	☼	93	62 - 120	6	15
Fluorene	ND		1900	1700		ug/Kg	☼	90	63 - 120	2	15
Hexachlorobenzene	ND		1900	1680		ug/Kg	☼	89	60 - 120	11	15
Hexachlorobutadiene	ND		1900	1500		ug/Kg	☼	79	45 - 120	9	44
Hexachlorocyclopentadiene	ND		1900	1280		ug/Kg	☼	67	31 - 120	9	49
Hexachloroethane	ND		1900	1360		ug/Kg	☼	72	21 - 120	4	46
Indeno[1,2,3-cd]pyrene	ND		1900	1670		ug/Kg	☼	88	56 - 134	2	15
Isophorone	ND		1900	1490		ug/Kg	☼	79	56 - 120	2	17
Naphthalene	ND		1900	1480		ug/Kg	☼	78	46 - 120	1	29
Nitrobenzene	ND		1900	1390		ug/Kg	☼	73	49 - 120	2	24
N-Nitrosodi-n-propylamine	ND		1900	1410		ug/Kg	☼	74	46 - 120	3	31
Pentachlorophenol	ND		3800	3660		ug/Kg	☼	96	25 - 136	3	35
Phenanthrene	ND		1900	1720		ug/Kg	☼	91	60 - 122	13	15
Phenol	ND		1900	1500		ug/Kg	☼	79	50 - 120	2	35
Pyrene	ND		1900	1910		ug/Kg	☼	101	61 - 133	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*97*		*54 - 120*
2-Fluorobiphenyl	*78*		*60 - 120*
2-Fluorophenol	*69*		*52 - 120*
Nitrobenzene-d5	*69*		*53 - 120*
Phenol-d5	*68*		*54 - 120*
p-Terphenyl-d14	*101*		*65 - 121*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-434275/1-A
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.420	J	1.7	0.32	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
4,4'-DDE	ND		1.7	0.35	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
4,4'-DDT	ND		1.7	0.39	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Aldrin	ND		1.7	0.41	ug/Kg		09/13/18 14:36	09/14/18 12:58	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-434275/1-A
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		1.7	0.30	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
cis-Chlordane	ND		1.7	0.82	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
beta-BHC	ND		1.7	0.30	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
delta-BHC	ND		1.7	0.31	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Dieldrin	ND		1.7	0.40	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Endosulfan I	ND		1.7	0.32	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Endosulfan II	ND		1.7	0.30	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Endosulfan sulfate	ND		1.7	0.31	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Endrin	ND		1.7	0.33	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Endrin aldehyde	ND		1.7	0.42	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Endrin ketone	ND		1.7	0.41	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
gamma-BHC (Lindane)	ND		1.7	0.30	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
trans-Chlordane	ND		1.7	0.52	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Heptachlor	ND		1.7	0.36	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Heptachlor epoxide	ND		1.7	0.43	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Methoxychlor	ND		1.7	0.34	ug/Kg		09/13/18 14:36	09/14/18 12:58	1
Toxaphene	ND		17	9.6	ug/Kg		09/13/18 14:36	09/14/18 12:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*45 - 120*	*09/13/18 14:36*	*09/14/18 12:58*	*1*
DCB Decachlorobiphenyl	*88*		*45 - 120*	*09/13/18 14:36*	*09/14/18 12:58*	*1*
Tetrachloro-m-xylene	*77*		*30 - 124*	*09/13/18 14:36*	*09/14/18 12:58*	*1*
Tetrachloro-m-xylene	*57*		*30 - 124*	*09/13/18 14:36*	*09/14/18 12:58*	*1*

Lab Sample ID: LCS 480-434275/2-A
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	16.5	16.1		ug/Kg		97	56 - 120
4,4'-DDE	16.5	14.4		ug/Kg		87	44 - 120
4,4'-DDT	16.5	15.9		ug/Kg		97	38 - 120
Aldrin	16.5	12.8		ug/Kg		77	38 - 120
alpha-BHC	16.5	11.6		ug/Kg		70	39 - 120
cis-Chlordane	16.5	12.4		ug/Kg		75	47 - 120
beta-BHC	16.5	13.2		ug/Kg		80	40 - 120
delta-BHC	16.5	13.5		ug/Kg		82	45 - 120
Dieldrin	16.5	15.2		ug/Kg		92	58 - 120
Endosulfan I	16.5	14.4		ug/Kg		87	49 - 120
Endosulfan II	16.5	16.3		ug/Kg		99	55 - 120
Endosulfan sulfate	16.5	13.8		ug/Kg		84	49 - 124
Endrin	16.5	15.8		ug/Kg		95	58 - 120
Endrin aldehyde	16.5	10.8		ug/Kg		65	37 - 121
Endrin ketone	16.5	15.4		ug/Kg		93	46 - 123
gamma-BHC (Lindane)	16.5	12.5		ug/Kg		76	50 - 120
trans-Chlordane	16.5	13.3		ug/Kg		81	48 - 120
Heptachlor	16.5	13.4		ug/Kg		81	50 - 120
Heptachlor epoxide	16.5	14.0		ug/Kg		85	50 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-434275/2-A
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434275

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methoxychlor			16.5	15.5		ug/Kg		94	58 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*95*		*45 - 120*
DCB Decachlorobiphenyl	*88*		*45 - 120*
Tetrachloro-m-xylene	*78*		*30 - 124*
Tetrachloro-m-xylene	*58*		*30 - 124*

Lab Sample ID: 480-141620-1 MS
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434275

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		19.0	14.4		ug/Kg	☼	76	37 - 126		
4,4'-DDE	ND		19.0	13.0		ug/Kg	☼	68	34 - 120		
4,4'-DDT	ND		19.0	14.1		ug/Kg	☼	74	43 - 123		
Aldrin	ND	F2	19.0	11.9		ug/Kg	☼	63	37 - 125		
alpha-BHC	ND	F2	19.0	10.6		ug/Kg	☼	56	39 - 120		
cis-Chlordane	ND		19.0	11.6		ug/Kg	☼	61	35 - 120		
beta-BHC	ND		19.0	12.4		ug/Kg	☼	65	36 - 120		
delta-BHC	ND	F2	19.0	12.4		ug/Kg	☼	65	34 - 120		
Dieldrin	ND	F2	19.0	13.8		ug/Kg	☼	72	45 - 120		
Endosulfan I	ND		19.0	13.1		ug/Kg	☼	69	39 - 120		
Endosulfan II	ND		19.0	14.6		ug/Kg	☼	77	34 - 126		
Endosulfan sulfate	ND		19.0	12.3		ug/Kg	☼	65	27 - 130		
Endrin	ND		19.0	14.3		ug/Kg	☼	75	47 - 121		
Endrin aldehyde	ND		19.0	9.36		ug/Kg	☼	49	33 - 123		
Endrin ketone	ND		19.0	14.0		ug/Kg	☼	74	43 - 126		
gamma-BHC (Lindane)	ND	F2	19.0	11.5		ug/Kg	☼	60	50 - 120		
trans-Chlordane	ND	F2	19.0	12.5		ug/Kg	☼	66	31 - 120		
Heptachlor	ND		19.0	12.3		ug/Kg	☼	65	42 - 120		
Heptachlor epoxide	ND		19.0	12.9		ug/Kg	☼	68	40 - 120		
Methoxychlor	ND		19.0	14.1		ug/Kg	☼	74	44 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*76*		*45 - 120*
DCB Decachlorobiphenyl	*71*		*45 - 120*
Tetrachloro-m-xylene	*62*		*30 - 124*
Tetrachloro-m-xylene	*45*		*30 - 124*

Lab Sample ID: 480-141620-1 MSD
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434275

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		18.8	17.2		ug/Kg	☼	91	37 - 126	18	21
4,4'-DDE	ND		18.8	15.6		ug/Kg	☼	83	34 - 120	18	18
4,4'-DDT	ND		18.8	17.0		ug/Kg	☼	90	43 - 123	19	25

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 480-141620-1 MSD
Matrix: Solid
Analysis Batch: 434412

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434275

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	ND	F2	18.8	14.1	F2	ug/Kg	☼	75	37 - 125	17	12
alpha-BHC	ND	F2	18.8	12.9	F2	ug/Kg	☼	68	39 - 120	20	15
cis-Chlordane	ND		18.8	13.8		ug/Kg	☼	73	35 - 120	17	23
beta-BHC	ND		18.8	14.1		ug/Kg	☼	75	36 - 120	13	19
delta-BHC	ND	F2	18.8	14.7	F2	ug/Kg	☼	78	34 - 120	16	14
Dieldrin	ND	F2	18.8	16.7	F2	ug/Kg	☼	89	45 - 120	19	12
Endosulfan I	ND		18.8	15.7		ug/Kg	☼	84	39 - 120	18	18
Endosulfan II	ND		18.8	17.6		ug/Kg	☼	94	34 - 126	19	26
Endosulfan sulfate	ND		18.8	14.0		ug/Kg	☼	74	27 - 130	13	35
Endrin	ND		18.8	17.2		ug/Kg	☼	91	47 - 121	19	20
Endrin aldehyde	ND		18.8	10.9		ug/Kg	☼	58	33 - 123	15	47
Endrin ketone	ND		18.8	16.2		ug/Kg	☼	86	43 - 126	15	37
gamma-BHC (Lindane)	ND	F2	18.8	13.4	F2	ug/Kg	☼	71	50 - 120	16	12
trans-Chlordane	ND	F2	18.8	14.7	F2	ug/Kg	☼	78	31 - 120	16	15
Heptachlor	ND		18.8	14.2		ug/Kg	☼	76	42 - 120	15	22
Heptachlor epoxide	ND		18.8	15.0		ug/Kg	☼	79	40 - 120	15	15
Methoxychlor	ND		18.8	16.1		ug/Kg	☼	85	44 - 150	13	24

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*92*		*45 - 120*
DCB Decachlorobiphenyl	*82*		*45 - 120*
Tetrachloro-m-xylene	*74*		*30 - 124*
Tetrachloro-m-xylene	*55*		*30 - 124*

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

Lab Sample ID: MB 480-434277/1-A
Matrix: Solid
Analysis Batch: 434440

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434277

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.048	mg/Kg		09/13/18 14:50	09/14/18 13:22	1
PCB-1221	ND		0.25	0.048	mg/Kg		09/13/18 14:50	09/14/18 13:22	1
PCB-1232	ND		0.25	0.048	mg/Kg		09/13/18 14:50	09/14/18 13:22	1
PCB-1242	ND		0.25	0.048	mg/Kg		09/13/18 14:50	09/14/18 13:22	1
PCB-1248	ND		0.25	0.048	mg/Kg		09/13/18 14:50	09/14/18 13:22	1
PCB-1254	ND		0.25	0.11	mg/Kg		09/13/18 14:50	09/14/18 13:22	1
PCB-1260	ND		0.25	0.11	mg/Kg		09/13/18 14:50	09/14/18 13:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*109*		*60 - 154*	*09/13/18 14:50*	*09/14/18 13:22*	*1*
Tetrachloro-m-xylene	*93*		*60 - 154*	*09/13/18 14:50*	*09/14/18 13:22*	*1*
DCB Decachlorobiphenyl	*108*		*65 - 174*	*09/13/18 14:50*	*09/14/18 13:22*	*1*
DCB Decachlorobiphenyl	*97*		*65 - 174*	*09/13/18 14:50*	*09/14/18 13:22*	*1*

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

Lab Sample ID: LCS 480-434277/2-A
Matrix: Solid
Analysis Batch: 434440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434277

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.16	3.10		mg/Kg		144	51 - 185
PCB-1260	2.16	3.42		mg/Kg		159	61 - 184

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*125*		*60 - 154*
Tetrachloro-m-xylene	*113*		*60 - 154*
DCB Decachlorobiphenyl	*116*		*65 - 174*
DCB Decachlorobiphenyl	*115*		*65 - 174*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-434362/1-A
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		17	5.3	ug/Kg		09/14/18 06:32	09/18/18 12:08	1
Silvex (2,4,5-TP)	ND		17	6.0	ug/Kg		09/14/18 06:32	09/18/18 12:08	1
2,4-D	ND		17	10	ug/Kg		09/14/18 06:32	09/18/18 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*21*	*X*	*28 - 129*	*09/14/18 06:32*	*09/18/18 12:08*	*1*
2,4-Dichlorophenylacetic acid	*24*	*X*	*28 - 129*	*09/14/18 06:32*	*09/18/18 12:08*	*1*

Lab Sample ID: LCS 480-434362/2-A
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	65.6	28.9		ug/Kg		44	41 - 120
Silvex (2,4,5-TP)	65.6	30.6		ug/Kg		47	39 - 125
2,4-D	65.6	60.3		ug/Kg		92	40 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*37*		*28 - 129*
2,4-Dichlorophenylacetic acid	*51*		*28 - 129*

Lab Sample ID: 480-141620-1 MS
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434362

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		75.5	27.0		ug/Kg	☼	36	29 - 123
Silvex (2,4,5-TP)	ND		75.5	30.9		ug/Kg	☼	41	22 - 140
2,4-D	ND		75.5	71.2		ug/Kg	☼	94	32 - 115

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 480-141620-1 MS
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434362

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	*37*		*28 - 129*
2,4-Dichlorophenylacetic acid	*47*		*28 - 129*

Lab Sample ID: 480-141620-1 MSD
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: MW-3 (20-22')
Prep Type: Total/NA
Prep Batch: 434362

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		74.6	25.7		ug/Kg	☼	35	29 - 123	5	50
Silvex (2,4,5-TP)	ND		74.6	28.6		ug/Kg	☼	38	22 - 140	8	50
2,4-D	ND		74.6	58.5		ug/Kg	☼	78	32 - 115	20	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	*36*		*28 - 129*
2,4-Dichlorophenylacetic acid	*40*		*28 - 129*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-434514/1-A
Matrix: Solid
Analysis Batch: 434884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434514

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		9.7	4.3	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Antimony	ND		14.6	0.39	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Arsenic	ND		1.9	0.39	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Barium	ND		0.49	0.11	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Beryllium	ND		0.19	0.027	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Cadmium	ND		0.19	0.029	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Calcium	8.00	J	48.5	3.2	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Chromium	ND		0.49	0.19	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Cobalt	ND		0.49	0.049	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Copper	ND		0.97	0.20	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Iron	ND		9.7	3.4	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Lead	ND		0.97	0.23	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Magnesium	1.34	J	19.4	0.90	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Manganese	0.122	J	0.19	0.031	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Nickel	ND		4.9	0.22	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Potassium	ND		29.1	19.4	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Selenium	ND		3.9	0.39	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Silver	ND		0.58	0.19	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Sodium	ND		136	12.6	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Thallium	ND		5.8	0.29	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Vanadium	ND		0.49	0.11	mg/Kg		09/15/18 09:45	09/17/18 23:27	1
Zinc	3.36		1.9	0.62	mg/Kg		09/15/18 09:45	09/17/18 23:27	1

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

Lab Sample ID: LCSSRM 480-434514/2-A
Matrix: Solid
Analysis Batch: 434884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434514

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10100	7401		mg/Kg		73.3	30.4 - 125.7
Antimony	184	47.49		mg/Kg		25.8	10.0 - 137.5
Arsenic	178	122.1		mg/Kg		68.6	65.7 - 120.8
Barium	228	170.5		mg/Kg		74.8	68.4 - 118.4
Beryllium	61.3	46.99		mg/Kg		76.7	69.3 - 120.1
Cadmium	143	102.7		mg/Kg		71.8	65.9 - 114.0
Calcium	5190	3715		mg/Kg		71.6	65.9 - 115.8
Chromium	107	76.62		mg/Kg		71.6	65.9 - 123.4
Cobalt	71.4	61.23		mg/Kg		85.8	71.3 - 120.4
Copper	116	85.71		mg/Kg		73.9	70.6 - 119.0
Iron	15000	11420		mg/Kg		76.1	33.0 - 155.3
Lead	210	167.1		mg/Kg		79.6	71.9 - 121.0
Magnesium	2570	1904		mg/Kg		74.1	55.3 - 123.0
Nickel	95.4	78.49		mg/Kg		82.3	65.6 - 117.4
Potassium	2420	1790		mg/Kg		74.0	47.9 - 116.9
Selenium	130	88.99		mg/Kg		68.5	59.2 - 120.0
Silver	91.2	64.59		mg/Kg		70.8	64.0 - 126.1
Sodium	690	502.7		mg/Kg		72.9	49.0 - 131.0
Thallium	156	120.3		mg/Kg		77.1	61.9 - 119.9
Vanadium	104	74.96		mg/Kg		72.1	61.4 - 126.0
Zinc	254	191.0		mg/Kg		75.2	66.9 - 122.4

Lab Sample ID: LCSSRM 480-434514/2-A
Matrix: Solid
Analysis Batch: 435192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434514

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	383	301.7		mg/Kg		78.8	73.1 - 120.1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-434798/1-A
Matrix: Solid
Analysis Batch: 435018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434798

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.0082	mg/Kg		09/18/18 11:20	09/18/18 17:09	1

Lab Sample ID: LCSSRM 480-434798/2-A ^10
Matrix: Solid
Analysis Batch: 435018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434798

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	23.7	14.12		mg/Kg		59.6	27.7 - 110.1

GC/MS VOA

Prep Batch: 434143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	5035A_L	
MB 480-434143/3-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-434143/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	
LCSD 480-434143/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_L	

Analysis Batch: 434221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	8260C	434143
MB 480-434143/3-A	Method Blank	Total/NA	Solid	8260C	434143
LCS 480-434143/1-A	Lab Control Sample	Total/NA	Solid	8260C	434143
LCSD 480-434143/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	434143

GC/MS Semi VOA

Prep Batch: 434274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	3550C	
MB 480-434274/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434274/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141620-1 MS	MW-3 (20-22')	Total/NA	Solid	3550C	
480-141620-1 MSD	MW-3 (20-22')	Total/NA	Solid	3550C	

Analysis Batch: 434774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-434274/1-A	Method Blank	Total/NA	Solid	8270D	434274
LCS 480-434274/2-A	Lab Control Sample	Total/NA	Solid	8270D	434274

Analysis Batch: 435413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	8270D	434274
480-141620-1 MS	MW-3 (20-22')	Total/NA	Solid	8270D	434274
480-141620-1 MSD	MW-3 (20-22')	Total/NA	Solid	8270D	434274

GC Semi VOA

Prep Batch: 434275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	3550C	
MB 480-434275/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434275/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141620-1 MS	MW-3 (20-22')	Total/NA	Solid	3550C	
480-141620-1 MSD	MW-3 (20-22')	Total/NA	Solid	3550C	

Prep Batch: 434277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	3550C	
MB 480-434277/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434277/2-A	Lab Control Sample	Total/NA	Solid	3550C	

GC Semi VOA (Continued)

Prep Batch: 434362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	8151A	
MB 480-434362/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 480-434362/2-A	Lab Control Sample	Total/NA	Solid	8151A	
480-141620-1 MS	MW-3 (20-22')	Total/NA	Solid	8151A	
480-141620-1 MSD	MW-3 (20-22')	Total/NA	Solid	8151A	

Analysis Batch: 434412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	8081B	434275
MB 480-434275/1-A	Method Blank	Total/NA	Solid	8081B	434275
LCS 480-434275/2-A	Lab Control Sample	Total/NA	Solid	8081B	434275
480-141620-1 MS	MW-3 (20-22')	Total/NA	Solid	8081B	434275
480-141620-1 MSD	MW-3 (20-22')	Total/NA	Solid	8081B	434275

Analysis Batch: 434440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	8082A	434277
MB 480-434277/1-A	Method Blank	Total/NA	Solid	8082A	434277
LCS 480-434277/2-A	Lab Control Sample	Total/NA	Solid	8082A	434277

Analysis Batch: 434907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	8151A	434362
MB 480-434362/1-A	Method Blank	Total/NA	Solid	8151A	434362
LCS 480-434362/2-A	Lab Control Sample	Total/NA	Solid	8151A	434362
480-141620-1 MS	MW-3 (20-22')	Total/NA	Solid	8151A	434362
480-141620-1 MSD	MW-3 (20-22')	Total/NA	Solid	8151A	434362

Metals

Prep Batch: 434514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	3050B	
MB 480-434514/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-434514/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 434798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	7471B	
MB 480-434798/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-434798/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 434884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	6010C	434514
MB 480-434514/1-A	Method Blank	Total/NA	Solid	6010C	434514
LCSSRM 480-434514/2-A	Lab Control Sample	Total/NA	Solid	6010C	434514

Metals (Continued)

Analysis Batch: 435018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	7471B	434798
MB 480-434798/1-A	Method Blank	Total/NA	Solid	7471B	434798
LCSSRM 480-434798/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	434798

Analysis Batch: 435192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSSRM 480-434514/2-A	Lab Control Sample	Total/NA	Solid	6010C	434514

General Chemistry

Analysis Batch: 434153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141620-1	MW-3 (20-22')	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Client Sample ID: MW-3 (20-22')

Lab Sample ID: 480-141620-1

Date Collected: 09/11/18 13:00

Matrix: Solid

Date Received: 09/12/18 15:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	434153	09/13/18 07:49	CSW	TAL BUF

Client Sample ID: MW-3 (20-22')

Lab Sample ID: 480-141620-1

Date Collected: 09/11/18 13:00

Matrix: Solid

Date Received: 09/12/18 15:53

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			434143	09/13/18 00:38	RLB	TAL BUF
Total/NA	Analysis	8260C		1	434221	09/13/18 14:42	CDC	TAL BUF
Total/NA	Prep	3550C			434274	09/13/18 14:28	SGD	TAL BUF
Total/NA	Analysis	8270D		1	435413	09/20/18 17:14	PJQ	TAL BUF
Total/NA	Prep	3550C			434275	09/13/18 14:36	SGD	TAL BUF
Total/NA	Analysis	8081B		1	434412	09/14/18 15:13	JLS	TAL BUF
Total/NA	Prep	3550C			434277	09/13/18 14:50	SGD	TAL BUF
Total/NA	Analysis	8082A		1	434440	09/14/18 15:39	W1T	TAL BUF
Total/NA	Prep	8151A			434362	09/14/18 06:32	SMP	TAL BUF
Total/NA	Analysis	8151A		1	434907	09/18/18 14:07	MAN	TAL BUF
Total/NA	Prep	3050B			434514	09/15/18 09:45	KMP	TAL BUF
Total/NA	Analysis	6010C		1	434884	09/18/18 00:29	LMH	TAL BUF
Total/NA	Prep	7471B			434798	09/18/18 11:20	BMB	TAL BUF
Total/NA	Analysis	7471B		1	435018	09/18/18 17:42	BMB	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

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 (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5035A_L	Closed System Purge and Trap	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF
8151A	Extraction (Herbicides)	SW846	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 - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141620-1	MW-3 (20-22')	Solid	09/11/18 13:00	09/12/18 15:53

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica

Client Information
Client Contact: Bryan Mayback
Company: Benchmark Env. Eng. & Science, PLLC
Address: 2558 Hamburg Turnpike
City: Lackawanna
State, Zip: NY, 14218
Phone: 716-856-0599(Tel)
Email: bmayback@turnkeyllc.com
Project Name: Benchmark - 990 Niagara St. site
Site:

Sampler: Dick Sunal
Phone: 716-713-3437

Due Date Requested: Standard
TAT Requested (days):
B0462-018-001
PO #: Purchase Order Requested
WO #:
Project #: 48018286
SSOW#:

Lab PM: Fischer, Brian J
E-Mail: brian.fischer@testamericainc.com

Carrier Tracking No(s):

COC No: 480-114782-28554.3
Page: Page 3 of 5
Job #:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acet, D - Nitric A, E - NaHSO, F - MeOH, G - Amchl, H - Ascorb, I - Ice, J - DI Wate, K - EDTA, L - EDA, M - Hexane, N - None
Other:

480-141620 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8010C, 7471B, 8270D	8081B, 8082A, 8151A	Moisture - Percent Moisture	TAL Metals / TCL SVOC's, PCB's, Pest, Herb, TCLP List VOC's	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
MW-3(20-22')	9/11/18	13:00	G	Solid	N	X	X	X	X			Enclves
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat B, Deliverables

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	9/12/18 8:00		Received by:	9/12/18 1246	TAL
Relinquished by: Rebecca Lowery	9/12/18 1553	TAB	Received by:	9/12/18 1553	TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.0 #1

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-141620-1

Login Number: 141620
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

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 (Excluding tests with immediate HTs)..	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	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: 480-141736-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Joseph V. Giacomazza

Authorized for release by:
9/27/2018 1:53:04 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

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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 - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

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.

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
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.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-141736-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-141736-1

Comments
No additional comments.

Receipt
The samples were received on 9/13/2018 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-434452 recovered outside acceptance criteria, low biased, for Chloromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following sample is impacted: MW-1 (22-24') (480-141736-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8081B: 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) 8081B: All primary data for analytical batch 434855 is reported from the RTX-CLPI column.

Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-435129/31) that had recoveries for the surrogate Decachlorobiphenyl that were above acceptance limits: MW-1 (22-24') (480-141736-1). The secondary surrogate Tetrachloro-m-xylene is within limits. Therefore, the data has been reported.

Method(s) 8082A: The following samples are associated with laboratory control sample (LCS 480-434959/2-A) that had recoveries for the surrogate Decachlorobiphenyl that were above acceptance limits: MW-1 (22-24') (480-141736-1). The secondary surrogate Tetrachloro-m-xylene was within limits. Therefore, the data has been reported.

Method(s) 8082A: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) sample: (480-141736-C-1-B MS). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method(s) 8082A: All primary data for analytical batch 435129 is reported from the ZB-35 column.

Method(s) 8151A: The surrogate recovery for method blank (MB 480-434362/1-A) associated with preparation batch 480-434362 was below the Quality Control limit. All samples had surrogate recoveries within acceptable limits therefore the data has been reported. The following sample is impacted: MW-1 (22-24') (480-141736-1).

Method(s) 8151A: All primary data for analytical batch 434907 is reported from the RTX-CLPI column, while all primary data for analytical batch 435053 is reported from the RTX-CLPII column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The serial dilution and post spike (480-141736-A-1-E PDS) and (480-141736-A-1-E SD ^5), associated with batch 480-434704, exceeded the quality control limits for Total Iron, Manganese, and Zinc. Sample matrix is suspected, therefore, no corrective action was necessary.

Method(s) 6010C: The serial dilution (480-141736-A-1-E SD ^5) associated with batch 480-435083, exhibited results outside the quality

Job ID: 480-141736-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

control limits for Total Calcium, Chromium, Magnesium, and Vanadium. However, the post digestion spike (PDS) was compliant, therefore no corrective action was necessary.

Method(s) 6010C: The recovery of post spike, (480-141736-A-1-E PDS), associated with batch 480-435083, exhibited results outside quality control limits for Total Aluminum. However, the serial dilution (SD) of this sample was compliant, therefore no corrective action was necessary.

Method(s) 6010C: The following sample was diluted due to the presence of Total Calcium which interferes with Copper: MW-2 (0-2') (480-141736-2). 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.

Organic Prep
Method(s) 3550C: The following sample required a Florisil clean-up, via 3620C, to reduce matrix interferences: MW-1 (22-24') (480-141736-1).

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 - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-1 (22-24') — Lab Sample ID: 480-141736-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13	J	17	2.9	ug/Kg	1	☼	8260C	Total/NA
Benzo[a]anthracene	24	J	190	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	39	J	190	30	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	48	J F2 F1	190	20	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	64	J F2 F1	190	28	ug/Kg	1	☼	8270D	Total/NA
Pyrene	45	J	190	22	ug/Kg	1	☼	8270D	Total/NA
Aluminum	11500	F2	11.0	4.9	mg/Kg	1	☼	6010C	Total/NA
Antimony	1.0	J F1	16.5	0.44	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.8		2.2	0.44	mg/Kg	1	☼	6010C	Total/NA
Barium	54.7	F1	0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.50		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.16	J	0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Calcium	67600	F2 B	55.1	3.6	mg/Kg	1	☼	6010C	Total/NA
Chromium	14.5		0.55	0.22	mg/Kg	1	☼	6010C	Total/NA
Cobalt	7.3		0.55	0.055	mg/Kg	1	☼	6010C	Total/NA
Copper	13.9		1.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Iron	14900		11.0	3.9	mg/Kg	1	☼	6010C	Total/NA
Lead	14.6		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Magnesium	28800	F2	22.1	1.0	mg/Kg	1	☼	6010C	Total/NA
Manganese	376	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	16.2		5.5	0.25	mg/Kg	1	☼	6010C	Total/NA
Potassium	4110	F1	33.1	22.1	mg/Kg	1	☼	6010C	Total/NA
Sodium	290		154	14.3	mg/Kg	1	☼	6010C	Total/NA
Vanadium	23.3		0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	51.5	F2 F1	2.2	0.71	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.011	J	0.022	0.0089	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: MW-2 (0-2') — Lab Sample ID: 480-141736-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	49	J	180	36	ug/Kg	1	☼	8270D	Total/NA
Acenaphthene	250		180	27	ug/Kg	1	☼	8270D	Total/NA
Anthracene	550		180	45	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	960		180	18	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	800		180	27	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1100		180	29	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	510		180	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	450		180	24	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	570		180	62	ug/Kg	1	☼	8270D	Total/NA
Carbazole	300		180	21	ug/Kg	1	☼	8270D	Total/NA
Chrysene	940		180	41	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	140	J	180	32	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	150	J	180	21	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	2300		180	19	ug/Kg	1	☼	8270D	Total/NA
Fluorene	240		180	21	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	500		180	22	ug/Kg	1	☼	8270D	Total/NA
Naphthalene	76	J	180	24	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	2200		180	27	ug/Kg	1	☼	8270D	Total/NA
Pyrene	2000		180	21	ug/Kg	1	☼	8270D	Total/NA
Aluminum	9120		10.7	4.7	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-2 (0-2') (Continued)

Lab Sample ID: 480-141736-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.4		2.1	0.43	mg/Kg	1	☼	6010C	Total/NA
Barium	118		0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.43		0.21	0.030	mg/Kg	1	☼	6010C	Total/NA
Cadmium	3.8		0.21	0.032	mg/Kg	1	☼	6010C	Total/NA
Calcium	126000	B	107	7.1	mg/Kg	2	☼	6010C	Total/NA
Chromium	13.8		0.54	0.21	mg/Kg	1	☼	6010C	Total/NA
Cobalt	9.4		0.54	0.054	mg/Kg	1	☼	6010C	Total/NA
Copper	15.8		2.1	0.45	mg/Kg	2	☼	6010C	Total/NA
Iron	11700		10.7	3.8	mg/Kg	1	☼	6010C	Total/NA
Lead	18.3		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Magnesium	22300		21.5	0.99	mg/Kg	1	☼	6010C	Total/NA
Manganese	430	B	0.21	0.034	mg/Kg	1	☼	6010C	Total/NA
Nickel	18.7		5.4	0.25	mg/Kg	1	☼	6010C	Total/NA
Potassium	3390		32.2	21.5	mg/Kg	1	☼	6010C	Total/NA
Sodium	325		150	14.0	mg/Kg	1	☼	6010C	Total/NA
Vanadium	17.4		0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Zinc	1020		2.1	0.69	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-1 (22-24')
Date Collected: 09/12/18 13:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-1
Matrix: Solid
Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		3.4	0.25	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,1,2,2-Tetrachloroethane	ND		3.4	0.55	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.4	0.78	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,1,2-Trichloroethane	ND		3.4	0.44	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,1-Dichloroethane	ND		3.4	0.42	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,1-Dichloroethene	ND		3.4	0.42	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2,4-Trichlorobenzene	ND		3.4	0.21	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2,4-Trimethylbenzene	ND		3.4	0.66	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2-Dibromo-3-Chloropropane	ND		3.4	1.7	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2-Dibromoethane	ND		3.4	0.44	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2-Dichlorobenzene	ND		3.4	0.27	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2-Dichloroethane	ND		3.4	0.17	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,2-Dichloropropane	ND		3.4	1.7	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,3,5-Trimethylbenzene	ND		3.4	0.22	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,3-Dichlorobenzene	ND		3.4	0.18	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
1,4-Dichlorobenzene	ND		3.4	0.48	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
2-Butanone (MEK)	ND		17	1.3	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
2-Hexanone	ND		17	1.7	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
4-Isopropyltoluene	ND		3.4	0.27	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
4-Methyl-2-pentanone (MIBK)	ND		17	1.1	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Acetone	**13**	**J**	17	2.9	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Benzene	ND		3.4	0.17	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Bromodichloromethane	ND		3.4	0.46	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Bromoform	ND		3.4	1.7	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Bromomethane	ND		3.4	0.31	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Carbon disulfide	ND		3.4	1.7	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Carbon tetrachloride	ND		3.4	0.33	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Chlorobenzene	ND		3.4	0.45	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Chloroethane	ND		3.4	0.77	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Chloroform	ND		3.4	0.21	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Chloromethane	ND		3.4	0.21	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
cis-1,2-Dichloroethene	ND		3.4	0.44	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
cis-1,3-Dichloropropene	ND		3.4	0.49	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Cyclohexane	ND		3.4	0.48	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Dibromochloromethane	ND		3.4	0.44	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Dichlorodifluoromethane	ND		3.4	0.28	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Ethylbenzene	ND		3.4	0.24	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Isopropylbenzene	ND		3.4	0.52	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
m,p-Xylene	ND		6.8	0.57	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Methyl acetate	ND		17	2.1	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Methyl tert-butyl ether	ND		3.4	0.34	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Methylcyclohexane	ND		3.4	0.52	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Methylene Chloride	ND		3.4	1.6	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
n-Butylbenzene	ND		3.4	0.30	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
N-Propylbenzene	ND		3.4	0.27	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
o-Xylene	ND		3.4	0.45	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
sec-Butylbenzene	ND		3.4	0.30	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Styrene	ND		3.4	0.17	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
tert-Butylbenzene	ND		3.4	0.36	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-1 (22-24')
Date Collected: 09/12/18 13:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-1
Matrix: Solid
Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		3.4	0.46	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Toluene	ND		3.4	0.26	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
trans-1,2-Dichloroethene	ND		3.4	0.35	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
trans-1,3-Dichloropropene	ND		3.4	1.5	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Trichloroethene	ND		3.4	0.75	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Trichlorofluoromethane	ND		3.4	0.32	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Vinyl chloride	ND		3.4	0.42	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1
Xylenes, Total	ND		6.8	0.57	ug/Kg	☼	09/14/18 09:55	09/14/18 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*	*09/14/18 09:55*	*09/14/18 15:22*	*1*
4-Bromofluorobenzene (Surr)	*97*		*72 - 126*	*09/14/18 09:55*	*09/14/18 15:22*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*	*09/14/18 09:55*	*09/14/18 15:22*	*1*
Toluene-d8 (Surr)	*103*		*71 - 125*	*09/14/18 09:55*	*09/14/18 15:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		190	51	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2,4,6-Trichlorophenol	ND		190	37	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2,4-Dichlorophenol	ND		190	20	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2,4-Dimethylphenol	ND		190	45	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2,4-Dinitrophenol	ND		1800	860	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2,4-Dinitrotoluene	ND		190	39	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2,6-Dinitrotoluene	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2-Chloronaphthalene	ND		190	31	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2-Chlorophenol	ND		190	34	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2-Methylnaphthalene	ND		190	37	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2-Methylphenol	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2-Nitroaniline	ND		360	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
2-Nitrophenol	ND		190	53	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
3,3'-Dichlorobenzidine	ND		360	220	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
3-Nitroaniline	ND		360	52	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4,6-Dinitro-2-methylphenol	ND		360	190	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Bromophenyl phenyl ether	ND		190	26	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Chloro-3-methylphenol	ND		190	46	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Chloroaniline	ND		190	46	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Chlorophenyl phenyl ether	ND		190	23	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Methylphenol	ND		360	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Nitroaniline	ND		360	98	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
4-Nitrophenol	ND		360	130	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Acenaphthene	ND		190	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Acenaphthylene	ND		190	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Acetophenone	ND		190	25	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Anthracene	ND		190	46	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Atrazine	ND		190	65	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Benzaldehyde	ND		190	150	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Benzo[a]anthracene	**24**	**J**	190	19	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Benzo[a]pyrene	ND		190	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Benzo[b]fluoranthene	**39**	**J**	190	30	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Benzo[g,h,i]perylene	ND		190	20	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-1 (22-24')
Date Collected: 09/12/18 13:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-1
Matrix: Solid
Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		190	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Biphenyl	ND		190	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
bis (2-chloroisopropyl) ether	ND		190	37	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Bis(2-chloroethoxy)methane	ND		190	40	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Bis(2-chloroethyl)ether	ND		190	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Bis(2-ethylhexyl) phthalate	ND		190	64	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Butyl benzyl phthalate	ND		190	31	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Caprolactam	ND		190	56	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Carbazole	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Chrysene	ND		190	42	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Dibenz(a,h)anthracene	ND		190	33	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Dibenzofuran	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Diethyl phthalate	ND		190	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Dimethyl phthalate	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Di-n-butyl phthalate	ND		190	32	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Di-n-octyl phthalate	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Fluoranthene	**48**	**J F2 F1**	190	20	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Fluorene	ND		190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Hexachlorobenzene	ND		190	25	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Hexachlorobutadiene	ND		190	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Hexachlorocyclopentadiene	ND		190	25	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Hexachloroethane	ND		190	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Indeno[1,2,3-cd]pyrene	ND		190	23	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Isophorone	ND		190	40	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Naphthalene	ND		190	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Nitrobenzene	ND		190	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
N-Nitrosodi-n-propylamine	ND		190	32	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
N-Nitrosodiphenylamine	ND		190	150	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Pentachlorophenol	ND		360	190	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Phenanthrene	**64**	**J F2 F1**	190	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Phenol	ND		190	29	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1
Pyrene	**45**	**J**	190	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*82*		*54 - 120*	*09/14/18 15:26*	*09/17/18 17:27*	*1*
2-Fluorobiphenyl	*85*		*60 - 120*	*09/14/18 15:26*	*09/17/18 17:27*	*1*
2-Fluorophenol	*75*		*52 - 120*	*09/14/18 15:26*	*09/17/18 17:27*	*1*
Nitrobenzene-d5	*77*		*53 - 120*	*09/14/18 15:26*	*09/17/18 17:27*	*1*
Phenol-d5	*77*		*54 - 120*	*09/14/18 15:26*	*09/17/18 17:27*	*1*
p-Terphenyl-d14	*119*		*65 - 121*	*09/14/18 15:26*	*09/17/18 17:27*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.8	0.36	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
4,4'-DDE	ND		1.8	0.39	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
4,4'-DDT	ND		1.8	0.43	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Aldrin	ND		1.8	0.45	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
alpha-BHC	ND		1.8	0.33	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
cis-Chlordane	ND		1.8	0.91	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
beta-BHC	ND		1.8	0.33	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1

Client Sample ID: MW-1 (22-24')
Date Collected: 09/12/18 13:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-1
Matrix: Solid
Percent Solids: 90.3

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		1.8	0.34	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Dieldrin	ND		1.8	0.44	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Endosulfan I	ND		1.8	0.35	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Endosulfan II	ND		1.8	0.33	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Endosulfan sulfate	ND		1.8	0.34	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Endrin	ND		1.8	0.36	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Endrin aldehyde	ND		1.8	0.47	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Endrin ketone	ND		1.8	0.45	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
gamma-BHC (Lindane)	ND		1.8	0.34	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
trans-Chlordane	ND		1.8	0.58	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Heptachlor	ND		1.8	0.40	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Heptachlor epoxide	ND		1.8	0.47	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Methoxychlor	ND		1.8	0.37	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1
Toxaphene	ND		18	11	ug/Kg	☼	09/17/18 14:28	09/18/18 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*45 - 120*	*09/17/18 14:28*	*09/18/18 13:15*	*1*
DCB Decachlorobiphenyl	*73*		*45 - 120*	*09/17/18 14:28*	*09/18/18 13:15*	*1*
Tetrachloro-m-xylene	*70*		*30 - 124*	*09/17/18 14:28*	*09/18/18 13:15*	*1*
Tetrachloro-m-xylene	*56*		*30 - 124*	*09/17/18 14:28*	*09/18/18 13:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.27	0.052	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1
PCB-1221	ND		0.27	0.052	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1
PCB-1232	ND		0.27	0.052	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1
PCB-1242	ND		0.27	0.052	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1
PCB-1248	ND		0.27	0.052	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1
PCB-1254	ND		0.27	0.12	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1
PCB-1260	ND		0.27	0.12	mg/Kg	☼	09/18/18 14:26	09/19/18 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*60 - 154*	*09/18/18 14:26*	*09/19/18 21:55*	*1*
Tetrachloro-m-xylene	*83*		*60 - 154*	*09/18/18 14:26*	*09/19/18 21:55*	*1*
DCB Decachlorobiphenyl	*111*		*65 - 174*	*09/18/18 14:26*	*09/19/18 21:55*	*1*
DCB Decachlorobiphenyl	*96*		*65 - 174*	*09/18/18 14:26*	*09/19/18 21:55*	*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	☼	09/14/18 08:40	09/19/18 10:40	1
Silvex (2,4,5-TP)	ND		18	6.5	ug/Kg	☼	09/14/18 08:40	09/19/18 10:40	1
2,4-D	ND		18	11	ug/Kg	☼	09/14/18 08:40	09/19/18 10:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*58*		*28 - 129*	*09/14/18 08:40*	*09/19/18 10:40*	*1*
2,4-Dichlorophenylacetic acid	*53*		*28 - 129*	*09/14/18 08:40*	*09/19/18 10:40*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**11500**	**F2**	11.0	4.9	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Antimony	**1.0**	**J F1**	16.5	0.44	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1

Client Sample ID: MW-1 (22-24')
Date Collected: 09/12/18 13:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-1
Matrix: Solid
Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.2	0.44	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Barium	54.7	F1	0.55	0.12	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Beryllium	0.50		0.22	0.031	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Cadmium	0.16	J	0.22	0.033	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Calcium	67600	F2 B	55.1	3.6	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Chromium	14.5		0.55	0.22	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Cobalt	7.3		0.55	0.055	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Copper	13.9		1.1	0.23	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Iron	14900		11.0	3.9	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Lead	14.6		1.1	0.26	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Magnesium	28800	F2	22.1	1.0	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Manganese	376	B	0.22	0.035	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Nickel	16.2		5.5	0.25	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Potassium	4110	F1	33.1	22.1	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Selenium	ND		4.4	0.44	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Silver	ND		0.66	0.22	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Sodium	290		154	14.3	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Thallium	ND		6.6	0.33	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Vanadium	23.3		0.55	0.12	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1
Zinc	51.5	F2 F1	2.2	0.71	mg/Kg	☼	09/18/18 10:11	09/18/18 21:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.022	0.0089	mg/Kg	☼	09/18/18 11:20	09/18/18 17:45	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.7		0.1	0.1	%			09/14/18 07:03	1
Percent Solids	90.3		0.1	0.1	%			09/14/18 07:03	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-2 (0-2')
Date Collected: 09/13/18 09:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-2
Matrix: Solid
Percent Solids: 93.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		180	49	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2,4,6-Trichlorophenol	ND		180	36	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2,4-Dichlorophenol	ND		180	19	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2,4-Dimethylphenol	ND		180	44	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2,4-Dinitrophenol	ND		1800	840	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2,4-Dinitrotoluene	ND		180	37	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2,6-Dinitrotoluene	ND		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2-Chloronaphthalene	ND		180	30	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2-Chlorophenol	ND		180	33	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2-Methylnaphthalene	**49**	**J**	180	36	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2-Methylphenol	ND		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2-Nitroaniline	ND		350	27	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
2-Nitrophenol	ND		180	51	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
3,3'-Dichlorobenzidine	ND		350	210	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
3-Nitroaniline	ND		350	50	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4,6-Dinitro-2-methylphenol	ND		350	180	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Bromophenyl phenyl ether	ND		180	26	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Chloro-3-methylphenol	ND		180	45	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Chloroaniline	ND		180	45	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Chlorophenyl phenyl ether	ND		180	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Methylphenol	ND		350	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Nitroaniline	ND		350	95	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
4-Nitrophenol	ND		350	130	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Acenaphthene	**250**		180	27	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Acenaphthylene	ND		180	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Acetophenone	ND		180	25	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Anthracene	**550**		180	45	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Atrazine	ND		180	63	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Benzaldehyde	ND		180	140	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Benzo[a]anthracene	**960**		180	18	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Benzo[a]pyrene	**800**		180	27	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Benzo[b]fluoranthene	**1100**		180	29	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Benzo[g,h,i]perylene	**510**		180	19	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Benzo[k]fluoranthene	**450**		180	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Biphenyl	ND		180	27	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
bis (2-chloroisopropyl) ether	ND		180	36	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Bis(2-chloroethoxy)methane	ND		180	38	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Bis(2-chloroethyl)ether	ND		180	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Bis(2-ethylhexyl) phthalate	**570**		180	62	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Butyl benzyl phthalate	ND		180	30	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Caprolactam	ND		180	55	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Carbazole	**300**		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Chrysene	**940**		180	41	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Dibenz(a,h)anthracene	**140**	**J**	180	32	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Dibenzofuran	**150**	**J**	180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Diethyl phthalate	ND		180	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Dimethyl phthalate	ND		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Di-n-butyl phthalate	ND		180	31	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Di-n-octyl phthalate	ND		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1

Client Sample ID: MW-2 (0-2')
Date Collected: 09/13/18 09:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-2
Matrix: Solid
Percent Solids: 93.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	2300		180	19	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Fluorene	240		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Hexachlorobenzene	ND		180	25	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Hexachlorobutadiene	ND		180	27	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Hexachlorocyclopentadiene	ND		180	25	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Hexachloroethane	ND		180	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Indeno[1,2,3-cd]pyrene	500		180	22	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Isophorone	ND		180	38	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Naphthalene	76	J	180	24	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Nitrobenzene	ND		180	20	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
N-Nitrosodi-n-propylamine	ND		180	31	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
N-Nitrosodiphenylamine	ND		180	150	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Pentachlorophenol	ND		350	180	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Phenanthrene	2200		180	27	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Phenol	ND		180	28	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1
Pyrene	2000		180	21	ug/Kg	☼	09/14/18 15:26	09/17/18 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*54 - 120*	*09/14/18 15:26*	*09/17/18 17:52*	*1*
2-Fluorobiphenyl	*89*		*60 - 120*	*09/14/18 15:26*	*09/17/18 17:52*	*1*
2-Fluorophenol	*76*		*52 - 120*	*09/14/18 15:26*	*09/17/18 17:52*	*1*
Nitrobenzene-d5	*82*		*53 - 120*	*09/14/18 15:26*	*09/17/18 17:52*	*1*
Phenol-d5	*80*		*54 - 120*	*09/14/18 15:26*	*09/17/18 17:52*	*1*
p-Terphenyl-d14	*114*		*65 - 121*	*09/14/18 15:26*	*09/17/18 17:52*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9120		10.7	4.7	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Antimony	ND		16.1	0.43	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Arsenic	2.4		2.1	0.43	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Barium	118		0.54	0.12	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Beryllium	0.43		0.21	0.030	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Cadmium	3.8		0.21	0.032	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Calcium	126000	B	107	7.1	mg/Kg	☼	09/18/18 10:11	09/19/18 10:40	2
Chromium	13.8		0.54	0.21	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Cobalt	9.4		0.54	0.054	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Copper	15.8		2.1	0.45	mg/Kg	☼	09/18/18 10:11	09/19/18 10:40	2
Iron	11700		10.7	3.8	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Lead	18.3		1.1	0.26	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Magnesium	22300		21.5	0.99	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Manganese	430	B	0.21	0.034	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Nickel	18.7		5.4	0.25	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Potassium	3390		32.2	21.5	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Selenium	ND		4.3	0.43	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Silver	ND		0.64	0.21	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Sodium	325		150	14.0	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Thallium	ND		6.4	0.32	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Vanadium	17.4		0.54	0.12	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1
Zinc	1020		2.1	0.69	mg/Kg	☼	09/18/18 10:11	09/18/18 21:29	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-2 (0-2')
Date Collected: 09/13/18 09:00
Date Received: 09/13/18 16:30

Lab Sample ID: 480-141736-2
Matrix: Solid
Percent Solids: 93.1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.022	0.0087	mg/Kg	☼	09/18/18 11:20	09/18/18 17:49	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.9		0.1	0.1	%			09/14/18 07:03	1
Percent Solids	93.1		0.1	0.1	%			09/14/18 07:03	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(60-140)	(71-125)
480-141736-1	MW-1 (22-24')	104	97	104	103
LCS 480-434429/1-A	Lab Control Sample	102	101	104	104
LCSD 480-434429/2-A	Lab Control Sample Dup	98	102	102	104
MB 480-434429/3-A	Method Blank	102	99	102	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(54-120)	(60-120)	(52-120)	(53-120)	(54-120)	(65-121)
480-141736-1	MW-1 (22-24')	82	85	75	77	77	119
480-141736-1 MS	MW-1 (22-24')	97	90	77	83	83	111
480-141736-1 MSD	MW-1 (22-24')	98	89	76	82	79	112
480-141736-2	MW-2 (0-2')	90	89	76	82	80	114
LCS 480-434535/2-A	Lab Control Sample	90	90	80	79	85	103
MB 480-434535/1-A	Method Blank	83	93	84	86	86	118

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHd14 = p-Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-141736-1	MW-1 (22-24')	82	73	70	56
LCS 480-434785/2-A	Lab Control Sample	86	83	70	49
MB 480-434785/1-A	Method Blank	87	84	73	53

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-141736-1	MW-1 (22-24')	87	83	111	96
480-141736-1 MS	MW-1 (22-24')	139	118	175 X	215 X
480-141736-1 MSD	MW-1 (22-24')	132	120	157	159
LCS 480-434959/2-A	Lab Control Sample	133	121	165	192 X
MB 480-434959/1-A	Method Blank	91	84	111	95

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1	DCPAA2
Lab Sample ID	Client Sample ID	(28-129)	(28-129)
480-141736-1	MW-1 (22-24')	58	53
LCS 480-434362/2-A	Lab Control Sample	37	51
MB 480-434362/1-A	Method Blank	21 X	24 X

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 480-434429/3-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434429

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2,4-Trimethylbenzene	ND		5.0	0.96	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,3,5-Trimethylbenzene	ND		5.0	0.32	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
2-Hexanone	ND		25	2.5	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
4-Isopropyltoluene	ND		5.0	0.40	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Acetone	ND		25	4.2	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Benzene	ND		5.0	0.25	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Bromoform	ND		5.0	2.5	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Bromomethane	ND		5.0	0.45	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Chloroethane	ND		5.0	1.1	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Chloroform	ND		5.0	0.31	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Chloromethane	ND		5.0	0.30	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Cyclohexane	ND		5.0	0.70	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
m,p-Xylene	ND		10	0.84	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Methyl acetate	ND		25	3.0	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Methylene Chloride	3.78	J	5.0	2.3	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
n-Butylbenzene	ND		5.0	0.44	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
N-Propylbenzene	ND		5.0	0.40	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
o-Xylene	ND		5.0	0.65	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
sec-Butylbenzene	ND		5.0	0.44	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Styrene	ND		5.0	0.25	ug/Kg		09/14/18 09:55	09/14/18 14:40	1

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

Lab Sample ID: MB 480-434429/3-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434429

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		5.0	0.52	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Toluene	ND		5.0	0.38	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Trichloroethene	ND		5.0	1.1	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		09/14/18 09:55	09/14/18 14:40	1
Xylenes, Total	ND		10	0.84	ug/Kg		09/14/18 09:55	09/14/18 14:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*	*09/14/18 09:55*	*09/14/18 14:40*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*09/14/18 09:55*	*09/14/18 14:40*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*09/14/18 09:55*	*09/14/18 14:40*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*09/14/18 09:55*	*09/14/18 14:40*	*1*

Lab Sample ID: LCS 480-434429/1-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434429

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	46.5		ug/Kg		93	77 - 121
1,1,2,2-Tetrachloroethane	50.0	48.4		ug/Kg		97	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	45.8		ug/Kg		92	60 - 140
1,1,2-Trichloroethane	50.0	48.4		ug/Kg		97	78 - 122
1,1-Dichloroethane	50.0	48.5		ug/Kg		97	73 - 126
1,1-Dichloroethene	50.0	47.9		ug/Kg		96	59 - 125
1,2,4-Trichlorobenzene	50.0	44.4		ug/Kg		89	64 - 120
1,2,4-Trimethylbenzene	50.0	48.5		ug/Kg		97	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	42.7		ug/Kg		85	63 - 124
1,2-Dibromoethane	50.0	48.2		ug/Kg		96	78 - 120
1,2-Dichlorobenzene	50.0	47.2		ug/Kg		94	75 - 120
1,2-Dichloroethane	50.0	45.0		ug/Kg		90	77 - 122
1,2-Dichloropropane	50.0	49.7		ug/Kg		99	75 - 124
1,3,5-Trimethylbenzene	50.0	48.9		ug/Kg		98	74 - 120
1,3-Dichlorobenzene	50.0	48.3		ug/Kg		97	74 - 120
1,4-Dichlorobenzene	50.0	47.9		ug/Kg		96	73 - 120
2-Butanone (MEK)	250	252		ug/Kg		101	70 - 134
2-Hexanone	250	232		ug/Kg		93	59 - 130
4-Isopropyltoluene	50.0	49.4		ug/Kg		99	74 - 120
4-Methyl-2-pentanone (MIBK)	250	228		ug/Kg		91	65 - 133
Acetone	250	252		ug/Kg		101	61 - 137
Benzene	50.0	50.9		ug/Kg		102	79 - 127
Bromodichloromethane	50.0	48.6		ug/Kg		97	80 - 122
Bromoform	50.0	44.2		ug/Kg		88	68 - 126
Bromomethane	50.0	66.4		ug/Kg		133	37 - 149
Carbon disulfide	50.0	44.0		ug/Kg		88	64 - 131

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

Lab Sample ID: LCS 480-434429/1-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434429

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	50.0	45.8		ug/Kg		92	75 - 135
Chlorobenzene	50.0	49.0		ug/Kg		98	76 - 124
Chloroethane	50.0	67.2		ug/Kg		134	69 - 135
Chloroform	50.0	48.4		ug/Kg		97	80 - 120
Chloromethane	50.0	42.9		ug/Kg		86	63 - 127
cis-1,2-Dichloroethene	50.0	49.8		ug/Kg		100	81 - 120
cis-1,3-Dichloropropene	50.0	48.7		ug/Kg		97	80 - 120
Cyclohexane	50.0	47.3		ug/Kg		95	65 - 120
Dibromochloromethane	50.0	46.2		ug/Kg		92	76 - 125
Dichlorodifluoromethane	50.0	49.1		ug/Kg		98	57 - 142
Ethylbenzene	50.0	49.2		ug/Kg		98	80 - 120
Isopropylbenzene	50.0	49.0		ug/Kg		98	72 - 120
m,p-Xylene	50.0	49.6		ug/Kg		99	70 - 130
Methyl acetate	100	93.6		ug/Kg		94	55 - 136
Methyl tert-butyl ether	50.0	45.6		ug/Kg		91	63 - 125
Methylcyclohexane	50.0	49.9		ug/Kg		100	60 - 140
Methylene Chloride	50.0	46.2		ug/Kg		92	61 - 127
Naphthalene	50.0	43.4		ug/Kg		87	38 - 137
n-Butylbenzene	50.0	48.9		ug/Kg		98	70 - 120
N-Propylbenzene	50.0	49.9		ug/Kg		100	70 - 130
o-Xylene	50.0	48.6		ug/Kg		97	70 - 130
sec-Butylbenzene	50.0	49.4		ug/Kg		99	74 - 120
Styrene	50.0	50.1		ug/Kg		100	80 - 120
tert-Butylbenzene	50.0	48.7		ug/Kg		97	73 - 120
Tetrachloroethene	50.0	48.7		ug/Kg		97	74 - 122
Toluene	50.0	49.3		ug/Kg		99	74 - 128
trans-1,2-Dichloroethene	50.0	49.8		ug/Kg		100	78 - 126
trans-1,3-Dichloropropene	50.0	46.8		ug/Kg		94	73 - 123
Trichloroethene	50.0	48.9		ug/Kg		98	77 - 129
Trichlorofluoromethane	50.0	51.4		ug/Kg		103	65 - 146
Vinyl chloride	50.0	44.1		ug/Kg		88	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 126*
4-Bromofluorobenzene (Surr)	*101*		*72 - 126*
Dibromofluoromethane (Surr)	*104*		*60 - 140*
Toluene-d8 (Surr)	*104*		*71 - 125*

Lab Sample ID: LCSD 480-434429/2-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434429

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	44.0		ug/Kg		88	77 - 121	5	20
1,1,2,2-Tetrachloroethane	50.0	48.9		ug/Kg		98	80 - 120	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	42.9		ug/Kg		86	60 - 140	7	20
1,1,2-Trichloroethane	50.0	49.2		ug/Kg		98	78 - 122	2	20

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

Lab Sample ID: LCSD 480-434429/2-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434429

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane			50.0	46.4		ug/Kg		93	73 - 126	4	20
1,1-Dichloroethene			50.0	44.7		ug/Kg		89	59 - 125	7	20
1,2,4-Trichlorobenzene			50.0	43.3		ug/Kg		87	64 - 120	3	20
1,2,4-Trimethylbenzene			50.0	46.9		ug/Kg		94	74 - 120	3	20
1,2-Dibromo-3-Chloropropane			50.0	42.0		ug/Kg		84	63 - 124	2	20
1,2-Dibromoethane			50.0	49.0		ug/Kg		98	78 - 120	2	20
1,2-Dichlorobenzene			50.0	46.4		ug/Kg		93	75 - 120	2	20
1,2-Dichloroethane			50.0	43.8		ug/Kg		88	77 - 122	3	20
1,2-Dichloropropane			50.0	48.1		ug/Kg		96	75 - 124	3	20
1,3,5-Trimethylbenzene			50.0	47.3		ug/Kg		95	74 - 120	3	20
1,3-Dichlorobenzene			50.0	47.4		ug/Kg		95	74 - 120	2	20
1,4-Dichlorobenzene			50.0	46.9		ug/Kg		94	73 - 120	2	20
2-Butanone (MEK)			250	251		ug/Kg		100	70 - 134	0	20
2-Hexanone			250	238		ug/Kg		95	59 - 130	2	20
4-Isopropyltoluene			50.0	47.9		ug/Kg		96	74 - 120	3	20
4-Methyl-2-pentanone (MIBK)			250	233		ug/Kg		93	65 - 133	2	20
Acetone			250	249		ug/Kg		100	61 - 137	1	20
Benzene			50.0	48.5		ug/Kg		97	79 - 127	5	20
Bromodichloromethane			50.0	47.5		ug/Kg		95	80 - 122	2	20
Bromoform			50.0	45.4		ug/Kg		91	68 - 126	3	20
Bromomethane			50.0	61.4		ug/Kg		123	37 - 149	8	20
Carbon disulfide			50.0	41.1		ug/Kg		82	64 - 131	7	20
Carbon tetrachloride			50.0	42.9		ug/Kg		86	75 - 135	7	20
Chlorobenzene			50.0	48.4		ug/Kg		97	76 - 124	1	20
Chloroethane			50.0	61.7		ug/Kg		123	69 - 135	8	20
Chloroform			50.0	46.6		ug/Kg		93	80 - 120	4	20
Chloromethane			50.0	40.1		ug/Kg		80	63 - 127	7	20
cis-1,2-Dichloroethene			50.0	47.5		ug/Kg		95	81 - 120	5	20
cis-1,3-Dichloropropene			50.0	48.3		ug/Kg		97	80 - 120	1	20
Cyclohexane			50.0	44.7		ug/Kg		89	65 - 120	6	20
Dibromochloromethane			50.0	47.0		ug/Kg		94	76 - 125	2	20
Dichlorodifluoromethane			50.0	45.0		ug/Kg		90	57 - 142	9	20
Ethylbenzene			50.0	48.2		ug/Kg		96	80 - 120	2	20
Isopropylbenzene			50.0	47.3		ug/Kg		95	72 - 120	3	20
m,p-Xylene			50.0	48.4		ug/Kg		97	70 - 130	3	20
Methyl acetate			100	93.3		ug/Kg		93	55 - 136	0	20
Methyl tert-butyl ether			50.0	45.1		ug/Kg		90	63 - 125	1	20
Methylcyclohexane			50.0	47.3		ug/Kg		95	60 - 140	5	20
Methylene Chloride			50.0	44.5		ug/Kg		89	61 - 127	4	20
Naphthalene			50.0	43.7		ug/Kg		87	38 - 137	1	20
n-Butylbenzene			50.0	47.1		ug/Kg		94	70 - 120	4	20
N-Propylbenzene			50.0	48.2		ug/Kg		96	70 - 130	3	20
o-Xylene			50.0	47.9		ug/Kg		96	70 - 130	1	20
sec-Butylbenzene			50.0	47.5		ug/Kg		95	74 - 120	4	20
Styrene			50.0	49.4		ug/Kg		99	80 - 120	1	20
tert-Butylbenzene			50.0	47.3		ug/Kg		95	73 - 120	3	20
Tetrachloroethene			50.0	46.8		ug/Kg		94	74 - 122	4	20
Toluene			50.0	48.1		ug/Kg		96	74 - 128	2	20

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

Lab Sample ID: LCSD 480-434429/2-A
Matrix: Solid
Analysis Batch: 434452

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434429

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene			50.0	46.7		ug/Kg		93	78 - 126	6	20
trans-1,3-Dichloropropene			50.0	47.5		ug/Kg		95	73 - 123	2	20
Trichloroethene			50.0	46.9		ug/Kg		94	77 - 129	4	20
Trichlorofluoromethane			50.0	47.2		ug/Kg		94	65 - 146	8	20
Vinyl chloride			50.0	40.4		ug/Kg		81	61 - 133	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 126*
4-Bromofluorobenzene (Surr)	*102*		*72 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*104*		*71 - 125*

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

Lab Sample ID: MB 480-434535/1-A
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434535

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		170	46	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2,4-Dimethylphenol	ND		170	41	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2,4-Dinitrophenol	ND		1700	780	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2-Chloronaphthalene	ND		170	28	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2-Chlorophenol	ND		170	31	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2-Methylnaphthalene	ND		170	34	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2-Methylphenol	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2-Nitroaniline	ND		330	25	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
2-Nitrophenol	ND		170	48	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
3-Nitroaniline	ND		330	47	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Chloro-3-methylphenol	ND		170	42	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Chloroaniline	ND		170	42	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Methylphenol	ND		330	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Nitroaniline	ND		330	89	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
4-Nitrophenol	ND		330	120	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Acenaphthene	ND		170	25	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Acenaphthylene	ND		170	22	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Acetophenone	ND		170	23	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Anthracene	ND		170	42	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Atrazine	ND		170	59	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Benzaldehyde	ND		170	130	ug/Kg		09/14/18 15:26	09/17/18 15:47	1

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

Lab Sample ID: MB 480-434535/1-A
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434535

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		170	17	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Benzo[a]pyrene	ND		170	25	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Biphenyl	ND		170	25	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Bis(2-ethylhexyl) phthalate	ND		170	58	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Caprolactam	ND		170	51	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Carbazole	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Chrysene	ND		170	38	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Dibenzofuran	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Diethyl phthalate	ND		170	22	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Dimethyl phthalate	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Fluoranthene	ND		170	18	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Fluorene	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Hexachlorobenzene	ND		170	23	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Hexachlorobutadiene	ND		170	25	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Hexachloroethane	ND		170	22	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Isophorone	ND		170	36	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Naphthalene	ND		170	22	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Nitrobenzene	ND		170	19	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Pentachlorophenol	ND		330	170	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Phenanthrene	ND		170	25	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Phenol	ND		170	26	ug/Kg		09/14/18 15:26	09/17/18 15:47	1
Pyrene	ND		170	20	ug/Kg		09/14/18 15:26	09/17/18 15:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*83*		*54 - 120*	*09/14/18 15:26*	*09/17/18 15:47*	*1*
2-Fluorobiphenyl	*93*		*60 - 120*	*09/14/18 15:26*	*09/17/18 15:47*	*1*
2-Fluorophenol	*84*		*52 - 120*	*09/14/18 15:26*	*09/17/18 15:47*	*1*
Nitrobenzene-d5	*86*		*53 - 120*	*09/14/18 15:26*	*09/17/18 15:47*	*1*
Phenol-d5	*86*		*54 - 120*	*09/14/18 15:26*	*09/17/18 15:47*	*1*
p-Terphenyl-d14	*118*		*65 - 121*	*09/14/18 15:26*	*09/17/18 15:47*	*1*

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

Lab Sample ID: LCS 480-434535/2-A
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	1650	1660		ug/Kg		101	59 - 126
2,4,6-Trichlorophenol	1650	1640		ug/Kg		100	59 - 123
2,4-Dichlorophenol	1650	1550		ug/Kg		94	61 - 120
2,4-Dimethylphenol	1650	1580		ug/Kg		96	59 - 120
2,4-Dinitrophenol	3300	2480		ug/Kg		75	41 - 146
2,4-Dinitrotoluene	1650	1690		ug/Kg		103	63 - 120
2,6-Dinitrotoluene	1650	1640		ug/Kg		99	66 - 120
2-Chloronaphthalene	1650	1620		ug/Kg		98	57 - 120
2-Chlorophenol	1650	1500		ug/Kg		91	53 - 120
2-Methylnaphthalene	1650	1560		ug/Kg		94	59 - 120
2-Methylphenol	1650	1600		ug/Kg		97	54 - 120
2-Nitroaniline	1650	1630		ug/Kg		99	61 - 120
2-Nitrophenol	1650	1410		ug/Kg		86	56 - 120
3,3'-Dichlorobenzidine	3300	3110		ug/Kg		94	54 - 120
3-Nitroaniline	1650	1430		ug/Kg		87	48 - 120
4,6-Dinitro-2-methylphenol	3300	3040		ug/Kg		92	49 - 122
4-Bromophenyl phenyl ether	1650	1720		ug/Kg		104	58 - 120
4-Chloro-3-methylphenol	1650	1550		ug/Kg		94	61 - 120
4-Chloroaniline	1650	1420		ug/Kg		86	38 - 120
4-Chlorophenyl phenyl ether	1650	1720		ug/Kg		104	63 - 124
4-Methylphenol	1650	1550		ug/Kg		94	55 - 120
4-Nitroaniline	1650	1620		ug/Kg		98	56 - 120
4-Nitrophenol	3300	3340		ug/Kg		101	43 - 147
Acenaphthene	1650	1630		ug/Kg		99	62 - 120
Acenaphthylene	1650	1670		ug/Kg		101	58 - 121
Acetophenone	1650	1550		ug/Kg		94	54 - 120
Anthracene	1650	1720		ug/Kg		104	62 - 120
Atrazine	3300	3640		ug/Kg		110	60 - 127
Benzaldehyde	3300	3110		ug/Kg		94	10 - 150
Benzo[a]anthracene	1650	1740		ug/Kg		106	65 - 120
Benzo[a]pyrene	1650	1720		ug/Kg		104	64 - 120
Benzo[b]fluoranthene	1650	1600		ug/Kg		97	64 - 120
Benzo[g,h,i]perylene	1650	1760		ug/Kg		106	45 - 145
Benzo[k]fluoranthene	1650	1810		ug/Kg		110	65 - 120
Biphenyl	1650	1660		ug/Kg		100	59 - 120
bis (2-chloroisopropyl) ether	1650	1390		ug/Kg		84	44 - 120
Bis(2-chloroethoxy)methane	1650	1490		ug/Kg		90	55 - 120
Bis(2-chloroethyl)ether	1650	1440		ug/Kg		87	45 - 120
Bis(2-ethylhexyl) phthalate	1650	1790		ug/Kg		109	61 - 133
Butyl benzyl phthalate	1650	1800		ug/Kg		109	61 - 129
Caprolactam	3300	3170		ug/Kg		96	47 - 120
Carbazole	1650	1680		ug/Kg		102	65 - 120
Chrysene	1650	1700		ug/Kg		103	64 - 120
Dibenz(a,h)anthracene	1650	1750		ug/Kg		106	54 - 132
Dibenzofuran	1650	1690		ug/Kg		103	63 - 120
Diethyl phthalate	1650	1770		ug/Kg		107	66 - 120
Dimethyl phthalate	1650	1740		ug/Kg		105	65 - 124
Di-n-butyl phthalate	1650	1800		ug/Kg		109	58 - 130

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

Lab Sample ID: LCS 480-434535/2-A
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	1650	1740		ug/Kg		105	57 - 133
Fluoranthene	1650	1720		ug/Kg		104	62 - 120
Fluorene	1650	1700		ug/Kg		103	63 - 120
Hexachlorobenzene	1650	1720		ug/Kg		104	60 - 120
Hexachlorobutadiene	1650	1500		ug/Kg		91	45 - 120
Hexachlorocyclopentadiene	1650	1670		ug/Kg		101	47 - 120
Hexachloroethane	1650	1430		ug/Kg		87	41 - 120
Indeno[1,2,3-cd]pyrene	1650	1740		ug/Kg		105	56 - 134
Isophorone	1650	1570		ug/Kg		95	56 - 120
Naphthalene	1650	1460		ug/Kg		89	55 - 120
Nitrobenzene	1650	1460		ug/Kg		88	54 - 120
N-Nitrosodi-n-propylamine	1650	1480		ug/Kg		90	52 - 120
Pentachlorophenol	3300	2940		ug/Kg		89	51 - 120
Phenanthrene	1650	1740		ug/Kg		106	60 - 120
Phenol	1650	1430		ug/Kg		86	53 - 120
Pyrene	1650	1820		ug/Kg		110	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*90*		*54 - 120*
2-Fluorobiphenyl	*90*		*60 - 120*
2-Fluorophenol	*80*		*52 - 120*
Nitrobenzene-d5	*79*		*53 - 120*
Phenol-d5	*85*		*54 - 120*
p-Terphenyl-d14	*103*		*65 - 121*

Lab Sample ID: 480-141736-1 MS
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434535

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	ND		1830	1780		ug/Kg	☼	97	46 - 120
2,4,6-Trichlorophenol	ND		1830	1820		ug/Kg	☼	99	41 - 123
2,4-Dichlorophenol	ND		1830	1700		ug/Kg	☼	93	45 - 120
2,4-Dimethylphenol	ND		1830	1810		ug/Kg	☼	99	52 - 120
2,4-Dinitrophenol	ND		3660	2380		ug/Kg	☼	65	41 - 146
2,4-Dinitrotoluene	ND		1830	1790		ug/Kg	☼	97	63 - 125
2,6-Dinitrotoluene	ND		1830	1800		ug/Kg	☼	98	66 - 120
2-Chloronaphthalene	ND		1830	1760		ug/Kg	☼	96	57 - 120
2-Chlorophenol	ND		1830	1610		ug/Kg	☼	88	43 - 120
2-Methylnaphthalene	ND		1830	1760		ug/Kg	☼	96	55 - 120
2-Methylphenol	ND		1830	1670		ug/Kg	☼	91	48 - 120
2-Nitroaniline	ND		1830	1810		ug/Kg	☼	99	61 - 120
2-Nitrophenol	ND		1830	1630		ug/Kg	☼	89	37 - 120
3,3'-Dichlorobenzidine	ND		3660	3550		ug/Kg	☼	97	37 - 126
3-Nitroaniline	ND		1830	1560		ug/Kg	☼	85	48 - 120
4,6-Dinitro-2-methylphenol	ND		3660	3230		ug/Kg	☼	88	23 - 149
4-Bromophenyl phenyl ether	ND		1830	1970		ug/Kg	☼	107	58 - 120
4-Chloro-3-methylphenol	ND		1830	1790		ug/Kg	☼	98	49 - 125

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

Lab Sample ID: 480-141736-1 MS
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434535

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	ND		1830	1510		ug/Kg	☼	82	38 - 120
4-Chlorophenyl phenyl ether	ND		1830	1850		ug/Kg	☼	101	63 - 124
4-Methylphenol	ND		1830	1710		ug/Kg	☼	94	50 - 120
4-Nitroaniline	ND		1830	1630		ug/Kg	☼	89	47 - 120
4-Nitrophenol	ND		3660	3700		ug/Kg	☼	101	31 - 147
Acenaphthene	ND		1830	1780		ug/Kg	☼	97	60 - 120
Acenaphthylene	ND		1830	1830		ug/Kg	☼	100	58 - 121
Acetophenone	ND		1830	1640		ug/Kg	☼	90	47 - 120
Anthracene	ND		1830	1940		ug/Kg	☼	106	62 - 120
Atrazine	ND		3660	3900		ug/Kg	☼	107	60 - 150
Benzaldehyde	ND		3660	3330		ug/Kg	☼	91	10 - 150
Benzo[a]anthracene	24	J	1830	2020		ug/Kg	☼	109	65 - 120
Benzo[a]pyrene	ND		1830	1940		ug/Kg	☼	106	64 - 120
Benzo[b]fluoranthene	39	J	1830	1990		ug/Kg	☼	107	64 - 120
Benzo[g,h,i]perylene	ND		1830	2050		ug/Kg	☼	112	45 - 145
Benzo[k]fluoranthene	ND		1830	1930		ug/Kg	☼	106	65 - 120
Biphenyl	ND		1830	1790		ug/Kg	☼	98	58 - 120
bis (2-chloroisopropyl) ether	ND		1830	1520		ug/Kg	☼	83	31 - 120
Bis(2-chloroethoxy)methane	ND		1830	1670		ug/Kg	☼	91	52 - 120
Bis(2-chloroethyl)ether	ND		1830	1540		ug/Kg	☼	84	45 - 120
Bis(2-ethylhexyl) phthalate	ND		1830	2170		ug/Kg	☼	118	61 - 133
Butyl benzyl phthalate	ND		1830	2180		ug/Kg	☼	119	61 - 120
Caprolactam	ND		3660	3550		ug/Kg	☼	97	37 - 133
Carbazole	ND		1830	1870		ug/Kg	☼	102	59 - 120
Chrysene	ND		1830	1990		ug/Kg	☼	109	64 - 120
Dibenz(a,h)anthracene	ND		1830	1970		ug/Kg	☼	107	54 - 132
Dibenzofuran	ND		1830	1840		ug/Kg	☼	101	62 - 120
Diethyl phthalate	ND		1830	1910		ug/Kg	☼	104	66 - 120
Dimethyl phthalate	ND		1830	1920		ug/Kg	☼	105	65 - 124
Di-n-butyl phthalate	ND		1830	1970		ug/Kg	☼	108	58 - 130
Di-n-octyl phthalate	ND		1830	1990		ug/Kg	☼	109	57 - 133
Fluoranthene	48	J F2 F1	1830	1860		ug/Kg	☼	99	62 - 120
Fluorene	ND		1830	1830		ug/Kg	☼	100	63 - 120
Hexachlorobenzene	ND		1830	1950		ug/Kg	☼	107	60 - 120
Hexachlorobutadiene	ND		1830	1690		ug/Kg	☼	92	45 - 120
Hexachlorocyclopentadiene	ND		1830	1800		ug/Kg	☼	98	31 - 120
Hexachloroethane	ND		1830	1510		ug/Kg	☼	83	21 - 120
Indeno[1,2,3-cd]pyrene	ND		1830	1990		ug/Kg	☼	109	56 - 134
Isophorone	ND		1830	1760		ug/Kg	☼	96	56 - 120
Naphthalene	ND		1830	1650		ug/Kg	☼	90	46 - 120
Nitrobenzene	ND		1830	1640		ug/Kg	☼	89	49 - 120
N-Nitrosodi-n-propylamine	ND		1830	1610		ug/Kg	☼	88	46 - 120
Pentachlorophenol	ND		3660	3110		ug/Kg	☼	85	25 - 136
Phenanthrene	64	J F2 F1	1830	1950		ug/Kg	☼	103	60 - 122
Phenol	ND		1830	1510		ug/Kg	☼	82	50 - 120
Pyrene	45	J	1830	2230		ug/Kg	☼	119	61 - 133

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

Lab Sample ID: 480-141736-1 MS
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434535

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*97*		*54 - 120*
2-Fluorobiphenyl	*90*		*60 - 120*
2-Fluorophenol	*77*		*52 - 120*
Nitrobenzene-d5	*83*		*53 - 120*
Phenol-d5	*83*		*54 - 120*
p-Terphenyl-d14	*111*		*65 - 121*

Lab Sample ID: 480-141736-1 MSD
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434535

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	ND		1810	1780		ug/Kg	☼	98	46 - 120	0	18
2,4,6-Trichlorophenol	ND		1810	1790		ug/Kg	☼	99	41 - 123	2	19
2,4-Dichlorophenol	ND		1810	1660		ug/Kg	☼	92	45 - 120	2	19
2,4-Dimethylphenol	ND		1810	1720		ug/Kg	☼	95	52 - 120	5	42
2,4-Dinitrophenol	ND		3630	2330		ug/Kg	☼	64	41 - 146	2	22
2,4-Dinitrotoluene	ND		1810	1830		ug/Kg	☼	101	63 - 125	3	20
2,6-Dinitrotoluene	ND		1810	1800		ug/Kg	☼	99	66 - 120	0	15
2-Chloronaphthalene	ND		1810	1750		ug/Kg	☼	96	57 - 120	0	21
2-Chlorophenol	ND		1810	1580		ug/Kg	☼	87	43 - 120	2	25
2-Methylnaphthalene	ND		1810	1730		ug/Kg	☼	96	55 - 120	1	21
2-Methylphenol	ND		1810	1640		ug/Kg	☼	90	48 - 120	2	27
2-Nitroaniline	ND		1810	1770		ug/Kg	☼	98	61 - 120	2	15
2-Nitrophenol	ND		1810	1590		ug/Kg	☼	88	37 - 120	2	18
3,3'-Dichlorobenzidine	ND		3630	3600		ug/Kg	☼	99	37 - 126	1	25
3-Nitroaniline	ND		1810	1530		ug/Kg	☼	85	48 - 120	2	19
4,6-Dinitro-2-methylphenol	ND		3630	3240		ug/Kg	☼	89	23 - 149	0	15
4-Bromophenyl phenyl ether	ND		1810	2000		ug/Kg	☼	110	58 - 120	2	15
4-Chloro-3-methylphenol	ND		1810	1690		ug/Kg	☼	93	49 - 125	6	27
4-Chloroaniline	ND		1810	1500		ug/Kg	☼	83	38 - 120	0	22
4-Chlorophenyl phenyl ether	ND		1810	1870		ug/Kg	☼	103	63 - 124	1	16
4-Methylphenol	ND		1810	1640		ug/Kg	☼	91	50 - 120	4	24
4-Nitroaniline	ND		1810	1610		ug/Kg	☼	89	47 - 120	1	24
4-Nitrophenol	ND		3630	3700		ug/Kg	☼	102	31 - 147	0	25
Acenaphthene	ND		1810	1760		ug/Kg	☼	97	60 - 120	1	35
Acenaphthylene	ND		1810	1890		ug/Kg	☼	104	58 - 121	3	18
Acetophenone	ND		1810	1590		ug/Kg	☼	88	47 - 120	3	20
Anthracene	ND		1810	2040		ug/Kg	☼	113	62 - 120	5	15
Atrazine	ND		3630	3910		ug/Kg	☼	108	60 - 150	0	20
Benzaldehyde	ND		3630	3320		ug/Kg	☼	92	10 - 150	0	20
Benzo[a]anthracene	24	J	1810	2120		ug/Kg	☼	115	65 - 120	5	15
Benzo[a]pyrene	ND		1810	2070		ug/Kg	☼	114	64 - 120	7	15
Benzo[b]fluoranthene	39	J	1810	2000		ug/Kg	☼	108	64 - 120	0	15
Benzo[g,h,i]perylene	ND		1810	2170		ug/Kg	☼	120	45 - 145	6	15
Benzo[k]fluoranthene	ND		1810	2130		ug/Kg	☼	117	65 - 120	9	22
Biphenyl	ND		1810	1810		ug/Kg	☼	100	58 - 120	1	20
bis (2-chloroisopropyl) ether	ND		1810	1500		ug/Kg	☼	83	31 - 120	1	24

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

Lab Sample ID: 480-141736-1 MSD
Matrix: Solid
Analysis Batch: 434658

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434535

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	ND		1810	1650		ug/Kg	☼	91	52 - 120	1	17
Bis(2-chloroethyl)ether	ND		1810	1530		ug/Kg	☼	84	45 - 120	1	21
Bis(2-ethylhexyl) phthalate	ND		1810	2140		ug/Kg	☼	118	61 - 133	1	15
Butyl benzyl phthalate	ND		1810	2150		ug/Kg	☼	119	61 - 120	1	16
Caprolactam	ND		3630	3480		ug/Kg	☼	96	37 - 133	2	20
Carbazole	ND		1810	1940		ug/Kg	☼	107	59 - 120	4	20
Chrysene	ND		1810	2050		ug/Kg	☼	113	64 - 120	3	15
Dibenz(a,h)anthracene	ND		1810	2020		ug/Kg	☼	111	54 - 132	2	15
Dibenzofuran	ND		1810	1880		ug/Kg	☼	104	62 - 120	2	15
Diethyl phthalate	ND		1810	1900		ug/Kg	☼	105	66 - 120	1	15
Dimethyl phthalate	ND		1810	1870		ug/Kg	☼	103	65 - 124	2	15
Di-n-butyl phthalate	ND		1810	2000		ug/Kg	☼	111	58 - 130	2	15
Di-n-octyl phthalate	ND		1810	2030		ug/Kg	☼	112	57 - 133	2	16
Fluoranthene	48	J F2 F1	1810	2290	F1 F2	ug/Kg	☼	124	62 - 120	20	15
Fluorene	ND		1810	1930		ug/Kg	☼	107	63 - 120	6	15
Hexachlorobenzene	ND		1810	1940		ug/Kg	☼	107	60 - 120	1	15
Hexachlorobutadiene	ND		1810	1650		ug/Kg	☼	91	45 - 120	3	44
Hexachlorocyclopentadiene	ND		1810	1700		ug/Kg	☼	94	31 - 120	6	49
Hexachloroethane	ND		1810	1490		ug/Kg	☼	82	21 - 120	2	46
Indeno[1,2,3-cd]pyrene	ND		1810	2100		ug/Kg	☼	116	56 - 134	5	15
Isophorone	ND		1810	1730		ug/Kg	☼	95	56 - 120	2	17
Naphthalene	ND		1810	1740		ug/Kg	☼	96	46 - 120	5	29
Nitrobenzene	ND		1810	1620		ug/Kg	☼	90	49 - 120	1	24
N-Nitrosodi-n-propylamine	ND		1810	1610		ug/Kg	☼	89	46 - 120	0	31
Pentachlorophenol	ND		3630	3130		ug/Kg	☼	86	25 - 136	1	35
Phenanthrene	64	J F2 F1	1810	2470	F1 F2	ug/Kg	☼	133	60 - 122	24	15
Phenol	ND		1810	1470		ug/Kg	☼	81	50 - 120	3	35
Pyrene	45	J	1810	2450		ug/Kg	☼	133	61 - 133	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*98*		*54 - 120*
2-Fluorobiphenyl	*89*		*60 - 120*
2-Fluorophenol	*76*		*52 - 120*
Nitrobenzene-d5	*82*		*53 - 120*
Phenol-d5	*79*		*54 - 120*
p-Terphenyl-d14	*112*		*65 - 121*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-434785/1-A
Matrix: Solid
Analysis Batch: 434855

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434785

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.6	0.32	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
4,4'-DDE	ND		1.6	0.35	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
4,4'-DDT	ND		1.6	0.38	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Aldrin	ND		1.6	0.40	ug/Kg		09/17/18 14:28	09/18/18 11:17	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-434785/1-A
Matrix: Solid
Analysis Batch: 434855

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434785

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		1.6	0.30	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
cis-Chlordane	ND		1.6	0.82	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
beta-BHC	ND		1.6	0.30	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
delta-BHC	ND		1.6	0.31	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Dieldrin	ND		1.6	0.39	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Endosulfan I	ND		1.6	0.32	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Endosulfan II	ND		1.6	0.30	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Endosulfan sulfate	ND		1.6	0.31	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Endrin	ND		1.6	0.33	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Endrin aldehyde	ND		1.6	0.42	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Endrin ketone	ND		1.6	0.40	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
gamma-BHC (Lindane)	ND		1.6	0.30	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
trans-Chlordane	ND		1.6	0.52	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Heptachlor	ND		1.6	0.36	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Heptachlor epoxide	ND		1.6	0.42	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Methoxychlor	ND		1.6	0.34	ug/Kg		09/17/18 14:28	09/18/18 11:17	1
Toxaphene	ND		16	9.6	ug/Kg		09/17/18 14:28	09/18/18 11:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*87*		*45 - 120*	*09/17/18 14:28*	*09/18/18 11:17*	*1*
DCB Decachlorobiphenyl	*84*		*45 - 120*	*09/17/18 14:28*	*09/18/18 11:17*	*1*
Tetrachloro-m-xylene	*73*		*30 - 124*	*09/17/18 14:28*	*09/18/18 11:17*	*1*
Tetrachloro-m-xylene	*53*		*30 - 124*	*09/17/18 14:28*	*09/18/18 11:17*	*1*

Lab Sample ID: LCS 480-434785/2-A
Matrix: Solid
Analysis Batch: 434855

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434785

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	16.6	15.2		ug/Kg		92	56 - 120
4,4'-DDE	16.6	13.4		ug/Kg		81	44 - 120
4,4'-DDT	16.6	14.5		ug/Kg		87	38 - 120
Aldrin	16.6	11.3		ug/Kg		69	38 - 120
alpha-BHC	16.6	10.7		ug/Kg		65	39 - 120
cis-Chlordane	16.6	12.3		ug/Kg		74	47 - 120
beta-BHC	16.6	12.3		ug/Kg		74	40 - 120
delta-BHC	16.6	12.5		ug/Kg		76	45 - 120
Dieldrin	16.6	14.5		ug/Kg		88	58 - 120
Endosulfan I	16.6	13.7		ug/Kg		82	49 - 120
Endosulfan II	16.6	15.5		ug/Kg		94	55 - 120
Endosulfan sulfate	16.6	13.6		ug/Kg		82	49 - 124
Endrin	16.6	15.0		ug/Kg		91	58 - 120
Endrin aldehyde	16.6	11.0		ug/Kg		66	37 - 121
Endrin ketone	16.6	14.9		ug/Kg		90	46 - 123
gamma-BHC (Lindane)	16.6	11.4		ug/Kg		69	50 - 120
trans-Chlordane	16.6	13.0		ug/Kg		79	48 - 120
Heptachlor	16.6	12.1		ug/Kg		73	50 - 120
Heptachlor epoxide	16.6	12.8		ug/Kg		77	50 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-434785/2-A
Matrix: Solid
Analysis Batch: 434855

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434785

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methoxychlor			16.6	14.8		ug/Kg		90	58 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*86*		*45 - 120*
DCB Decachlorobiphenyl	*83*		*45 - 120*
Tetrachloro-m-xylene	*70*		*30 - 124*
Tetrachloro-m-xylene	*49*		*30 - 124*

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

Lab Sample ID: MB 480-434959/1-A
Matrix: Solid
Analysis Batch: 435129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434959

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.23	0.046	mg/Kg		09/18/18 14:26	09/19/18 20:51	1
PCB-1221	ND		0.23	0.046	mg/Kg		09/18/18 14:26	09/19/18 20:51	1
PCB-1232	ND		0.23	0.046	mg/Kg		09/18/18 14:26	09/19/18 20:51	1
PCB-1242	ND		0.23	0.046	mg/Kg		09/18/18 14:26	09/19/18 20:51	1
PCB-1248	ND		0.23	0.046	mg/Kg		09/18/18 14:26	09/19/18 20:51	1
PCB-1254	ND		0.23	0.11	mg/Kg		09/18/18 14:26	09/19/18 20:51	1
PCB-1260	ND		0.23	0.11	mg/Kg		09/18/18 14:26	09/19/18 20:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*91*		*60 - 154*	*09/18/18 14:26*	*09/19/18 20:51*	*1*
Tetrachloro-m-xylene	*84*		*60 - 154*	*09/18/18 14:26*	*09/19/18 20:51*	*1*
DCB Decachlorobiphenyl	*111*		*65 - 174*	*09/18/18 14:26*	*09/19/18 20:51*	*1*
DCB Decachlorobiphenyl	*95*		*65 - 174*	*09/18/18 14:26*	*09/19/18 20:51*	*1*

Lab Sample ID: LCS 480-434959/2-A
Matrix: Solid
Analysis Batch: 435129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434959

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.94	2.29		mg/Kg		118	51 - 185		
PCB-1260			1.94	2.83		mg/Kg		146	61 - 184		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*133*		*60 - 154*
Tetrachloro-m-xylene	*121*		*60 - 154*
DCB Decachlorobiphenyl	*165*		*65 - 174*
DCB Decachlorobiphenyl	*192*	*X*	*65 - 174*

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

Lab Sample ID: 480-141736-1 MS
Matrix: Solid
Analysis Batch: 435129

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434959

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		2.69	3.52		mg/Kg	☼	131	50 - 177
PCB-1260	ND		2.69	4.66		mg/Kg	☼	173	33 - 200

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*139*		*60 - 154*
Tetrachloro-m-xylene	*118*		*60 - 154*
DCB Decachlorobiphenyl	*175*	*X*	*65 - 174*
DCB Decachlorobiphenyl	*215*	*X*	*65 - 174*

Lab Sample ID: 480-141736-1 MSD
Matrix: Solid
Analysis Batch: 435129

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434959

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		2.11	2.66		mg/Kg	☼	126	50 - 177	28	50
PCB-1260	ND		2.11	2.95		mg/Kg	☼	140	33 - 200	45	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*132*		*60 - 154*
Tetrachloro-m-xylene	*120*		*60 - 154*
DCB Decachlorobiphenyl	*157*		*65 - 174*
DCB Decachlorobiphenyl	*159*		*65 - 174*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-434362/1-A
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		17	5.3	ug/Kg		09/14/18 06:32	09/18/18 12:08	1
Silvex (2,4,5-TP)	ND		17	6.0	ug/Kg		09/14/18 06:32	09/18/18 12:08	1
2,4-D	ND		17	10	ug/Kg		09/14/18 06:32	09/18/18 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*21*	*X*	*28 - 129*	*09/14/18 06:32*	*09/18/18 12:08*	*1*
2,4-Dichlorophenylacetic acid	*24*	*X*	*28 - 129*	*09/14/18 06:32*	*09/18/18 12:08*	*1*

Lab Sample ID: LCS 480-434362/2-A
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	65.6	28.9		ug/Kg		44	41 - 120
Silvex (2,4,5-TP)	65.6	30.6		ug/Kg		47	39 - 125
2,4-D	65.6	60.3		ug/Kg		92	40 - 120

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 480-434362/2-A
Matrix: Solid
Analysis Batch: 434907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434362

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*37*		*28 - 129*
2,4-Dichlorophenylacetic acid	*51*		*28 - 129*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-434704/1-A
Matrix: Solid
Analysis Batch: 435083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		9.9	4.4	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Antimony	ND		14.9	0.40	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Arsenic	ND		2.0	0.40	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Barium	ND		0.50	0.11	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Beryllium	ND		0.20	0.028	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Cadmium	ND		0.20	0.030	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Calcium	4.47	J	49.6	3.3	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Chromium	ND		0.50	0.20	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Cobalt	ND		0.50	0.050	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Copper	ND		0.99	0.21	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Iron	ND		9.9	3.5	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Lead	ND		0.99	0.24	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Magnesium	ND		19.9	0.92	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Manganese	0.0606	J	0.20	0.032	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Nickel	ND		5.0	0.23	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Potassium	ND		29.8	19.9	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Selenium	ND		4.0	0.40	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Silver	ND		0.60	0.20	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Sodium	ND		139	12.9	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Thallium	ND		6.0	0.30	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Vanadium	ND		0.50	0.11	mg/Kg		09/18/18 10:11	09/18/18 21:03	1
Zinc	ND		2.0	0.64	mg/Kg		09/18/18 10:11	09/18/18 21:03	1

Lab Sample ID: LCSSRM 480-434704/2-A
Matrix: Solid
Analysis Batch: 435083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434704

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10100	8567		mg/Kg		84.8	30.4 - 125.7
Antimony	184	64.96		mg/Kg		35.3	10.0 - 137.5
Arsenic	178	143.4		mg/Kg		80.5	65.7 - 120.8
Barium	228	189.9		mg/Kg		83.3	68.4 - 118.4
Beryllium	61.3	53.03		mg/Kg		86.5	69.3 - 120.1

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

Lab Sample ID: LCSSRM 480-434704/2-A
Matrix: Solid
Analysis Batch: 435083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434704

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	143	115.2		mg/Kg		80.6	65.9 - 114.0
Calcium	5190	4196		mg/Kg		80.8	65.9 - 115.8
Chromium	107	88.52		mg/Kg		82.7	65.9 - 123.4
Cobalt	71.4	71.65		mg/Kg		100.4	71.3 - 120.4
Copper	116	97.96		mg/Kg		84.4	70.6 - 119.0
Iron	15000	12580		mg/Kg		83.9	33.0 - 155.3
Lead	210	200.4		mg/Kg		95.4	71.9 - 121.0
Magnesium	2570	2136		mg/Kg		83.1	55.3 - 123.0
Manganese	383	336.0		mg/Kg		87.7	73.1 - 120.1
Nickel	95.4	91.58		mg/Kg		96.0	65.6 - 117.4
Potassium	2420	2009		mg/Kg		83.0	47.9 - 116.9
Selenium	130	102.2		mg/Kg		78.6	59.2 - 120.0
Silver	91.2	77.76		mg/Kg		85.3	64.0 - 126.1
Sodium	690	566.9		mg/Kg		82.2	49.0 - 131.0
Thallium	156	145.7		mg/Kg		93.4	61.9 - 119.9
Vanadium	104	86.46		mg/Kg		83.1	61.4 - 126.0
Zinc	254	209.1		mg/Kg		82.3	66.9 - 122.4

Lab Sample ID: 480-141736-1 MS
Matrix: Solid
Analysis Batch: 435083

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434704

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	11500	F2	2200	20160	4	mg/Kg	☼	394	75 - 125
Antimony	1.0	J F1	44.0	26.49	F1	mg/Kg	☼	58	75 - 125
Arsenic	2.8		44.0	43.08		mg/Kg	☼	91	75 - 125
Barium	54.7	F1	44.0	121.6	F1	mg/Kg	☼	152	75 - 125
Beryllium	0.50		44.0	42.33		mg/Kg	☼	95	75 - 125
Cadmium	0.16	J	44.0	40.03		mg/Kg	☼	91	75 - 125
Calcium	67600	F2 B	2200	71000	4	mg/Kg	☼	155	75 - 125
Chromium	14.5		44.0	56.18		mg/Kg	☼	95	75 - 125
Cobalt	7.3		44.0	52.11		mg/Kg	☼	102	75 - 125
Copper	13.9		44.0	54.21		mg/Kg	☼	92	75 - 125
Iron	14900		2200	17900	4	mg/Kg	☼	134	75 - 125
Lead	14.6		44.0	58.76		mg/Kg	☼	100	75 - 125
Magnesium	28800	F2	2200	31890	4	mg/Kg	☼	139	75 - 125

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

Lab Sample ID: 480-141736-1 MS
Matrix: Solid
Analysis Batch: 435083

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434704

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	376	B	44.0	417.8	4	mg/Kg	☼	96	75 - 125
Nickel	16.2		44.0	63.38		mg/Kg	☼	107	75 - 125
Potassium	4110	F1	2200	9316	F1	mg/Kg	☼	236	75 - 125
Selenium	ND		44.0	38.85		mg/Kg	☼	88	75 - 125
Silver	ND		11.0	10.12		mg/Kg	☼	92	75 - 125
Sodium	290		2200	2583		mg/Kg	☼	104	75 - 125
Thallium	ND		44.0	45.34		mg/Kg	☼	103	75 - 125
Vanadium	23.3		44.0	71.92		mg/Kg	☼	111	75 - 125
Zinc	51.5	F2 F1	44.0	87.73		mg/Kg	☼	82	75 - 125

Lab Sample ID: 480-141736-1 MSD
Matrix: Solid
Analysis Batch: 435083

Client Sample ID: MW-1 (22-24')
Prep Type: Total/NA
Prep Batch: 434704

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	11500	F2	2160	16330	4 F2	mg/Kg	☼	224	75 - 125	21	20
Antimony	1.0	J F1	43.2	29.18	F1	mg/Kg	☼	65	75 - 125	10	20
Arsenic	2.8		43.2	41.83		mg/Kg	☼	90	75 - 125	3	20
Barium	54.7	F1	43.2	123.0	F1	mg/Kg	☼	158	75 - 125	1	20
Beryllium	0.50		43.2	41.46		mg/Kg	☼	95	75 - 125	2	20
Cadmium	0.16	J	43.2	39.93		mg/Kg	☼	92	75 - 125	0	20
Calcium	67600	F2 B	2160	102200	E 4 F2	mg/Kg	☼	1599	75 - 125	36	20
Chromium	14.5		43.2	50.94		mg/Kg	☼	84	75 - 125	10	20
Cobalt	7.3		43.2	48.95		mg/Kg	☼	96	75 - 125	6	20
Copper	13.9		43.2	49.73		mg/Kg	☼	83	75 - 125	9	20
Iron	14900		2160	15330	4	mg/Kg	☼	18	75 - 125	16	20
Lead	14.6		43.2	55.41		mg/Kg	☼	94	75 - 125	6	20
Magnesium	28800	F2	2160	52560	E 4 F2	mg/Kg	☼	1098	75 - 125	49	20
Manganese	376	B	43.2	400.1	4	mg/Kg	☼	56	75 - 125	4	20
Nickel	16.2		43.2	57.76		mg/Kg	☼	96	75 - 125	9	20
Potassium	4110	F1	2160	7986	F1	mg/Kg	☼	179	75 - 125	15	20
Selenium	ND		43.2	38.46		mg/Kg	☼	89	75 - 125	1	20
Silver	ND		10.8	10.18		mg/Kg	☼	94	75 - 125	1	20
Sodium	290		2160	2577		mg/Kg	☼	106	75 - 125	0	20
Thallium	ND		43.2	43.23		mg/Kg	☼	100	75 - 125	5	20
Vanadium	23.3		43.2	64.02		mg/Kg	☼	94	75 - 125	12	20
Zinc	51.5	F2 F1	43.2	68.79	F2 F1	mg/Kg	☼	40	75 - 125	24	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-434798/1-A
Matrix: Solid
Analysis Batch: 435018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434798

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.0082	mg/Kg		09/18/18 11:20	09/18/18 17:09	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-434798/2-A ^10
Matrix: Solid
Analysis Batch: 435018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434798

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	23.7	14.12		mg/Kg		59.6	27.7 - 110.1

GC/MS VOA

Prep Batch: 434429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	5035A_L	
MB 480-434429/3-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-434429/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	
LCSD 480-434429/2-A	Lab Control Sample Dup	Total/NA	Solid	5035A_L	

Analysis Batch: 434452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	8260C	434429
MB 480-434429/3-A	Method Blank	Total/NA	Solid	8260C	434429
LCS 480-434429/1-A	Lab Control Sample	Total/NA	Solid	8260C	434429
LCSD 480-434429/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	434429

GC/MS Semi VOA

Prep Batch: 434535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	3550C	
480-141736-2	MW-2 (0-2')	Total/NA	Solid	3550C	
MB 480-434535/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434535/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141736-1 MS	MW-1 (22-24')	Total/NA	Solid	3550C	
480-141736-1 MSD	MW-1 (22-24')	Total/NA	Solid	3550C	

Analysis Batch: 434658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	8270D	434535
480-141736-2	MW-2 (0-2')	Total/NA	Solid	8270D	434535
MB 480-434535/1-A	Method Blank	Total/NA	Solid	8270D	434535
LCS 480-434535/2-A	Lab Control Sample	Total/NA	Solid	8270D	434535
480-141736-1 MS	MW-1 (22-24')	Total/NA	Solid	8270D	434535
480-141736-1 MSD	MW-1 (22-24')	Total/NA	Solid	8270D	434535

GC Semi VOA

Prep Batch: 434362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	8151A	
MB 480-434362/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 480-434362/2-A	Lab Control Sample	Total/NA	Solid	8151A	

Prep Batch: 434785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	3550C	
MB 480-434785/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434785/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 434855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	8081B	434785
MB 480-434785/1-A	Method Blank	Total/NA	Solid	8081B	434785

GC Semi VOA (Continued)

Analysis Batch: 434855 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-434785/2-A	Lab Control Sample	Total/NA	Solid	8081B	434785

Analysis Batch: 434907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-434362/1-A	Method Blank	Total/NA	Solid	8151A	434362
LCS 480-434362/2-A	Lab Control Sample	Total/NA	Solid	8151A	434362

Prep Batch: 434959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	3550C	
MB 480-434959/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434959/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141736-1 MS	MW-1 (22-24')	Total/NA	Solid	3550C	
480-141736-1 MSD	MW-1 (22-24')	Total/NA	Solid	3550C	

Analysis Batch: 435053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	8151A	434362

Analysis Batch: 435129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	8082A	434959
MB 480-434959/1-A	Method Blank	Total/NA	Solid	8082A	434959
LCS 480-434959/2-A	Lab Control Sample	Total/NA	Solid	8082A	434959
480-141736-1 MS	MW-1 (22-24')	Total/NA	Solid	8082A	434959
480-141736-1 MSD	MW-1 (22-24')	Total/NA	Solid	8082A	434959

Metals

Prep Batch: 434704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	3050B	
480-141736-2	MW-2 (0-2')	Total/NA	Solid	3050B	
MB 480-434704/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-434704/2-A	Lab Control Sample	Total/NA	Solid	3050B	
480-141736-1 MS	MW-1 (22-24')	Total/NA	Solid	3050B	
480-141736-1 MSD	MW-1 (22-24')	Total/NA	Solid	3050B	

Prep Batch: 434798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	7471B	
480-141736-2	MW-2 (0-2')	Total/NA	Solid	7471B	
MB 480-434798/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-434798/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 435018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	7471B	434798
480-141736-2	MW-2 (0-2')	Total/NA	Solid	7471B	434798
MB 480-434798/1-A	Method Blank	Total/NA	Solid	7471B	434798

Metals (Continued)

Analysis Batch: 435018 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSSRM 480-434798/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	434798

Analysis Batch: 435083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	6010C	434704
480-141736-2	MW-2 (0-2')	Total/NA	Solid	6010C	434704
MB 480-434704/1-A	Method Blank	Total/NA	Solid	6010C	434704
LCSSRM 480-434704/2-A	Lab Control Sample	Total/NA	Solid	6010C	434704
480-141736-1 MS	MW-1 (22-24')	Total/NA	Solid	6010C	434704
480-141736-1 MSD	MW-1 (22-24')	Total/NA	Solid	6010C	434704

Analysis Batch: 435190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-2	MW-2 (0-2')	Total/NA	Solid	6010C	434704

General Chemistry

Analysis Batch: 434364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141736-1	MW-1 (22-24')	Total/NA	Solid	Moisture	
480-141736-2	MW-2 (0-2')	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Client Sample ID: MW-1 (22-24')

Lab Sample ID: 480-141736-1
Date Collected: 09/12/18 13:00
Matrix: Solid
Date Received: 09/13/18 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	434364	09/14/18 07:03	CSW	TAL BUF

Client Sample ID: MW-1 (22-24')

Lab Sample ID: 480-141736-1
Date Collected: 09/12/18 13:00
Matrix: Solid
Date Received: 09/13/18 16:30
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			434429	09/14/18 09:55	CDC	TAL BUF
Total/NA	Analysis	8260C		1	434452	09/14/18 15:22	CDC	TAL BUF
Total/NA	Prep	3550C			434535	09/14/18 15:26	SGD	TAL BUF
Total/NA	Analysis	8270D		1	434658	09/17/18 17:27	RJS	TAL BUF
Total/NA	Prep	3550C			434785	09/17/18 14:28	SGD	TAL BUF
Total/NA	Analysis	8081B		1	434855	09/18/18 13:15	JLS	TAL BUF
Total/NA	Prep	3550C			434959	09/18/18 14:26	SGD	TAL BUF
Total/NA	Analysis	8082A		1	435129	09/19/18 21:55	W1T	TAL BUF
Total/NA	Prep	8151A			434362	09/14/18 08:40	SMP	TAL BUF
Total/NA	Analysis	8151A		1	435053	09/19/18 10:40	MAN	TAL BUF
Total/NA	Prep	3050B			434704	09/18/18 10:11	VEG	TAL BUF
Total/NA	Analysis	6010C		1	435083	09/18/18 21:10	LMH	TAL BUF
Total/NA	Prep	7471B			434798	09/18/18 11:20	BMB	TAL BUF
Total/NA	Analysis	7471B		1	435018	09/18/18 17:45	BMB	TAL BUF

Client Sample ID: MW-2 (0-2')

Lab Sample ID: 480-141736-2
Date Collected: 09/13/18 09:00
Matrix: Solid
Date Received: 09/13/18 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	434364	09/14/18 07:03	CSW	TAL BUF

Client Sample ID: MW-2 (0-2')

Lab Sample ID: 480-141736-2
Date Collected: 09/13/18 09:00
Matrix: Solid
Date Received: 09/13/18 16:30
Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			434535	09/14/18 15:26	SGD	TAL BUF
Total/NA	Analysis	8270D		1	434658	09/17/18 17:52	RJS	TAL BUF
Total/NA	Prep	3050B			434704	09/18/18 10:11	VEG	TAL BUF
Total/NA	Analysis	6010C		1	435083	09/18/18 21:29	LMH	TAL BUF
Total/NA	Prep	3050B			434704	09/18/18 10:11	VEG	TAL BUF
Total/NA	Analysis	6010C		2	435190	09/19/18 10:40	LMH	TAL BUF
Total/NA	Prep	7471B			434798	09/18/18 11:20	BMB	TAL BUF
Total/NA	Analysis	7471B		1	435018	09/18/18 17:49	BMB	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

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 (CVAA)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
3050B	Preparation, Metals	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5035A_L	Closed System Purge and Trap	SW846	TAL BUF
7471B	Preparation, Mercury	SW846	TAL BUF
8151A	Extraction (Herbicides)	SW846	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 - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141736-1	MW-1 (22-24')	Solid	09/12/18 13:00	09/13/18 16:30
480-141736-2	MW-2 (0-2')	Solid	09/13/18 09:00	09/13/18 16:30

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-141736 COC

Client Information	Sampler: Nick Surai	Lab PM: Fischer, Brian J	COC No: 480-114782-26554.4
Client Contact: Bryan Mayback	Phone: 716-713-3937	E-Mail: brian.fischer@testamericainc.com	Page: Page 4 of 5
Company: Benchmark Env. Eng. & Science, PLLC		**Analysis Requested**	Job #:
Address: 2558 Hamburg Turnpike	Due Date Requested: Standard		**Preservation Codes:**
City: Lackawanna	TAT Requested (days):		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) **Other:**
State, Zip: NY, 14218	B04162-018-001		
Phone: 716-856-0599(Tel)	PO #: Purchase Order Requested		
Email: bmayback@turnkeyllc.com	WO #:		
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270D	8081B, 8082A, 8151A	Moisture - Percent Moisture	TCL+TAL SVOC's	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N			
MW-1 (22-24')	9/12/18	13:00	G	Solid			X	X	X	X	1	Chlorides
MW-2 (0-2')	9/13/18	9:00	G	Solid			X				1	
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								
				Solid								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat B, NYSDEC EQuIS

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 9/13/18 12:00	Company	Received by:	Date/Time: 9/13/18 1536	Company TAL
Relinquished by: Rebecca Lewis	Date/Time: 9/13/18 1630	Company TAL	Received by:	Date/Time: 9/13/18 1650	Company TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 3.8° C

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-141736-1

Login Number: 141736
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

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 (Excluding tests with immediate HTs)..	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.	N/A	
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: 480-142475-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

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LINKS

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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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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance 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
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
*	LCS or LCSD is outside acceptance 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
B	Compound was found in the blank and sample.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits
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
F1	MS and/or MSD Recovery is outside acceptance 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.
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.
¤	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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-142475-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-142475-1

Comments
No additional comments.

Receipt
The samples were received on 9/27/2018 2:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.6º C and 4.2º 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, and corrective action was not possible: MW-2 (480-142475-1[MS]) and MW-2 (480-142475-1[MSD]). The sample was analyzed within 7 days per EPA recommendation.

Method(s) 8260C: The matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 480-437186 exceeded control limits for the following analyte(s): Bromomethane, Note that this analyte is a known poor performer when analyzed using this method.

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 480-437186 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 continuing calibration verification (CCV) associated with batch 480-437093 recovered above the upper control limit for 4-Nitrophenol, Atrazine and Hexachlorobutadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: MW-2 (480-142475-1).

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 480-436943 and analytical batch 480-437093 recovered outside control limits for the following analytes: 4-Nitrophenol and Atrazine. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following sample is impacted: MW-2 (480-142475-1).

Method(s) 8270D: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: MW-2 (480-142475-1[MS]) and MW-2 (480-142475-1[MSD]). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 480-436943 and analytical batch 480-437093 was outside control limits for 3,3'-Dichlorobenzidine. The data has been qualified and reported.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-436943 and analytical batch 480-437093 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The data has been qualified and reported.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 480-436943 and analytical batch 480-438044 recovered outside control limits for the following analytes: 4-Nitrophenol and Atrazine. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following sample is impacted: BD (480-142475-2).

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 matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 480-436944 and analytical batch 480-437032 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method(s) 8081B: All primary data for analytical batch 437032 is reported from the RTX-CLPI column.

Job ID: 480-142475-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method(s) 8082A: All primary data for analytical batch 437696 is reported from the ZB-5 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: The following sample was diluted due to sample matrix: BD (480-142475-2). Elevated reporting limits (RLs) are provided and surrogate recoveries are not representative.

Method(s) 8151A: Surrogate recovery for the following samples were outside control limits: MW-2 (480-142475-1), MW-2 (480-142475-1[MS]) and MW-2 (480-142475-1[MSD]). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8151A: All primary data for analytical batch 437610 is reported from the RTX-CLPI column.

Method(s) 8151A: The surrogate 2,4-Dichlorophenylacetic acid recovered above acceptance limits in the continuing calibration verifications associated with analytical batch 480-437614. (CCV 480-437610/16) and (CCV 480-437610/20).

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
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 - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Client Sample ID: MW-2 — Lab Sample ID: 480-142475-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.4	J	10	3.0	ug/L	1		8260C	Total/NA
Carbon disulfide	0.20	J	1.0	0.19	ug/L	1		8260C	Total/NA
Chloroform	2.0		1.0	0.34	ug/L	1		8260C	Total/NA
Methylcyclohexane	0.20	J	1.0	0.16	ug/L	1		8260C	Total/NA
Endosulfan I	0.056		0.050	0.011	ug/L	1		8081B	Total/NA
Barium	0.32	F1	0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	259		0.50	0.10	mg/L	1		6010C	Dissolved
Cobalt	0.0029	J	0.0040	0.00063	mg/L	1		6010C	Dissolved
Magnesium	156		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.11		0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0090	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	54.6		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	185		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0098	J B	0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: BD — Lab Sample ID: 480-142475-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.5	J	10	3.0	ug/L	1		8260C	Total/NA
Chloroform	2.3		1.0	0.34	ug/L	1		8260C	Total/NA
Diethyl phthalate	0.30	J	5.0	0.22	ug/L	1		8270D	Total/NA
Di-n-butyl phthalate	0.43	J B	5.0	0.31	ug/L	1		8270D	Total/NA
Endosulfan I	0.049	J	0.050	0.011	ug/L	1		8081B	Total/NA
Barium	0.32		0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	259		0.50	0.10	mg/L	1		6010C	Dissolved
Cobalt	0.0028	J	0.0040	0.00063	mg/L	1		6010C	Dissolved
Magnesium	156		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.10		0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0087	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	55.1		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	187		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0077	J B	0.010	0.0015	mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Client Sample ID: MW-2
Date Collected: 09/26/18 12:30
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-1
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	F1	1.0	0.82	ug/L			10/02/18 16:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/02/18 16:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/02/18 16:59	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/02/18 16:59	1
1,1-Dichloroethane	ND	F1	1.0	0.38	ug/L			10/02/18 16:59	1
1,1-Dichloroethene	ND	F1	1.0	0.29	ug/L			10/02/18 16:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/02/18 16:59	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/02/18 16:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/02/18 16:59	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/02/18 16:59	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/02/18 16:59	1
1,2-Dichloropropane	ND	F1	1.0	0.72	ug/L			10/02/18 16:59	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/02/18 16:59	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/02/18 16:59	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/02/18 16:59	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/02/18 16:59	1
2-Hexanone	ND		5.0	1.2	ug/L			10/02/18 16:59	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/02/18 16:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/02/18 16:59	1
Acetone	**3.4**	**J**	10	3.0	ug/L			10/02/18 16:59	1
Benzene	ND		1.0	0.41	ug/L			10/02/18 16:59	1
Bromoform	ND	F1	1.0	0.26	ug/L			10/02/18 16:59	1
Bromomethane	ND	F1	1.0	0.69	ug/L			10/02/18 16:59	1
Carbon disulfide	**0.20**	**J**	1.0	0.19	ug/L			10/02/18 16:59	1
Carbon tetrachloride	ND	F1	1.0	0.27	ug/L			10/02/18 16:59	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/02/18 16:59	1
Dibromochloromethane	ND	F1	1.0	0.32	ug/L			10/02/18 16:59	1
Chloroethane	ND		1.0	0.32	ug/L			10/02/18 16:59	1
Chloroform	**2.0**		1.0	0.34	ug/L			10/02/18 16:59	1
Chloromethane	ND		1.0	0.35	ug/L			10/02/18 16:59	1
cis-1,2-Dichloroethene	ND	F1	1.0	0.81	ug/L			10/02/18 16:59	1
Cyclohexane	ND		1.0	0.18	ug/L			10/02/18 16:59	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/02/18 16:59	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/02/18 16:59	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/02/18 16:59	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/02/18 16:59	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/02/18 16:59	1
Methyl acetate	ND		2.5	1.3	ug/L			10/02/18 16:59	1
Methyl tert-butyl ether	ND	F1	1.0	0.16	ug/L			10/02/18 16:59	1
Methylcyclohexane	**0.20**	**J**	1.0	0.16	ug/L			10/02/18 16:59	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/02/18 16:59	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/02/18 16:59	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/02/18 16:59	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/02/18 16:59	1
o-Xylene	ND		1.0	0.76	ug/L			10/02/18 16:59	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/02/18 16:59	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/02/18 16:59	1
Toluene	ND		1.0	0.51	ug/L			10/02/18 16:59	1
trans-1,2-Dichloroethene	ND	F1	1.0	0.90	ug/L			10/02/18 16:59	1

Client Sample ID: MW-2
Date Collected: 09/26/18 12:30
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-1
Matrix: Water

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			10/02/18 16:59	1
Trichloroethene	ND	F1	1.0	0.46	ug/L			10/02/18 16:59	1
Trichlorofluoromethane	ND	F1	1.0	0.88	ug/L			10/02/18 16:59	1
Vinyl chloride	ND	F1	1.0	0.90	ug/L			10/02/18 16:59	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/02/18 16:59	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/02/18 16:59	1
Styrene	ND		1.0	0.73	ug/L			10/02/18 16:59	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/02/18 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*77 - 120*		*10/02/18 16:59*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/02/18 16:59*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*10/02/18 16:59*	*1*
Dibromofluoromethane (Surr)	*113*		*75 - 123*		*10/02/18 16:59*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		09/29/18 20:33	10/01/18 20:38	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		09/29/18 20:33	10/01/18 20:38	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		09/29/18 20:33	10/01/18 20:38	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		09/29/18 20:33	10/01/18 20:38	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		09/29/18 20:33	10/01/18 20:38	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		09/29/18 20:33	10/01/18 20:38	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 20:38	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		09/29/18 20:33	10/01/18 20:38	1
2-Chlorophenol	ND		5.0	0.53	ug/L		09/29/18 20:33	10/01/18 20:38	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		09/29/18 20:33	10/01/18 20:38	1
2-Methylphenol	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 20:38	1
2-Nitroaniline	ND		10	0.42	ug/L		09/29/18 20:33	10/01/18 20:38	1
2-Nitrophenol	ND		5.0	0.48	ug/L		09/29/18 20:33	10/01/18 20:38	1
3,3'-Dichlorobenzidine	ND	F1 F2	5.0	0.40	ug/L		09/29/18 20:33	10/01/18 20:38	1
3-Nitroaniline	ND	F1 F2	10	0.48	ug/L		09/29/18 20:33	10/01/18 20:38	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Chloroaniline	ND		5.0	0.59	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Methylphenol	ND		10	0.36	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Nitroaniline	ND	F1	10	0.25	ug/L		09/29/18 20:33	10/01/18 20:38	1
4-Nitrophenol	ND	*	10	1.5	ug/L		09/29/18 20:33	10/01/18 20:38	1
Acenaphthene	ND		5.0	0.41	ug/L		09/29/18 20:33	10/01/18 20:38	1
Acenaphthylene	ND		5.0	0.38	ug/L		09/29/18 20:33	10/01/18 20:38	1
Acetophenone	ND		5.0	0.54	ug/L		09/29/18 20:33	10/01/18 20:38	1
Anthracene	ND		5.0	0.28	ug/L		09/29/18 20:33	10/01/18 20:38	1
Atrazine	ND	*	5.0	0.46	ug/L		09/29/18 20:33	10/01/18 20:38	1
Benzaldehyde	ND		5.0	0.27	ug/L		09/29/18 20:33	10/01/18 20:38	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		09/29/18 20:33	10/01/18 20:38	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		09/29/18 20:33	10/01/18 20:38	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		09/29/18 20:33	10/01/18 20:38	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		09/29/18 20:33	10/01/18 20:38	1

Client Sample ID: MW-2
Date Collected: 09/26/18 12:30
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		09/29/18 20:33	10/01/18 20:38	1
Biphenyl	ND		5.0	0.65	ug/L		09/29/18 20:33	10/01/18 20:38	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		09/29/18 20:33	10/01/18 20:38	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		09/29/18 20:33	10/01/18 20:38	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 20:38	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		09/29/18 20:33	10/01/18 20:38	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		09/29/18 20:33	10/01/18 20:38	1
Caprolactam	ND		5.0	2.2	ug/L		09/29/18 20:33	10/01/18 20:38	1
Carbazole	ND		5.0	0.30	ug/L		09/29/18 20:33	10/01/18 20:38	1
Chrysene	ND		5.0	0.33	ug/L		09/29/18 20:33	10/01/18 20:38	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		09/29/18 20:33	10/01/18 20:38	1
Dibenzofuran	ND		10	0.51	ug/L		09/29/18 20:33	10/01/18 20:38	1
Diethyl phthalate	ND		5.0	0.22	ug/L		09/29/18 20:33	10/01/18 20:38	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		09/29/18 20:33	10/01/18 20:38	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		09/29/18 20:33	10/01/18 20:38	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		09/29/18 20:33	10/01/18 20:38	1
Fluoranthene	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 20:38	1
Fluorene	ND		5.0	0.36	ug/L		09/29/18 20:33	10/01/18 20:38	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		09/29/18 20:33	10/01/18 20:38	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		09/29/18 20:33	10/01/18 20:38	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		09/29/18 20:33	10/01/18 20:38	1
Hexachloroethane	ND		5.0	0.59	ug/L		09/29/18 20:33	10/01/18 20:38	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		09/29/18 20:33	10/01/18 20:38	1
Isophorone	ND		5.0	0.43	ug/L		09/29/18 20:33	10/01/18 20:38	1
Naphthalene	ND		5.0	0.76	ug/L		09/29/18 20:33	10/01/18 20:38	1
Nitrobenzene	ND	F1	5.0	0.29	ug/L		09/29/18 20:33	10/01/18 20:38	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		09/29/18 20:33	10/01/18 20:38	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		09/29/18 20:33	10/01/18 20:38	1
Pentachlorophenol	ND		10	2.2	ug/L		09/29/18 20:33	10/01/18 20:38	1
Phenanthrene	ND		5.0	0.44	ug/L		09/29/18 20:33	10/01/18 20:38	1
Phenol	ND		5.0	0.39	ug/L		09/29/18 20:33	10/01/18 20:38	1
Pyrene	ND		5.0	0.34	ug/L		09/29/18 20:33	10/01/18 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*116*		*41 - 120*	*09/29/18 20:33*	*10/01/18 20:38*	*1*
2-Fluorobiphenyl	*101*		*48 - 120*	*09/29/18 20:33*	*10/01/18 20:38*	*1*
2-Fluorophenol	*79*		*35 - 120*	*09/29/18 20:33*	*10/01/18 20:38*	*1*
Nitrobenzene-d5	*101*		*46 - 120*	*09/29/18 20:33*	*10/01/18 20:38*	*1*
Phenol-d5	*62*		*22 - 120*	*09/29/18 20:33*	*10/01/18 20:38*	*1*
p-Terphenyl-d14	*60*		*59 - 136*	*09/29/18 20:33*	*10/01/18 20:38*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND	F2	0.050	0.0092	ug/L		09/29/18 23:18	10/01/18 13:30	1
4,4'-DDE	ND	F2	0.050	0.012	ug/L		09/29/18 23:18	10/01/18 13:30	1
4,4'-DDT	ND	F2	0.050	0.011	ug/L		09/29/18 23:18	10/01/18 13:30	1
Aldrin	ND	F2	0.050	0.0081	ug/L		09/29/18 23:18	10/01/18 13:30	1
alpha-BHC	ND		0.050	0.0077	ug/L		09/29/18 23:18	10/01/18 13:30	1
cis-Chlordane	ND	F2	0.050	0.015	ug/L		09/29/18 23:18	10/01/18 13:30	1
beta-BHC	ND		0.050	0.025	ug/L		09/29/18 23:18	10/01/18 13:30	1

Client Sample ID: MW-2
Date Collected: 09/26/18 12:30
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-1
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		0.050	0.010	ug/L		09/29/18 23:18	10/01/18 13:30	1
Dieldrin	ND		0.050	0.0098	ug/L		09/29/18 23:18	10/01/18 13:30	1
Endosulfan I	**0.056**		0.050	0.011	ug/L		09/29/18 23:18	10/01/18 13:30	1
Endosulfan II	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 13:30	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		09/29/18 23:18	10/01/18 13:30	1
Endrin	ND		0.050	0.014	ug/L		09/29/18 23:18	10/01/18 13:30	1
Endrin aldehyde	ND		0.050	0.016	ug/L		09/29/18 23:18	10/01/18 13:30	1
Endrin ketone	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 13:30	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		09/29/18 23:18	10/01/18 13:30	1
trans-Chlordane	ND	F2	0.050	0.011	ug/L		09/29/18 23:18	10/01/18 13:30	1
Heptachlor	ND		0.050	0.0085	ug/L		09/29/18 23:18	10/01/18 13:30	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		09/29/18 23:18	10/01/18 13:30	1
Methoxychlor	ND	F2	0.050	0.014	ug/L		09/29/18 23:18	10/01/18 13:30	1
Toxaphene	ND		0.50	0.12	ug/L		09/29/18 23:18	10/01/18 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*36*		*20 - 120*	*09/29/18 23:18*	*10/01/18 13:30*	*1*
DCB Decachlorobiphenyl	*35*		*20 - 120*	*09/29/18 23:18*	*10/01/18 13:30*	*1*
Tetrachloro-m-xylene	*85*		*44 - 120*	*09/29/18 23:18*	*10/01/18 13:30*	*1*
Tetrachloro-m-xylene	*81*		*44 - 120*	*09/29/18 23:18*	*10/01/18 13:30*	*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		10/03/18 10:51	10/05/18 00:06	1
PCB-1221	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:06	1
PCB-1232	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:06	1
PCB-1242	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:06	1
PCB-1248	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:06	1
PCB-1254	ND		0.50	0.25	ug/L		10/03/18 10:51	10/05/18 00:06	1
PCB-1260	ND		0.50	0.25	ug/L		10/03/18 10:51	10/05/18 00:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*41*		*19 - 120*	*10/03/18 10:51*	*10/05/18 00:06*	*1*
DCB Decachlorobiphenyl	*48*		*19 - 120*	*10/03/18 10:51*	*10/05/18 00:06*	*1*
Tetrachloro-m-xylene	*105*		*39 - 121*	*10/03/18 10:51*	*10/05/18 00:06*	*1*
Tetrachloro-m-xylene	*85*		*39 - 121*	*10/03/18 10:51*	*10/05/18 00:06*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.51	0.069	ug/L		10/01/18 07:51	10/04/18 14:54	1
Silvex (2,4,5-TP)	ND		0.51	0.051	ug/L		10/01/18 07:51	10/04/18 14:54	1
2,4-D	ND		0.51	0.18	ug/L		10/01/18 07:51	10/04/18 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*48*		*48 - 132*	*10/01/18 07:51*	*10/04/18 14:54*	*1*
2,4-Dichlorophenylacetic acid	*52*		*48 - 132*	*10/01/18 07:51*	*10/04/18 14:54*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/01/18 12:10	10/02/18 14:26	1
Antimony	ND		0.020	0.0068	mg/L		10/01/18 12:10	10/02/18 14:26	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Client Sample ID: MW-2
Date Collected: 09/26/18 12:30
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		10/01/18 12:10	10/02/18 14:26	1
Barium	**0.32**	**F1**	0.0020	0.00070	mg/L		10/01/18 12:10	10/02/18 14:26	1
Beryllium	ND		0.0020	0.00030	mg/L		10/01/18 12:10	10/02/18 14:26	1
Cadmium	ND		0.0020	0.00050	mg/L		10/01/18 12:10	10/02/18 14:26	1
Calcium	**259**		0.50	0.10	mg/L		10/01/18 12:10	10/02/18 14:26	1
Chromium	ND		0.0040	0.0010	mg/L		10/01/18 12:10	10/02/18 14:26	1
Cobalt	**0.0029**	**J**	0.0040	0.00063	mg/L		10/01/18 12:10	10/02/18 14:26	1
Copper	ND		0.010	0.0016	mg/L		10/01/18 12:10	10/02/18 14:26	1
Iron	ND		0.050	0.019	mg/L		10/01/18 12:10	10/02/18 14:26	1
Lead	ND		0.010	0.0030	mg/L		10/01/18 12:10	10/02/18 14:26	1
Magnesium	**156**		0.20	0.043	mg/L		10/01/18 12:10	10/02/18 14:26	1
Manganese	**0.11**		0.0030	0.00040	mg/L		10/01/18 12:10	10/02/18 14:26	1
Nickel	**0.0090**	**J**	0.010	0.0013	mg/L		10/01/18 12:10	10/02/18 14:26	1
Potassium	**54.6**		0.50	0.10	mg/L		10/01/18 12:10	10/02/18 14:26	1
Selenium	ND		0.025	0.0087	mg/L		10/01/18 12:10	10/02/18 14:26	1
Silver	ND		0.0060	0.0017	mg/L		10/01/18 12:10	10/02/18 14:26	1
Sodium	**185**		1.0	0.32	mg/L		10/01/18 12:10	10/02/18 14:26	1
Thallium	ND		0.020	0.010	mg/L		10/01/18 12:10	10/02/18 14:26	1
Vanadium	ND		0.0050	0.0015	mg/L		10/01/18 12:10	10/02/18 14:26	1
Zinc	**0.0098**	**J B**	0.010	0.0015	mg/L		10/01/18 12:10	10/02/18 14:26	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/02/18 12:25	10/02/18 15:22	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Client Sample ID: BD
Date Collected: 09/26/18 12:45
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-2
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			10/02/18 17:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/02/18 17:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/02/18 17:26	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/02/18 17:26	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/02/18 17:26	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/02/18 17:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/02/18 17:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/02/18 17:26	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/02/18 17:26	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/02/18 17:26	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/02/18 17:26	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/02/18 17:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/02/18 17:26	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/02/18 17:26	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/02/18 17:26	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/02/18 17:26	1
2-Hexanone	ND		5.0	1.2	ug/L			10/02/18 17:26	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/02/18 17:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/02/18 17:26	1
Acetone	**3.5**	**J**	10	3.0	ug/L			10/02/18 17:26	1
Benzene	ND		1.0	0.41	ug/L			10/02/18 17:26	1
Bromoform	ND		1.0	0.26	ug/L			10/02/18 17:26	1
Bromomethane	ND		1.0	0.69	ug/L			10/02/18 17:26	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/02/18 17:26	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/02/18 17:26	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/02/18 17:26	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/02/18 17:26	1
Chloroethane	ND		1.0	0.32	ug/L			10/02/18 17:26	1
Chloroform	**2.3**		1.0	0.34	ug/L			10/02/18 17:26	1
Chloromethane	ND		1.0	0.35	ug/L			10/02/18 17:26	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/02/18 17:26	1
Cyclohexane	ND		1.0	0.18	ug/L			10/02/18 17:26	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/02/18 17:26	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/02/18 17:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/02/18 17:26	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/02/18 17:26	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/02/18 17:26	1
Methyl acetate	ND		2.5	1.3	ug/L			10/02/18 17:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/02/18 17:26	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/02/18 17:26	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/02/18 17:26	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/02/18 17:26	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/02/18 17:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/02/18 17:26	1
o-Xylene	ND		1.0	0.76	ug/L			10/02/18 17:26	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/02/18 17:26	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/02/18 17:26	1
Toluene	ND		1.0	0.51	ug/L			10/02/18 17:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/02/18 17:26	1

Client Sample ID: BD
Date Collected: 09/26/18 12:45
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-2
Matrix: Water

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			10/02/18 17:26	1
Trichloroethene	ND		1.0	0.46	ug/L			10/02/18 17:26	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/02/18 17:26	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/02/18 17:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/02/18 17:26	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/02/18 17:26	1
Styrene	ND		1.0	0.73	ug/L			10/02/18 17:26	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/02/18 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*10/02/18 17:26*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/02/18 17:26*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/02/18 17:26*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/02/18 17:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		09/29/18 20:33	10/06/18 14:56	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		09/29/18 20:33	10/06/18 14:56	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		09/29/18 20:33	10/06/18 14:56	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		09/29/18 20:33	10/06/18 14:56	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		09/29/18 20:33	10/06/18 14:56	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		09/29/18 20:33	10/06/18 14:56	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		09/29/18 20:33	10/06/18 14:56	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		09/29/18 20:33	10/06/18 14:56	1
2-Chlorophenol	ND		5.0	0.53	ug/L		09/29/18 20:33	10/06/18 14:56	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		09/29/18 20:33	10/06/18 14:56	1
2-Methylphenol	ND		5.0	0.40	ug/L		09/29/18 20:33	10/06/18 14:56	1
2-Nitroaniline	ND		10	0.42	ug/L		09/29/18 20:33	10/06/18 14:56	1
2-Nitrophenol	ND		5.0	0.48	ug/L		09/29/18 20:33	10/06/18 14:56	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		09/29/18 20:33	10/06/18 14:56	1
3-Nitroaniline	ND		10	0.48	ug/L		09/29/18 20:33	10/06/18 14:56	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Chloroaniline	ND		5.0	0.59	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Methylphenol	ND		10	0.36	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Nitroaniline	ND		10	0.25	ug/L		09/29/18 20:33	10/06/18 14:56	1
4-Nitrophenol	ND	*	10	1.5	ug/L		09/29/18 20:33	10/06/18 14:56	1
Acenaphthene	ND		5.0	0.41	ug/L		09/29/18 20:33	10/06/18 14:56	1
Acenaphthylene	ND		5.0	0.38	ug/L		09/29/18 20:33	10/06/18 14:56	1
Acetophenone	ND		5.0	0.54	ug/L		09/29/18 20:33	10/06/18 14:56	1
Anthracene	ND		5.0	0.28	ug/L		09/29/18 20:33	10/06/18 14:56	1
Atrazine	ND	*	5.0	0.46	ug/L		09/29/18 20:33	10/06/18 14:56	1
Benzaldehyde	ND		5.0	0.27	ug/L		09/29/18 20:33	10/06/18 14:56	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		09/29/18 20:33	10/06/18 14:56	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		09/29/18 20:33	10/06/18 14:56	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		09/29/18 20:33	10/06/18 14:56	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		09/29/18 20:33	10/06/18 14:56	1

Client Sample ID: BD
Date Collected: 09/26/18 12:45
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		09/29/18 20:33	10/06/18 14:56	1
Biphenyl	ND		5.0	0.65	ug/L		09/29/18 20:33	10/06/18 14:56	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		09/29/18 20:33	10/06/18 14:56	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		09/29/18 20:33	10/06/18 14:56	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		09/29/18 20:33	10/06/18 14:56	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		09/29/18 20:33	10/06/18 14:56	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		09/29/18 20:33	10/06/18 14:56	1
Caprolactam	ND		5.0	2.2	ug/L		09/29/18 20:33	10/06/18 14:56	1
Carbazole	ND		5.0	0.30	ug/L		09/29/18 20:33	10/06/18 14:56	1
Chrysene	ND		5.0	0.33	ug/L		09/29/18 20:33	10/06/18 14:56	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		09/29/18 20:33	10/06/18 14:56	1
Dibenzofuran	ND		10	0.51	ug/L		09/29/18 20:33	10/06/18 14:56	1
Diethyl phthalate	**0.30**	**J**	5.0	0.22	ug/L		09/29/18 20:33	10/06/18 14:56	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		09/29/18 20:33	10/06/18 14:56	1
Di-n-butyl phthalate	**0.43**	**J B**	5.0	0.31	ug/L		09/29/18 20:33	10/06/18 14:56	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		09/29/18 20:33	10/06/18 14:56	1
Fluoranthene	ND		5.0	0.40	ug/L		09/29/18 20:33	10/06/18 14:56	1
Fluorene	ND		5.0	0.36	ug/L		09/29/18 20:33	10/06/18 14:56	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		09/29/18 20:33	10/06/18 14:56	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		09/29/18 20:33	10/06/18 14:56	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		09/29/18 20:33	10/06/18 14:56	1
Hexachloroethane	ND		5.0	0.59	ug/L		09/29/18 20:33	10/06/18 14:56	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		09/29/18 20:33	10/06/18 14:56	1
Isophorone	ND		5.0	0.43	ug/L		09/29/18 20:33	10/06/18 14:56	1
Naphthalene	ND		5.0	0.76	ug/L		09/29/18 20:33	10/06/18 14:56	1
Nitrobenzene	ND		5.0	0.29	ug/L		09/29/18 20:33	10/06/18 14:56	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		09/29/18 20:33	10/06/18 14:56	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		09/29/18 20:33	10/06/18 14:56	1
Pentachlorophenol	ND		10	2.2	ug/L		09/29/18 20:33	10/06/18 14:56	1
Phenanthrene	ND		5.0	0.44	ug/L		09/29/18 20:33	10/06/18 14:56	1
Phenol	ND		5.0	0.39	ug/L		09/29/18 20:33	10/06/18 14:56	1
Pyrene	ND		5.0	0.34	ug/L		09/29/18 20:33	10/06/18 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*94*		*41 - 120*	*09/29/18 20:33*	*10/06/18 14:56*	*1*
2-Fluorobiphenyl	*94*		*48 - 120*	*09/29/18 20:33*	*10/06/18 14:56*	*1*
2-Fluorophenol	*74*		*35 - 120*	*09/29/18 20:33*	*10/06/18 14:56*	*1*
Nitrobenzene-d5	*84*		*46 - 120*	*09/29/18 20:33*	*10/06/18 14:56*	*1*
Phenol-d5	*55*		*22 - 120*	*09/29/18 20:33*	*10/06/18 14:56*	*1*
p-Terphenyl-d14	*71*		*59 - 136*	*09/29/18 20:33*	*10/06/18 14:56*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		09/29/18 23:18	10/01/18 15:47	1
4,4'-DDE	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 15:47	1
4,4'-DDT	ND		0.050	0.011	ug/L		09/29/18 23:18	10/01/18 15:47	1
Aldrin	ND		0.050	0.0081	ug/L		09/29/18 23:18	10/01/18 15:47	1
alpha-BHC	ND		0.050	0.0077	ug/L		09/29/18 23:18	10/01/18 15:47	1
cis-Chlordane	ND		0.050	0.015	ug/L		09/29/18 23:18	10/01/18 15:47	1
beta-BHC	ND		0.050	0.025	ug/L		09/29/18 23:18	10/01/18 15:47	1

Client Sample ID: BD
Date Collected: 09/26/18 12:45
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-2
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		0.050	0.010	ug/L		09/29/18 23:18	10/01/18 15:47	1
Dieldrin	ND		0.050	0.0098	ug/L		09/29/18 23:18	10/01/18 15:47	1
Endosulfan I	**0.049**	**J**	0.050	0.011	ug/L		09/29/18 23:18	10/01/18 15:47	1
Endosulfan II	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 15:47	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		09/29/18 23:18	10/01/18 15:47	1
Endrin	ND		0.050	0.014	ug/L		09/29/18 23:18	10/01/18 15:47	1
Endrin aldehyde	ND		0.050	0.016	ug/L		09/29/18 23:18	10/01/18 15:47	1
Endrin ketone	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 15:47	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		09/29/18 23:18	10/01/18 15:47	1
trans-Chlordane	ND		0.050	0.011	ug/L		09/29/18 23:18	10/01/18 15:47	1
Heptachlor	ND		0.050	0.0085	ug/L		09/29/18 23:18	10/01/18 15:47	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		09/29/18 23:18	10/01/18 15:47	1
Methoxychlor	ND		0.050	0.014	ug/L		09/29/18 23:18	10/01/18 15:47	1
Toxaphene	ND		0.50	0.12	ug/L		09/29/18 23:18	10/01/18 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*25*		*20 - 120*	*09/29/18 23:18*	*10/01/18 15:47*	*1*
DCB Decachlorobiphenyl	*24*		*20 - 120*	*09/29/18 23:18*	*10/01/18 15:47*	*1*
Tetrachloro-m-xylene	*47*		*44 - 120*	*09/29/18 23:18*	*10/01/18 15:47*	*1*
Tetrachloro-m-xylene	*45*		*44 - 120*	*09/29/18 23:18*	*10/01/18 15:47*	*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		10/03/18 10:51	10/05/18 00:37	1
PCB-1221	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:37	1
PCB-1232	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:37	1
PCB-1242	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:37	1
PCB-1248	ND		0.50	0.18	ug/L		10/03/18 10:51	10/05/18 00:37	1
PCB-1254	ND		0.50	0.25	ug/L		10/03/18 10:51	10/05/18 00:37	1
PCB-1260	ND		0.50	0.25	ug/L		10/03/18 10:51	10/05/18 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*43*		*19 - 120*	*10/03/18 10:51*	*10/05/18 00:37*	*1*
DCB Decachlorobiphenyl	*48*		*19 - 120*	*10/03/18 10:51*	*10/05/18 00:37*	*1*
Tetrachloro-m-xylene	*100*		*39 - 121*	*10/03/18 10:51*	*10/05/18 00:37*	*1*
Tetrachloro-m-xylene	*75*		*39 - 121*	*10/03/18 10:51*	*10/05/18 00:37*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		5.1	0.69	ug/L		10/01/18 07:51	10/04/18 13:52	10
Silvex (2,4,5-TP)	ND		5.1	0.51	ug/L		10/01/18 07:51	10/04/18 13:52	10
2,4-D	ND		5.1	1.7	ug/L		10/01/18 07:51	10/04/18 13:52	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*168*	*X*	*48 - 132*	*10/01/18 07:51*	*10/04/18 13:52*	*10*
2,4-Dichlorophenylacetic acid	*169*	*X*	*48 - 132*	*10/01/18 07:51*	*10/04/18 13:52*	*10*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/01/18 12:10	10/02/18 14:38	1
Antimony	ND		0.020	0.0068	mg/L		10/01/18 12:10	10/02/18 14:38	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Client Sample ID: BD
Date Collected: 09/26/18 12:45
Date Received: 09/27/18 14:52

Lab Sample ID: 480-142475-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		10/01/18 12:10	10/02/18 14:38	1
Barium	**0.32**		0.0020	0.00070	mg/L		10/01/18 12:10	10/02/18 14:38	1
Beryllium	ND		0.0020	0.00030	mg/L		10/01/18 12:10	10/02/18 14:38	1
Cadmium	ND		0.0020	0.00050	mg/L		10/01/18 12:10	10/02/18 14:38	1
Calcium	**259**		0.50	0.10	mg/L		10/01/18 12:10	10/02/18 14:38	1
Chromium	ND		0.0040	0.0010	mg/L		10/01/18 12:10	10/02/18 14:38	1
Cobalt	**0.0028**	**J**	0.0040	0.00063	mg/L		10/01/18 12:10	10/02/18 14:38	1
Copper	ND		0.010	0.0016	mg/L		10/01/18 12:10	10/02/18 14:38	1
Iron	ND		0.050	0.019	mg/L		10/01/18 12:10	10/02/18 14:38	1
Lead	ND		0.010	0.0030	mg/L		10/01/18 12:10	10/02/18 14:38	1
Magnesium	**156**		0.20	0.043	mg/L		10/01/18 12:10	10/02/18 14:38	1
Manganese	**0.10**		0.0030	0.00040	mg/L		10/01/18 12:10	10/02/18 14:38	1
Nickel	**0.0087**	**J**	0.010	0.0013	mg/L		10/01/18 12:10	10/02/18 14:38	1
Potassium	**55.1**		0.50	0.10	mg/L		10/01/18 12:10	10/02/18 14:38	1
Selenium	ND		0.025	0.0087	mg/L		10/01/18 12:10	10/02/18 14:38	1
Silver	ND		0.0060	0.0017	mg/L		10/01/18 12:10	10/02/18 14:38	1
Sodium	**187**		1.0	0.32	mg/L		10/01/18 12:10	10/02/18 14:38	1
Thallium	ND		0.020	0.010	mg/L		10/01/18 12:10	10/02/18 14:38	1
Vanadium	ND		0.0050	0.0015	mg/L		10/01/18 12:10	10/02/18 14:38	1
Zinc	**0.0077**	**J B**	0.010	0.0015	mg/L		10/01/18 12:10	10/02/18 14:38	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/02/18 12:25	10/02/18 15:30	1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(80-120)	(75-123)
480-142475-1	MW-2	111	100	106	113
480-142475-1 MS	MW-2	109	105	103	110
480-142475-1 MSD	MW-2	108	106	106	115
480-142475-2	BD	110	102	104	111
LCS 480-437186/5	Lab Control Sample	106	102	104	114
MB 480-437186/7	Method Blank	107	97	102	111

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(41-120)	(48-120)	(35-120)	(46-120)	(22-120)	(59-136)
480-142475-1	MW-2	116	101	79	101	62	60
480-142475-1 MS	MW-2	116	91	66	97	52	50 X
480-142475-1 MSD	MW-2	108	90	74	101	60	58 X
480-142475-2	BD	94	94	74	84	55	71
LCS 480-436943/2-A	Lab Control Sample	112	94	67	101	53	98
MB 480-436943/1-A	Method Blank	89	85	58	85	42	91

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHd14 = p-Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(20-120)	(20-120)	(44-120)	(44-120)
480-142475-1	MW-2	36	35	85	81
480-142475-1 MS	MW-2	33	33	73	71
480-142475-1 MSD	MW-2	39	41	92	82
480-142475-2	BD	25	24	47	45
LCS 480-436944/2-A	Lab Control Sample	48	50	80	80
MB 480-436944/1-A	Method Blank	59	61	88	88

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(19-120)	(19-120)	(39-121)	(39-121)
480-142475-1	MW-2	41	48	105	85
480-142475-1 MS	MW-2	46	53	97	61
480-142475-1 MSD	MW-2	37	39	112	79
480-142475-2	BD	43	48	100	75
LCS 480-437473/2-A	Lab Control Sample	60	62	117	79
MB 480-437473/1-A	Method Blank	61	67	114	86

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1	DCPAA2
Lab Sample ID	Client Sample ID	(48-132)	(48-132)
480-142475-1	MW-2	48	52
480-142475-1 MS	MW-2	42 X	50
480-142475-1 MSD	MW-2	33 X	39 X
480-142475-2	BD	168 X	169 X
LCS 480-437009/2-A	Lab Control Sample	57	67
MB 480-437009/1-A	Method Blank	62	86

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 480-437186/7
Matrix: Water
Analysis Batch: 437186

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			10/02/18 11:42	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/02/18 11:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/02/18 11:42	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/02/18 11:42	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/02/18 11:42	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/02/18 11:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/02/18 11:42	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/02/18 11:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/02/18 11:42	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/02/18 11:42	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/02/18 11:42	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/02/18 11:42	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/02/18 11:42	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/02/18 11:42	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/02/18 11:42	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/02/18 11:42	1
2-Hexanone	ND		5.0	1.2	ug/L			10/02/18 11:42	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/02/18 11:42	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/02/18 11:42	1
Acetone	ND		10	3.0	ug/L			10/02/18 11:42	1
Benzene	ND		1.0	0.41	ug/L			10/02/18 11:42	1
Bromoform	ND		1.0	0.26	ug/L			10/02/18 11:42	1
Bromomethane	ND		1.0	0.69	ug/L			10/02/18 11:42	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/02/18 11:42	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/02/18 11:42	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/02/18 11:42	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/02/18 11:42	1
Chloroethane	ND		1.0	0.32	ug/L			10/02/18 11:42	1
Chloroform	ND		1.0	0.34	ug/L			10/02/18 11:42	1
Chloromethane	ND		1.0	0.35	ug/L			10/02/18 11:42	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/02/18 11:42	1
Cyclohexane	ND		1.0	0.18	ug/L			10/02/18 11:42	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/02/18 11:42	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/02/18 11:42	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/02/18 11:42	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/02/18 11:42	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/02/18 11:42	1
Methyl acetate	ND		2.5	1.3	ug/L			10/02/18 11:42	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/02/18 11:42	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/02/18 11:42	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/02/18 11:42	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/02/18 11:42	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/02/18 11:42	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/02/18 11:42	1
o-Xylene	ND		1.0	0.76	ug/L			10/02/18 11:42	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/02/18 11:42	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/02/18 11:42	1
Toluene	ND		1.0	0.51	ug/L			10/02/18 11:42	1

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

Lab Sample ID: MB 480-437186/7
Matrix: Water
Analysis Batch: 437186

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			10/02/18 11:42	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/02/18 11:42	1
Trichloroethene	ND		1.0	0.46	ug/L			10/02/18 11:42	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/02/18 11:42	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/02/18 11:42	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/02/18 11:42	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/02/18 11:42	1
Styrene	ND		1.0	0.73	ug/L			10/02/18 11:42	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/02/18 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*10/02/18 11:42*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*10/02/18 11:42*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/02/18 11:42*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*10/02/18 11:42*	*1*

Lab Sample ID: LCS 480-437186/5
Matrix: Water
Analysis Batch: 437186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	27.5		ug/L		110	73 - 126
1,1,2,2-Tetrachloroethane	25.0	23.6		ug/L		94	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.5		ug/L		106	61 - 148
1,1,2-Trichloroethane	25.0	25.0		ug/L		100	76 - 122
1,1-Dichloroethane	25.0	26.0		ug/L		104	77 - 120
1,1-Dichloroethene	25.0	27.3		ug/L		109	66 - 127
1,2,4-Trichlorobenzene	25.0	21.1		ug/L		84	79 - 122
1,2,4-Trimethylbenzene	25.0	23.8		ug/L		95	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	21.1		ug/L		84	56 - 134
1,2-Dichlorobenzene	25.0	23.7		ug/L		95	80 - 124
1,2-Dichloroethane	25.0	23.8		ug/L		95	75 - 120
1,2-Dichloropropane	25.0	26.4		ug/L		106	76 - 120
1,3,5-Trimethylbenzene	25.0	24.1		ug/L		97	77 - 121
1,3-Dichlorobenzene	25.0	24.0		ug/L		96	77 - 120
1,4-Dichlorobenzene	25.0	23.7		ug/L		95	80 - 120
2-Butanone (MEK)	125	122		ug/L		98	57 - 140
2-Hexanone	125	123		ug/L		98	65 - 127
4-Isopropyltoluene	25.0	23.7		ug/L		95	73 - 120
4-Methyl-2-pentanone (MIBK)	125	120		ug/L		96	71 - 125
Acetone	125	117		ug/L		93	56 - 142
Benzene	25.0	25.2		ug/L		101	71 - 124
Bromoform	25.0	26.4		ug/L		106	61 - 132
Bromomethane	25.0	30.9		ug/L		124	55 - 144
Carbon disulfide	25.0	26.1		ug/L		104	59 - 134
Carbon tetrachloride	25.0	29.2		ug/L		117	72 - 134
Chlorobenzene	25.0	24.5		ug/L		98	80 - 120

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

Lab Sample ID: LCS 480-437186/5
Matrix: Water
Analysis Batch: 437186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	25.0	29.0		ug/L		116	75 - 125
Chloroethane	25.0	25.6		ug/L		102	69 - 136
Chloroform	25.0	25.5		ug/L		102	73 - 127
Chloromethane	25.0	21.9		ug/L		87	68 - 124
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	74 - 124
Cyclohexane	25.0	25.1		ug/L		100	59 - 135
Bromodichloromethane	25.0	25.3		ug/L		101	80 - 122
Dichlorodifluoromethane	25.0	25.7		ug/L		103	59 - 135
Ethylbenzene	25.0	24.3		ug/L		97	77 - 123
1,2-Dibromoethane	25.0	25.7		ug/L		103	77 - 120
Isopropylbenzene	25.0	23.0		ug/L		92	77 - 122
Methyl acetate	50.0	43.6		ug/L		87	74 - 133
Methyl tert-butyl ether	25.0	26.5		ug/L		106	77 - 120
Methylcyclohexane	25.0	25.5		ug/L		102	68 - 134
Methylene Chloride	25.0	26.5		ug/L		106	75 - 124
m,p-Xylene	25.0	25.5		ug/L		102	76 - 122
Naphthalene	25.0	22.9		ug/L		92	66 - 125
n-Butylbenzene	25.0	22.7		ug/L		91	71 - 128
N-Propylbenzene	25.0	23.2		ug/L		93	75 - 127
o-Xylene	25.0	25.4		ug/L		101	76 - 122
sec-Butylbenzene	25.0	24.3		ug/L		97	74 - 127
Tetrachloroethene	25.0	24.8		ug/L		99	74 - 122
Toluene	25.0	25.0		ug/L		100	80 - 122
trans-1,2-Dichloroethene	25.0	27.2		ug/L		109	73 - 127
trans-1,3-Dichloropropene	25.0	24.6		ug/L		98	80 - 120
Trichloroethene	25.0	25.5		ug/L		102	74 - 123
Trichlorofluoromethane	25.0	27.7		ug/L		111	62 - 150
Vinyl chloride	25.0	26.9		ug/L		108	65 - 133
cis-1,3-Dichloropropene	25.0	25.2		ug/L		101	74 - 124
Styrene	25.0	24.6		ug/L		98	80 - 120
tert-Butylbenzene	25.0	24.0		ug/L		96	75 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*114*		*75 - 123*

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437186

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND	F1	25.0	33.2	F1	ug/L		133	73 - 126
1,1,2,2-Tetrachloroethane	ND		25.0	28.1		ug/L		112	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	32.4		ug/L		129	61 - 148
1,1,2-Trichloroethane	ND		25.0	28.4		ug/L		114	76 - 122

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

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437186

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	ND	F1	25.0	31.6	F1	ug/L		126	77 - 120
1,1-Dichloroethene	ND	F1	25.0	34.1	F1	ug/L		136	66 - 127
1,2,4-Trichlorobenzene	ND		25.0	22.7		ug/L		91	79 - 122
1,2,4-Trimethylbenzene	ND		25.0	27.1		ug/L		109	76 - 121
1,2-Dibromo-3-Chloropropane	ND		25.0	26.3		ug/L		105	56 - 134
1,2-Dichlorobenzene	ND		25.0	26.4		ug/L		106	80 - 124
1,2-Dichloroethane	ND		25.0	27.8		ug/L		111	75 - 120
1,2-Dichloropropane	ND	F1	25.0	31.3	F1	ug/L		125	76 - 120
1,3,5-Trimethylbenzene	ND		25.0	28.3		ug/L		113	77 - 121
1,3-Dichlorobenzene	ND		25.0	26.9		ug/L		108	77 - 120
1,4-Dichlorobenzene	ND		25.0	27.0		ug/L		108	78 - 124
2-Butanone (MEK)	ND		125	139		ug/L		111	57 - 140
2-Hexanone	ND		125	143		ug/L		114	65 - 127
4-Isopropyltoluene	ND		25.0	27.2		ug/L		109	73 - 120
4-Methyl-2-pentanone (MIBK)	ND		125	142		ug/L		114	71 - 125
Acetone	3.4	J	125	127		ug/L		99	56 - 142
Benzene	ND		25.0	30.0		ug/L		120	71 - 124
Bromoform	ND	F1	25.0	33.3	F1	ug/L		133	61 - 132
Bromomethane	ND	F1	25.0	38.8	F1	ug/L		155	55 - 144
Carbon disulfide	0.20	J	25.0	32.5		ug/L		129	59 - 134
Carbon tetrachloride	ND	F1	25.0	35.2	F1	ug/L		141	72 - 134
Chlorobenzene	ND		25.0	29.2		ug/L		117	80 - 120
Dibromochloromethane	ND	F1	25.0	35.0	F1	ug/L		140	75 - 125
Chloroethane	ND		25.0	32.7		ug/L		131	69 - 136
Chloroform	2.0		25.0	31.8		ug/L		119	73 - 127
Chloromethane	ND		25.0	30.8		ug/L		123	68 - 124
cis-1,2-Dichloroethene	ND	F1	25.0	31.8	F1	ug/L		127	74 - 124
Cyclohexane	ND		25.0	31.3		ug/L		125	59 - 135
Bromodichloromethane	ND		25.0	29.2		ug/L		117	80 - 122
Dichlorodifluoromethane	ND		25.0	33.0		ug/L		132	59 - 135
Ethylbenzene	ND		25.0	28.6		ug/L		114	77 - 123
1,2-Dibromoethane	ND		25.0	29.6		ug/L		118	77 - 120
Isopropylbenzene	ND		25.0	26.3		ug/L		105	77 - 122
Methyl acetate	ND		50.0	52.2		ug/L		104	74 - 133
Methyl tert-butyl ether	ND	F1	25.0	30.5	F1	ug/L		122	77 - 120
Methylcyclohexane	0.20	J	25.0	31.5		ug/L		125	68 - 134
Methylene Chloride	ND		25.0	31.0		ug/L		124	75 - 124
m,p-Xylene	ND		25.0	29.5		ug/L		118	76 - 122
Naphthalene	ND		25.0	26.3		ug/L		105	66 - 125
n-Butylbenzene	ND		25.0	26.3		ug/L		105	71 - 128
N-Propylbenzene	ND		25.0	27.3		ug/L		109	75 - 127
o-Xylene	ND		25.0	29.2		ug/L		117	76 - 122
sec-Butylbenzene	ND		25.0	27.9		ug/L		112	74 - 127
Tetrachloroethene	ND		25.0	29.0		ug/L		116	74 - 122
Toluene	ND		25.0	29.1		ug/L		116	80 - 122
trans-1,2-Dichloroethene	ND	F1	25.0	31.6		ug/L		127	73 - 127
trans-1,3-Dichloropropene	ND		25.0	27.0		ug/L		108	80 - 120
Trichloroethene	ND	F1	25.0	31.3	F1	ug/L		125	74 - 123

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

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437186

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	ND	F1	25.0	37.8	F1	ug/L		151	62 - 150
Vinyl chloride	ND	F1	25.0	34.8	F1	ug/L		139	65 - 133
cis-1,3-Dichloropropene	ND		25.0	29.2		ug/L		117	74 - 124
Styrene	ND		25.0	28.4		ug/L		114	80 - 120
tert-Butylbenzene	ND		25.0	28.7		ug/L		115	75 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*77 - 120*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*75 - 123*

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437186

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND	F1	25.0	34.0	F1	ug/L		136	73 - 126	2	15
1,1,2,2-Tetrachloroethane	ND		25.0	27.8		ug/L		111	76 - 120	1	15
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	30.4		ug/L		121	61 - 148	6	20
1,1,2-Trichloroethane	ND		25.0	27.3		ug/L		109	76 - 122	4	15
1,1-Dichloroethane	ND	F1	25.0	31.4	F1	ug/L		126	77 - 120	1	20
1,1-Dichloroethene	ND	F1	25.0	33.9	F1	ug/L		135	66 - 127	1	16
1,2,4-Trichlorobenzene	ND		25.0	22.8		ug/L		91	79 - 122	0	20
1,2,4-Trimethylbenzene	ND		25.0	27.0		ug/L		108	76 - 121	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	26.8		ug/L		107	56 - 134	2	15
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	80 - 124	1	20
1,2-Dichloroethane	ND		25.0	27.5		ug/L		110	75 - 120	1	20
1,2-Dichloropropane	ND	F1	25.0	30.5	F1	ug/L		122	76 - 120	2	20
1,3,5-Trimethylbenzene	ND		25.0	27.9		ug/L		112	77 - 121	1	20
1,3-Dichlorobenzene	ND		25.0	26.5		ug/L		106	77 - 120	1	20
1,4-Dichlorobenzene	ND		25.0	26.6		ug/L		106	78 - 124	2	20
2-Butanone (MEK)	ND		125	132		ug/L		106	57 - 140	5	20
2-Hexanone	ND		125	137		ug/L		110	65 - 127	4	15
4-Isopropyltoluene	ND		25.0	27.3		ug/L		109	73 - 120	0	20
4-Methyl-2-pentanone (MIBK)	ND		125	140		ug/L		112	71 - 125	1	35
Acetone	3.4	J	125	126		ug/L		98	56 - 142	0	15
Benzene	ND		25.0	29.5		ug/L		118	71 - 124	2	13
Bromoform	ND	F1	25.0	31.2		ug/L		125	61 - 132	7	15
Bromomethane	ND	F1	25.0	37.7	F1	ug/L		151	55 - 144	3	15
Carbon disulfide	0.20	J	25.0	33.2		ug/L		132	59 - 134	2	15
Carbon tetrachloride	ND	F1	25.0	35.6	F1	ug/L		142	72 - 134	1	15
Chlorobenzene	ND		25.0	28.7		ug/L		115	80 - 120	2	25
Dibromochloromethane	ND	F1	25.0	34.1	F1	ug/L		136	75 - 125	3	15
Chloroethane	ND		25.0	32.3		ug/L		129	69 - 136	1	15
Chloroform	2.0		25.0	32.5		ug/L		122	73 - 127	2	20
Chloromethane	ND		25.0	27.7		ug/L		111	68 - 124	11	15

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

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437186

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	ND	F1	25.0	31.6	F1	ug/L		126	74 - 124	1	15
Cyclohexane	ND		25.0	29.6		ug/L		118	59 - 135	6	20
Bromodichloromethane	ND		25.0	29.5		ug/L		118	80 - 122	1	15
Dichlorodifluoromethane	ND		25.0	30.3		ug/L		121	59 - 135	8	20
Ethylbenzene	ND		25.0	28.2		ug/L		113	77 - 123	1	15
1,2-Dibromoethane	ND		25.0	28.5		ug/L		114	77 - 120	4	15
Isopropylbenzene	ND		25.0	26.1		ug/L		105	77 - 122	1	20
Methyl acetate	ND		50.0	50.9		ug/L		102	74 - 133	2	20
Methyl tert-butyl ether	ND	F1	25.0	31.1	F1	ug/L		124	77 - 120	2	37
Methylcyclohexane	0.20	J	25.0	29.2		ug/L		116	68 - 134	7	20
Methylene Chloride	ND		25.0	30.9		ug/L		124	75 - 124	0	15
m,p-Xylene	ND		25.0	29.4		ug/L		117	76 - 122	0	16
Naphthalene	ND		25.0	26.1		ug/L		104	66 - 125	1	20
n-Butylbenzene	ND		25.0	25.9		ug/L		103	71 - 128	2	15
N-Propylbenzene	ND		25.0	27.1		ug/L		108	75 - 127	1	15
o-Xylene	ND		25.0	29.5		ug/L		118	76 - 122	1	16
sec-Butylbenzene	ND		25.0	28.1		ug/L		112	74 - 127	1	15
Tetrachloroethene	ND		25.0	28.3		ug/L		113	74 - 122	2	20
Toluene	ND		25.0	29.1		ug/L		116	80 - 122	0	15
trans-1,2-Dichloroethene	ND	F1	25.0	33.0	F1	ug/L		132	73 - 127	4	20
trans-1,3-Dichloropropene	ND		25.0	27.3		ug/L		109	80 - 120	1	15
Trichloroethene	ND	F1	25.0	29.6		ug/L		118	74 - 123	6	16
Trichlorofluoromethane	ND	F1	25.0	36.1		ug/L		144	62 - 150	5	20
Vinyl chloride	ND	F1	25.0	33.7	F1	ug/L		135	65 - 133	3	15
cis-1,3-Dichloropropene	ND		25.0	28.5		ug/L		114	74 - 124	2	15
Styrene	ND		25.0	27.7		ug/L		111	80 - 120	2	20
tert-Butylbenzene	ND		25.0	28.4		ug/L		114	75 - 123	1	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*
Toluene-d8 (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*115*		*75 - 123*

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

Lab Sample ID: MB 480-436943/1-A
Matrix: Water
Analysis Batch: 437093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436943

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		09/29/18 20:33	10/01/18 18:44	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		09/29/18 20:33	10/01/18 18:44	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		09/29/18 20:33	10/01/18 18:44	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		09/29/18 20:33	10/01/18 18:44	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		09/29/18 20:33	10/01/18 18:44	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		09/29/18 20:33	10/01/18 18:44	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 18:44	1

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

Lab Sample ID: MB 480-436943/1-A
Matrix: Water
Analysis Batch: 437093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436943

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		5.0	0.46	ug/L		09/29/18 20:33	10/01/18 18:44	1
2-Chlorophenol	ND		5.0	0.53	ug/L		09/29/18 20:33	10/01/18 18:44	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		09/29/18 20:33	10/01/18 18:44	1
2-Methylphenol	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 18:44	1
2-Nitroaniline	ND		10	0.42	ug/L		09/29/18 20:33	10/01/18 18:44	1
2-Nitrophenol	ND		5.0	0.48	ug/L		09/29/18 20:33	10/01/18 18:44	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 18:44	1
3-Nitroaniline	ND		10	0.48	ug/L		09/29/18 20:33	10/01/18 18:44	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Chloroaniline	ND		5.0	0.59	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Methylphenol	ND		10	0.36	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Nitroaniline	ND		10	0.25	ug/L		09/29/18 20:33	10/01/18 18:44	1
4-Nitrophenol	ND		10	1.5	ug/L		09/29/18 20:33	10/01/18 18:44	1
Acenaphthene	ND		5.0	0.41	ug/L		09/29/18 20:33	10/01/18 18:44	1
Acenaphthylene	ND		5.0	0.38	ug/L		09/29/18 20:33	10/01/18 18:44	1
Acetophenone	ND		5.0	0.54	ug/L		09/29/18 20:33	10/01/18 18:44	1
Anthracene	ND		5.0	0.28	ug/L		09/29/18 20:33	10/01/18 18:44	1
Atrazine	ND		5.0	0.46	ug/L		09/29/18 20:33	10/01/18 18:44	1
Benzaldehyde	ND		5.0	0.27	ug/L		09/29/18 20:33	10/01/18 18:44	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		09/29/18 20:33	10/01/18 18:44	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		09/29/18 20:33	10/01/18 18:44	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		09/29/18 20:33	10/01/18 18:44	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		09/29/18 20:33	10/01/18 18:44	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		09/29/18 20:33	10/01/18 18:44	1
Biphenyl	ND		5.0	0.65	ug/L		09/29/18 20:33	10/01/18 18:44	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		09/29/18 20:33	10/01/18 18:44	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		09/29/18 20:33	10/01/18 18:44	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 18:44	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		09/29/18 20:33	10/01/18 18:44	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		09/29/18 20:33	10/01/18 18:44	1
Caprolactam	ND		5.0	2.2	ug/L		09/29/18 20:33	10/01/18 18:44	1
Carbazole	ND		5.0	0.30	ug/L		09/29/18 20:33	10/01/18 18:44	1
Chrysene	ND		5.0	0.33	ug/L		09/29/18 20:33	10/01/18 18:44	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		09/29/18 20:33	10/01/18 18:44	1
Dibenzofuran	ND		10	0.51	ug/L		09/29/18 20:33	10/01/18 18:44	1
Diethyl phthalate	ND		5.0	0.22	ug/L		09/29/18 20:33	10/01/18 18:44	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		09/29/18 20:33	10/01/18 18:44	1
Di-n-butyl phthalate	0.351	J	5.0	0.31	ug/L		09/29/18 20:33	10/01/18 18:44	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		09/29/18 20:33	10/01/18 18:44	1
Fluoranthene	ND		5.0	0.40	ug/L		09/29/18 20:33	10/01/18 18:44	1
Fluorene	ND		5.0	0.36	ug/L		09/29/18 20:33	10/01/18 18:44	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		09/29/18 20:33	10/01/18 18:44	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		09/29/18 20:33	10/01/18 18:44	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		09/29/18 20:33	10/01/18 18:44	1
Hexachloroethane	ND		5.0	0.59	ug/L		09/29/18 20:33	10/01/18 18:44	1

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

Lab Sample ID: MB 480-436943/1-A
Matrix: Water
Analysis Batch: 437093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436943

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		09/29/18 20:33	10/01/18 18:44	1
Isophorone	ND		5.0	0.43	ug/L		09/29/18 20:33	10/01/18 18:44	1
Naphthalene	ND		5.0	0.76	ug/L		09/29/18 20:33	10/01/18 18:44	1
Nitrobenzene	ND		5.0	0.29	ug/L		09/29/18 20:33	10/01/18 18:44	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		09/29/18 20:33	10/01/18 18:44	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		09/29/18 20:33	10/01/18 18:44	1
Pentachlorophenol	ND		10	2.2	ug/L		09/29/18 20:33	10/01/18 18:44	1
Phenanthrene	ND		5.0	0.44	ug/L		09/29/18 20:33	10/01/18 18:44	1
Phenol	ND		5.0	0.39	ug/L		09/29/18 20:33	10/01/18 18:44	1
Pyrene	ND		5.0	0.34	ug/L		09/29/18 20:33	10/01/18 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*89*		*41 - 120*	*09/29/18 20:33*	*10/01/18 18:44*	*1*
2-Fluorobiphenyl	*85*		*48 - 120*	*09/29/18 20:33*	*10/01/18 18:44*	*1*
2-Fluorophenol	*58*		*35 - 120*	*09/29/18 20:33*	*10/01/18 18:44*	*1*
Nitrobenzene-d5	*85*		*46 - 120*	*09/29/18 20:33*	*10/01/18 18:44*	*1*
Phenol-d5	*42*		*22 - 120*	*09/29/18 20:33*	*10/01/18 18:44*	*1*
p-Terphenyl-d14	*91*		*59 - 136*	*09/29/18 20:33*	*10/01/18 18:44*	*1*

Lab Sample ID: LCS 480-436943/2-A
Matrix: Water
Analysis Batch: 437093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436943

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	32.0	36.0		ug/L		112	65 - 126
2,4,6-Trichlorophenol	32.0	35.2		ug/L		110	64 - 120
2,4-Dichlorophenol	32.0	34.7		ug/L		108	63 - 120
2,4-Dimethylphenol	32.0	35.7		ug/L		112	47 - 120
2,4-Dinitrophenol	64.0	79.1		ug/L		124	31 - 137
2,4-Dinitrotoluene	32.0	38.2		ug/L		119	69 - 120
2,6-Dinitrotoluene	32.0	36.2		ug/L		113	68 - 120
2-Chloronaphthalene	32.0	32.1		ug/L		100	58 - 120
2-Chlorophenol	32.0	30.7		ug/L		96	48 - 120
2-Methylnaphthalene	32.0	33.1		ug/L		103	59 - 120
2-Methylphenol	32.0	29.5		ug/L		92	39 - 120
2-Nitroaniline	32.0	39.3		ug/L		123	54 - 127
2-Nitrophenol	32.0	36.0		ug/L		112	52 - 125
3,3'-Dichlorobenzidine	64.0	66.9		ug/L		104	49 - 135
3-Nitroaniline	32.0	27.7		ug/L		87	51 - 120
4,6-Dinitro-2-methylphenol	64.0	78.2		ug/L		122	46 - 136
4-Bromophenyl phenyl ether	32.0	36.2		ug/L		113	65 - 120
4-Chloro-3-methylphenol	32.0	38.2		ug/L		119	61 - 123
4-Chloroaniline	32.0	26.4		ug/L		82	30 - 120
4-Chlorophenyl phenyl ether	32.0	35.4		ug/L		111	62 - 120
4-Methylphenol	32.0	29.6		ug/L		92	29 - 131
4-Nitroaniline	32.0	32.7		ug/L		102	65 - 120
4-Nitrophenol	64.0	77.3	*	ug/L		121	45 - 120
Acenaphthene	32.0	33.7		ug/L		105	60 - 120

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

Lab Sample ID: LCS 480-436943/2-A
Matrix: Water
Analysis Batch: 437093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436943

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	32.0	35.3		ug/L		110	63 - 120
Acetophenone	32.0	34.9		ug/L		109	45 - 120
Anthracene	32.0	36.0		ug/L		113	67 - 120
Atrazine	64.0	88.0	*	ug/L		137	71 - 130
Benzaldehyde	64.0	65.8		ug/L		103	10 - 140
Benzo(a)anthracene	32.0	35.9		ug/L		112	70 - 121
Benzo(a)pyrene	32.0	34.7		ug/L		108	60 - 123
Benzo(b)fluoranthene	32.0	36.1		ug/L		113	66 - 126
Benzo(g,h,i)perylene	32.0	36.5		ug/L		114	66 - 150
Benzo(k)fluoranthene	32.0	33.5		ug/L		105	65 - 124
Biphenyl	32.0	32.7		ug/L		102	59 - 120
bis (2-chloroisopropyl) ether	32.0	34.7		ug/L		108	21 - 136
Bis(2-chloroethoxy)methane	32.0	32.8		ug/L		102	50 - 128
Bis(2-chloroethyl)ether	32.0	29.1		ug/L		91	44 - 120
Bis(2-ethylhexyl) phthalate	32.0	39.1		ug/L		122	63 - 139
Butyl benzyl phthalate	32.0	37.6		ug/L		118	70 - 129
Caprolactam	64.0	24.4		ug/L		38	22 - 120
Carbazole	32.0	33.9		ug/L		106	66 - 123
Chrysene	32.0	34.5		ug/L		108	69 - 120
Dibenz(a,h)anthracene	32.0	37.0		ug/L		116	65 - 135
Dibenzofuran	32.0	34.0		ug/L		106	66 - 120
Diethyl phthalate	32.0	40.4		ug/L		126	59 - 127
Dimethyl phthalate	32.0	38.2		ug/L		119	68 - 120
Di-n-butyl phthalate	32.0	39.1		ug/L		122	69 - 131
Di-n-octyl phthalate	32.0	40.4		ug/L		126	63 - 140
Fluoranthene	32.0	38.0		ug/L		119	69 - 126
Fluorene	32.0	34.9		ug/L		109	66 - 120
Hexachlorobenzene	32.0	38.4		ug/L		120	61 - 120
Hexachlorobutadiene	32.0	34.4		ug/L		107	35 - 120
Hexachlorocyclopentadiene	32.0	28.7		ug/L		90	31 - 120
Hexachloroethane	32.0	31.2		ug/L		97	43 - 120
Indeno(1,2,3-cd)pyrene	32.0	36.7		ug/L		115	69 - 146
Isophorone	32.0	36.5		ug/L		114	55 - 120
Naphthalene	32.0	31.4		ug/L		98	57 - 120
Nitrobenzene	32.0	36.1		ug/L		113	53 - 123
N-Nitrosodi-n-propylamine	32.0	34.8		ug/L		109	32 - 140
Pentachlorophenol	64.0	74.9		ug/L		117	29 - 136
Phenanthrene	32.0	36.3		ug/L		113	68 - 120
Phenol	32.0	18.8		ug/L		59	17 - 120
Pyrene	32.0	35.0		ug/L		109	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*112*		*41 - 120*
2-Fluorobiphenyl	*94*		*48 - 120*
2-Fluorophenol	*67*		*35 - 120*
Nitrobenzene-d5	*101*		*46 - 120*
Phenol-d5	*53*		*22 - 120*
p-Terphenyl-d14	*98*		*59 - 136*

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437093

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 436943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	ND		32.0	34.9		ug/L		109	65 - 126
2,4,6-Trichlorophenol	ND		32.0	35.9		ug/L		112	64 - 120
2,4-Dichlorophenol	ND		32.0	34.5		ug/L		108	48 - 132
2,4-Dimethylphenol	ND		32.0	34.9		ug/L		109	39 - 130
2,4-Dinitrophenol	ND		64.0	81.5		ug/L		127	21 - 150
2,4-Dinitrotoluene	ND		32.0	37.5		ug/L		117	54 - 138
2,6-Dinitrotoluene	ND		32.0	36.9		ug/L		115	17 - 150
2-Chloronaphthalene	ND		32.0	31.4		ug/L		98	52 - 124
2-Chlorophenol	ND		32.0	30.6		ug/L		96	48 - 120
2-Methylnaphthalene	ND		32.0	31.7		ug/L		99	34 - 140
2-Methylphenol	ND		32.0	29.7		ug/L		93	46 - 120
2-Nitroaniline	ND		32.0	21.7		ug/L		68	44 - 136
2-Nitrophenol	ND		32.0	36.7		ug/L		115	38 - 141
3,3'-Dichlorobenzidine	ND	F1 F2	64.0	5.35	F1	ug/L		8	10 - 150
3-Nitroaniline	ND	F1 F2	32.0	5.74	J F1	ug/L		18	32 - 150
4,6-Dinitro-2-methylphenol	ND		64.0	78.0		ug/L		122	38 - 150
4-Bromophenyl phenyl ether	ND		32.0	36.0		ug/L		112	63 - 126
4-Chloro-3-methylphenol	ND		32.0	36.6		ug/L		114	64 - 127
4-Chloroaniline	ND		32.0	17.3		ug/L		54	16 - 124
4-Chlorophenyl phenyl ether	ND		32.0	34.1		ug/L		107	61 - 120
4-Methylphenol	ND		32.0	28.5		ug/L		89	36 - 120
4-Nitroaniline	ND	F1	32.0	5.48	J F1	ug/L		17	32 - 150
4-Nitrophenol	ND	*	64.0	74.4		ug/L		116	23 - 132
Acenaphthene	ND		32.0	32.8		ug/L		103	48 - 120
Acenaphthylene	ND		32.0	33.7		ug/L		105	63 - 120
Acetophenone	ND		32.0	34.1		ug/L		107	53 - 120
Anthracene	ND		32.0	32.8		ug/L		103	65 - 122
Atrazine	ND	*	64.0	79.9		ug/L		125	50 - 150
Benzaldehyde	ND		64.0	64.5		ug/L		101	10 - 150
Benzo(a)anthracene	ND		32.0	28.0		ug/L		87	43 - 124
Benzo(a)pyrene	ND		32.0	27.0		ug/L		84	23 - 125
Benzo(b)fluoranthene	ND		32.0	26.4		ug/L		83	27 - 127
Benzo(g,h,i)perylene	ND		32.0	27.7		ug/L		87	16 - 147
Benzo(k)fluoranthene	ND		32.0	26.8		ug/L		84	20 - 124
Biphenyl	ND		32.0	32.2		ug/L		101	57 - 120
bis (2-chloroisopropyl) ether	ND		32.0	34.0		ug/L		106	28 - 121
Bis(2-chloroethoxy)methane	ND		32.0	31.7		ug/L		99	44 - 128
Bis(2-chloroethyl)ether	ND		32.0	28.9		ug/L		90	45 - 120
Bis(2-ethylhexyl) phthalate	ND		32.0	31.4		ug/L		98	16 - 150
Butyl benzyl phthalate	ND		32.0	32.9		ug/L		103	51 - 140
Caprolactam	ND		64.0	21.5		ug/L		34	10 - 120
Carbazole	ND		32.0	36.3		ug/L		113	16 - 148
Chrysene	ND		32.0	27.5		ug/L		86	44 - 122
Dibenz(a,h)anthracene	ND		32.0	28.9		ug/L		90	16 - 139
Dibenzofuran	ND		32.0	33.3		ug/L		104	60 - 120
Diethyl phthalate	ND		32.0	36.1		ug/L		113	53 - 133
Dimethyl phthalate	ND		32.0	37.1		ug/L		116	59 - 123
Di-n-butyl phthalate	ND		32.0	35.1		ug/L		110	65 - 129
Di-n-octyl phthalate	ND		32.0	32.7		ug/L		102	16 - 150
Fluoranthene	ND		32.0	33.6		ug/L		105	63 - 129

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

Lab Sample ID: 480-142475-1 MS — **Client Sample ID: MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437093 — **Prep Batch: 436943**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	ND		32.0	33.6		ug/L		105	62 - 120
Hexachlorobenzene	ND		32.0	34.7		ug/L		108	57 - 121
Hexachlorobutadiene	ND		32.0	32.8		ug/L		103	37 - 120
Hexachlorocyclopentadiene	ND		32.0	29.4		ug/L		92	21 - 120
Hexachloroethane	ND		32.0	31.0		ug/L		97	16 - 130
Indeno(1,2,3-cd)pyrene	ND		32.0	28.4		ug/L		89	16 - 140
Isophorone	ND		32.0	35.7		ug/L		112	48 - 133
Naphthalene	ND		32.0	30.4		ug/L		95	45 - 120
Nitrobenzene	ND	F1	32.0	59.3	F1	ug/L		185	45 - 123
N-Nitrosodi-n-propylamine	ND		32.0	34.3		ug/L		107	49 - 120
Pentachlorophenol	ND		64.0	79.1		ug/L		124	23 - 149
Phenanthrene	ND		32.0	35.6		ug/L		111	65 - 122
Phenol	ND		32.0	18.5		ug/L		58	16 - 120
Pyrene	ND		32.0	30.2		ug/L		95	58 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*116*		*41 - 120*
2-Fluorobiphenyl	*91*		*48 - 120*
2-Fluorophenol	*66*		*35 - 120*
Nitrobenzene-d5	*97*		*46 - 120*
Phenol-d5	*52*		*22 - 120*
p-Terphenyl-d14	*50*	*X*	*59 - 136*

Lab Sample ID: 480-142475-1 MSD — **Client Sample ID: MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437093 — **Prep Batch: 436943**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	ND		32.0	30.2		ug/L		94	65 - 126	14	18
2,4,6-Trichlorophenol	ND		32.0	37.6		ug/L		118	64 - 120	5	19
2,4-Dichlorophenol	ND		32.0	34.8		ug/L		109	48 - 132	1	19
2,4-Dimethylphenol	ND		32.0	35.9		ug/L		112	39 - 130	3	42
2,4-Dinitrophenol	ND		64.0	74.7		ug/L		117	21 - 150	9	22
2,4-Dinitrotoluene	ND		32.0	33.2		ug/L		104	54 - 138	12	20
2,6-Dinitrotoluene	ND		32.0	32.1		ug/L		100	17 - 150	14	15
2-Chloronaphthalene	ND		32.0	31.3		ug/L		98	52 - 124	0	21
2-Chlorophenol	ND		32.0	31.3		ug/L		98	48 - 120	2	25
2-Methylnaphthalene	ND		32.0	32.7		ug/L		102	34 - 140	3	21
2-Methylphenol	ND		32.0	31.0		ug/L		97	46 - 120	4	27
2-Nitroaniline	ND		32.0	19.5		ug/L		61	44 - 136	10	15
2-Nitrophenol	ND		32.0	39.0		ug/L		122	38 - 141	6	18
3,3'-Dichlorobenzidine	ND	F1 F2	64.0	2.04	J F1 F2	ug/L		3	10 - 150	90	25
3-Nitroaniline	ND	F1 F2	32.0	8.18	J F1 F2	ug/L		26	32 - 150	35	19
4,6-Dinitro-2-methylphenol	ND		64.0	77.3		ug/L		121	38 - 150	1	15
4-Bromophenyl phenyl ether	ND		32.0	35.5		ug/L		111	63 - 126	1	15
4-Chloro-3-methylphenol	ND		32.0	37.9		ug/L		118	64 - 127	3	27
4-Chloroaniline	ND		32.0	17.2		ug/L		54	16 - 124	1	22
4-Chlorophenyl phenyl ether	ND		32.0	31.1		ug/L		97	61 - 120	9	16

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

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437093

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 436943

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Methylphenol	ND		32.0	31.1		ug/L		97	36 - 120	9	24
4-Nitroaniline	ND	F1	32.0	5.75	J F1	ug/L		18	32 - 150	5	24
4-Nitrophenol	ND	*	64.0	76.1		ug/L		119	23 - 132	2	48
Acenaphthene	ND		32.0	33.1		ug/L		103	48 - 120	1	24
Acenaphthylene	ND		32.0	33.2		ug/L		104	63 - 120	1	18
Acetophenone	ND		32.0	35.0		ug/L		109	53 - 120	2	20
Anthracene	ND		32.0	33.3		ug/L		104	65 - 122	1	15
Atrazine	ND	*	64.0	77.7		ug/L		121	50 - 150	3	20
Benzaldehyde	ND		64.0	65.8		ug/L		103	10 - 150	2	20
Benzo(a)anthracene	ND		32.0	29.6		ug/L		93	43 - 124	6	15
Benzo(a)pyrene	ND		32.0	27.7		ug/L		87	23 - 125	3	15
Benzo(b)fluoranthene	ND		32.0	27.6		ug/L		86	27 - 127	4	15
Benzo(g,h,i)perylene	ND		32.0	29.4		ug/L		92	16 - 147	6	15
Benzo(k)fluoranthene	ND		32.0	28.6		ug/L		90	20 - 124	6	22
Biphenyl	ND		32.0	31.9		ug/L		100	57 - 120	1	20
bis (2-chloroisopropyl) ether	ND		32.0	34.0		ug/L		106	28 - 121	0	24
Bis(2-chloroethoxy)methane	ND		32.0	32.5		ug/L		102	44 - 128	3	17
Bis(2-chloroethyl)ether	ND		32.0	30.2		ug/L		94	45 - 120	5	21
Bis(2-ethylhexyl) phthalate	ND		32.0	33.4		ug/L		104	16 - 150	6	15
Butyl benzyl phthalate	ND		32.0	34.0		ug/L		106	51 - 140	3	16
Caprolactam	ND		64.0	25.8		ug/L		40	10 - 120	18	20
Carbazole	ND		32.0	36.5		ug/L		114	16 - 148	1	20
Chrysene	ND		32.0	29.2		ug/L		91	44 - 122	6	15
Dibenz(a,h)anthracene	ND		32.0	30.3		ug/L		95	16 - 139	5	15
Dibenzofuran	ND		32.0	33.3		ug/L		104	60 - 120	0	15
Diethyl phthalate	ND		32.0	34.9		ug/L		109	53 - 133	3	15
Dimethyl phthalate	ND		32.0	32.6		ug/L		102	59 - 123	13	15
Di-n-butyl phthalate	ND		32.0	36.3		ug/L		113	65 - 129	3	15
Di-n-octyl phthalate	ND		32.0	34.8		ug/L		109	16 - 150	6	16
Fluoranthene	ND		32.0	35.0		ug/L		109	63 - 129	4	15
Fluorene	ND		32.0	30.8		ug/L		96	62 - 120	9	15
Hexachlorobenzene	ND		32.0	35.1		ug/L		110	57 - 121	1	15
Hexachlorobutadiene	ND		32.0	34.2		ug/L		107	37 - 120	4	44
Hexachlorocyclopentadiene	ND		32.0	29.2		ug/L		91	21 - 120	1	49
Hexachloroethane	ND		32.0	31.1		ug/L		97	16 - 130	0	46
Indeno(1,2,3-cd)pyrene	ND		32.0	29.6		ug/L		93	16 - 140	4	15
Isophorone	ND		32.0	37.0		ug/L		116	48 - 133	3	17
Naphthalene	ND		32.0	30.9		ug/L		97	45 - 120	2	29
Nitrobenzene	ND	F1	32.0	59.7	F1	ug/L		187	45 - 123	1	24
N-Nitrosodi-n-propylamine	ND		32.0	35.3		ug/L		110	49 - 120	3	31
Pentachlorophenol	ND		64.0	74.6		ug/L		117	23 - 149	6	37
Phenanthrene	ND		32.0	36.2		ug/L		113	65 - 122	2	15
Phenol	ND		32.0	21.4		ug/L		67	16 - 120	15	34
Pyrene	ND		32.0	31.8		ug/L		99	58 - 128	5	19

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*108*		*41 - 120*
2-Fluorobiphenyl	*90*		*48 - 120*

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

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437093

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 436943

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorophenol	*74*		*35 - 120*
Nitrobenzene-d5	*101*		*46 - 120*
Phenol-d5	*60*		*22 - 120*
p-Terphenyl-d14	*58*	*X*	*59 - 136*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-436944/1-A
Matrix: Water
Analysis Batch: 437032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436944

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		09/29/18 23:18	10/01/18 11:33	1
4,4'-DDE	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 11:33	1
4,4'-DDT	ND		0.050	0.011	ug/L		09/29/18 23:18	10/01/18 11:33	1
Aldrin	ND		0.050	0.0081	ug/L		09/29/18 23:18	10/01/18 11:33	1
alpha-BHC	ND		0.050	0.0077	ug/L		09/29/18 23:18	10/01/18 11:33	1
cis-Chlordane	ND		0.050	0.015	ug/L		09/29/18 23:18	10/01/18 11:33	1
beta-BHC	ND		0.050	0.025	ug/L		09/29/18 23:18	10/01/18 11:33	1
delta-BHC	ND		0.050	0.010	ug/L		09/29/18 23:18	10/01/18 11:33	1
Dieldrin	ND		0.050	0.0098	ug/L		09/29/18 23:18	10/01/18 11:33	1
Endosulfan I	ND		0.050	0.011	ug/L		09/29/18 23:18	10/01/18 11:33	1
Endosulfan II	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 11:33	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		09/29/18 23:18	10/01/18 11:33	1
Endrin	ND		0.050	0.014	ug/L		09/29/18 23:18	10/01/18 11:33	1
Endrin aldehyde	ND		0.050	0.016	ug/L		09/29/18 23:18	10/01/18 11:33	1
Endrin ketone	ND		0.050	0.012	ug/L		09/29/18 23:18	10/01/18 11:33	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		09/29/18 23:18	10/01/18 11:33	1
trans-Chlordane	ND		0.050	0.011	ug/L		09/29/18 23:18	10/01/18 11:33	1
Heptachlor	ND		0.050	0.0085	ug/L		09/29/18 23:18	10/01/18 11:33	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		09/29/18 23:18	10/01/18 11:33	1
Methoxychlor	ND		0.050	0.014	ug/L		09/29/18 23:18	10/01/18 11:33	1
Toxaphene	ND		0.50	0.12	ug/L		09/29/18 23:18	10/01/18 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*20 - 120*	*09/29/18 23:18*	*10/01/18 11:33*	*1*
DCB Decachlorobiphenyl	*61*		*20 - 120*	*09/29/18 23:18*	*10/01/18 11:33*	*1*
Tetrachloro-m-xylene	*88*		*44 - 120*	*09/29/18 23:18*	*10/01/18 11:33*	*1*
Tetrachloro-m-xylene	*88*		*44 - 120*	*09/29/18 23:18*	*10/01/18 11:33*	*1*

Lab Sample ID: LCS 480-436944/2-A
Matrix: Water
Analysis Batch: 437032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.400	0.397		ug/L		99	64 - 129
4,4'-DDE	0.400	0.326		ug/L		81	50 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-436944/2-A
Matrix: Water
Analysis Batch: 437032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDT	0.400	0.377		ug/L		94	59 - 120
Aldrin	0.400	0.336		ug/L		84	40 - 125
alpha-BHC	0.400	0.303		ug/L		76	52 - 125
cis-Chlordane	0.400	0.293		ug/L		73	52 - 120
beta-BHC	0.400	0.381		ug/L		95	51 - 120
delta-BHC	0.400	0.358		ug/L		89	51 - 120
Dieldrin	0.400	0.393		ug/L		98	66 - 128
Endosulfan I	0.400	0.396		ug/L		99	57 - 120
Endosulfan II	0.400	0.402		ug/L		100	66 - 131
Endosulfan sulfate	0.400	0.404		ug/L		101	66 - 136
Endrin	0.400	0.411		ug/L		103	65 - 135
Endrin aldehyde	0.400	0.377		ug/L		94	61 - 134
Endrin ketone	0.400	0.460		ug/L		115	71 - 133
gamma-BHC (Lindane)	0.400	0.356		ug/L		89	56 - 120
trans-Chlordane	0.400	0.349		ug/L		87	54 - 120
Heptachlor	0.400	0.354		ug/L		89	58 - 120
Heptachlor epoxide	0.400	0.407		ug/L		102	65 - 125
Methoxychlor	0.400	0.374		ug/L		93	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*48*		*20 - 120*
DCB Decachlorobiphenyl	*50*		*20 - 120*
Tetrachloro-m-xylene	*80*		*44 - 120*
Tetrachloro-m-xylene	*80*		*44 - 120*

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437032

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 436944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND	F2	0.400	0.283		ug/L		71	57 - 130
4,4'-DDE	ND	F2	0.400	0.173		ug/L		43	39 - 120
4,4'-DDT	ND	F2	0.400	0.189		ug/L		47	37 - 130
Aldrin	ND	F2	0.400	0.252		ug/L		63	39 - 125
alpha-BHC	ND		0.400	0.316		ug/L		79	48 - 120
cis-Chlordane	ND	F2	0.400	0.256		ug/L		64	44 - 120
beta-BHC	ND		0.400	0.377		ug/L		94	49 - 120
delta-BHC	ND		0.400	0.365		ug/L		91	50 - 120
Dieldrin	ND		0.400	0.378		ug/L		94	56 - 130
Endosulfan I	0.056		0.400	0.446		ug/L		98	40 - 126
Endosulfan II	ND		0.400	0.422		ug/L		106	59 - 140
Endosulfan sulfate	ND		0.400	0.413		ug/L		103	60 - 134
Endrin	ND		0.400	0.403		ug/L		101	54 - 135
Endrin aldehyde	ND		0.400	0.382		ug/L		95	50 - 142
Endrin ketone	ND		0.400	0.477		ug/L		119	57 - 138
gamma-BHC (Lindane)	ND		0.400	0.338		ug/L		84	50 - 120
trans-Chlordane	ND	F2	0.400	0.259		ug/L		65	42 - 120
Heptachlor	ND		0.400	0.312		ug/L		78	56 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437032

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 436944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor epoxide	ND		0.400	0.398		ug/L		99	58 - 125
Methoxychlor	ND	F2	0.400	0.302		ug/L		75	40 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*33*		*20 - 120*
DCB Decachlorobiphenyl	*33*		*20 - 120*
Tetrachloro-m-xylene	*73*		*44 - 120*
Tetrachloro-m-xylene	*71*		*44 - 120*

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437032

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 436944

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND	F2	0.400	0.384	F2	ug/L		96	57 - 130	30	23
4,4'-DDE	ND	F2	0.400	0.268	F2	ug/L		67	39 - 120	43	22
4,4'-DDT	ND	F2	0.400	0.292	F2	ug/L		73	37 - 130	43	24
Aldrin	ND	F2	0.400	0.332	F2	ug/L		83	39 - 125	27	25
alpha-BHC	ND		0.400	0.315		ug/L		79	48 - 120	0	24
cis-Chlordane	ND	F2	0.400	0.335	F2	ug/L		84	44 - 120	27	23
beta-BHC	ND		0.400	0.403		ug/L		101	49 - 120	7	24
delta-BHC	ND		0.400	0.382		ug/L		95	50 - 120	5	24
Dieldrin	ND		0.400	0.425		ug/L		106	56 - 130	12	24
Endosulfan I	0.056		0.400	0.486		ug/L		108	40 - 126	9	30
Endosulfan II	ND		0.400	0.476		ug/L		119	59 - 140	12	40
Endosulfan sulfate	ND		0.400	0.445		ug/L		111	60 - 134	8	24
Endrin	ND		0.400	0.446		ug/L		112	54 - 135	10	24
Endrin aldehyde	ND		0.400	0.385		ug/L		96	50 - 142	1	28
Endrin ketone	ND		0.400	0.516		ug/L		129	57 - 138	8	26
gamma-BHC (Lindane)	ND		0.400	0.361		ug/L		90	50 - 120	7	24
trans-Chlordane	ND	F2	0.400	0.338	F2	ug/L		85	42 - 120	26	24
Heptachlor	ND		0.400	0.365		ug/L		91	56 - 120	16	25
Heptachlor epoxide	ND		0.400	0.434		ug/L		108	58 - 125	9	23
Methoxychlor	ND	F2	0.400	0.401	F2	ug/L		100	40 - 150	28	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*39*		*20 - 120*
DCB Decachlorobiphenyl	*41*		*20 - 120*
Tetrachloro-m-xylene	*92*		*44 - 120*
Tetrachloro-m-xylene	*82*		*44 - 120*

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

Lab Sample ID: MB 480-437473/1-A
Matrix: Water
Analysis Batch: 437696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		10/03/18 10:51	10/04/18 22:30	1
PCB-1221	ND		0.50	0.18	ug/L		10/03/18 10:51	10/04/18 22:30	1
PCB-1232	ND		0.50	0.18	ug/L		10/03/18 10:51	10/04/18 22:30	1
PCB-1242	ND		0.50	0.18	ug/L		10/03/18 10:51	10/04/18 22:30	1
PCB-1248	ND		0.50	0.18	ug/L		10/03/18 10:51	10/04/18 22:30	1
PCB-1254	ND		0.50	0.25	ug/L		10/03/18 10:51	10/04/18 22:30	1
PCB-1260	ND		0.50	0.25	ug/L		10/03/18 10:51	10/04/18 22:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*61*		*19 - 120*	*10/03/18 10:51*	*10/04/18 22:30*	*1*
DCB Decachlorobiphenyl	*67*		*19 - 120*	*10/03/18 10:51*	*10/04/18 22:30*	*1*
Tetrachloro-m-xylene	*114*		*39 - 121*	*10/03/18 10:51*	*10/04/18 22:30*	*1*
Tetrachloro-m-xylene	*86*		*39 - 121*	*10/03/18 10:51*	*10/04/18 22:30*	*1*

Lab Sample ID: LCS 480-437473/2-A
Matrix: Water
Analysis Batch: 437696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437473

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			4.00	4.07		ug/L		102	62 - 130		
PCB-1260			4.00	3.70		ug/L		92	56 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*60*		*19 - 120*
DCB Decachlorobiphenyl	*62*		*19 - 120*
Tetrachloro-m-xylene	*117*		*39 - 121*
Tetrachloro-m-xylene	*79*		*39 - 121*

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437696

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 437473

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		4.00	3.42		ug/L		85	28 - 150		
PCB-1260	ND		4.00	2.54		ug/L		63	25 - 131		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*46*		*19 - 120*
DCB Decachlorobiphenyl	*53*		*19 - 120*
Tetrachloro-m-xylene	*97*		*39 - 121*
Tetrachloro-m-xylene	*61*		*39 - 121*

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

Lab Sample ID: 480-142475-1 MSD — **Client Sample ID: MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437696 — **Prep Batch: 437473**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		4.00	3.77		ug/L		94	28 - 150	10	50
PCB-1260	ND		4.00	1.99		ug/L		50	25 - 131	24	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*37*		*19 - 120*
DCB Decachlorobiphenyl	*39*		*19 - 120*
Tetrachloro-m-xylene	*112*		*39 - 121*
Tetrachloro-m-xylene	*79*		*39 - 121*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-437009/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437610 — **Prep Batch: 437009**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.068	ug/L		10/01/18 07:51	10/04/18 12:23	1
Silvex (2,4,5-TP)	ND		0.50	0.050	ug/L		10/01/18 07:51	10/04/18 12:23	1
2,4-D	ND		0.50	0.17	ug/L		10/01/18 07:51	10/04/18 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*62*		*48 - 132*	*10/01/18 07:51*	*10/04/18 12:23*	*1*
2,4-Dichlorophenylacetic acid	*86*		*48 - 132*	*10/01/18 07:51*	*10/04/18 12:23*	*1*

Lab Sample ID: LCS 480-437009/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437610 — **Prep Batch: 437009**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	1.26		ug/L		63	41 - 150
Silvex (2,4,5-TP)	2.00	1.26		ug/L		63	49 - 150
2,4-D	2.00	1.48		ug/L		74	36 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*57*		*48 - 132*
2,4-Dichlorophenylacetic acid	*67*		*48 - 132*

Lab Sample ID: 480-142475-1 MS — **Client Sample ID: MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437610 — **Prep Batch: 437009**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	ND		2.00	1.47		ug/L		73	34 - 138
Silvex (2,4,5-TP)	ND		2.00	1.48		ug/L		74	25 - 146
2,4-D	ND		2.00	1.50		ug/L		75	31 - 150

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437610

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 437009

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	*42*	*X*	*48 - 132*
2,4-Dichlorophenylacetic acid	*50*		*48 - 132*

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437610

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 437009

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	ND		2.00	1.06		ug/L		53	34 - 138	33	50
Silvex (2,4,5-TP)	ND		2.00	1.12		ug/L		56	25 - 146	28	50
2,4-D	ND		2.00	1.33		ug/L		66	31 - 150	12	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	*33*	*X*	*48 - 132*
2,4-Dichlorophenylacetic acid	*39*	*X*	*48 - 132*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-436911/1-E
Matrix: Water
Analysis Batch: 437386

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 437047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/01/18 12:10	10/02/18 12:56	1
Antimony	ND		0.020	0.0068	mg/L		10/01/18 12:10	10/02/18 12:56	1
Arsenic	ND		0.015	0.0056	mg/L		10/01/18 12:10	10/02/18 12:56	1
Barium	ND		0.0020	0.00070	mg/L		10/01/18 12:10	10/02/18 12:56	1
Beryllium	ND		0.0020	0.00030	mg/L		10/01/18 12:10	10/02/18 12:56	1
Cadmium	ND		0.0020	0.00050	mg/L		10/01/18 12:10	10/02/18 12:56	1
Calcium	ND		0.50	0.10	mg/L		10/01/18 12:10	10/02/18 12:56	1
Chromium	ND		0.0040	0.0010	mg/L		10/01/18 12:10	10/02/18 12:56	1
Cobalt	ND		0.0040	0.00063	mg/L		10/01/18 12:10	10/02/18 12:56	1
Copper	ND		0.010	0.0016	mg/L		10/01/18 12:10	10/02/18 12:56	1
Iron	ND		0.050	0.019	mg/L		10/01/18 12:10	10/02/18 12:56	1
Lead	ND		0.010	0.0030	mg/L		10/01/18 12:10	10/02/18 12:56	1
Magnesium	ND		0.20	0.043	mg/L		10/01/18 12:10	10/02/18 12:56	1
Manganese	ND		0.0030	0.00040	mg/L		10/01/18 12:10	10/02/18 12:56	1
Nickel	ND		0.010	0.0013	mg/L		10/01/18 12:10	10/02/18 12:56	1
Potassium	ND		0.50	0.10	mg/L		10/01/18 12:10	10/02/18 12:56	1
Selenium	ND		0.025	0.0087	mg/L		10/01/18 12:10	10/02/18 12:56	1
Silver	ND		0.0060	0.0017	mg/L		10/01/18 12:10	10/02/18 12:56	1
Sodium	ND		1.0	0.32	mg/L		10/01/18 12:10	10/02/18 12:56	1
Thallium	ND		0.020	0.010	mg/L		10/01/18 12:10	10/02/18 12:56	1
Vanadium	ND		0.0050	0.0015	mg/L		10/01/18 12:10	10/02/18 12:56	1
Zinc	0.00323	J	0.010	0.0015	mg/L		10/01/18 12:10	10/02/18 12:56	1

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

Lab Sample ID: LCS 480-436911/2-E
Matrix: Water
Analysis Batch: 437386

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 437047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.72		mg/L		97	80 - 120
Antimony	0.200	0.165		mg/L		82	80 - 120
Arsenic	0.200	0.198		mg/L		99	80 - 120
Barium	0.200	0.195		mg/L		97	80 - 120
Beryllium	0.200	0.194		mg/L		97	80 - 120
Cadmium	0.200	0.192		mg/L		96	80 - 120
Calcium	10.0	9.65		mg/L		97	80 - 120
Chromium	0.200	0.197		mg/L		99	80 - 120
Cobalt	0.200	0.184		mg/L		92	80 - 120
Copper	0.200	0.187		mg/L		93	80 - 120
Iron	10.0	9.65		mg/L		96	80 - 120
Lead	0.200	0.196		mg/L		98	80 - 120
Magnesium	10.0	9.89		mg/L		99	80 - 120
Manganese	0.200	0.193		mg/L		96	80 - 120
Nickel	0.200	0.199		mg/L		100	80 - 120
Potassium	10.0	9.30		mg/L		93	80 - 120
Selenium	0.200	0.200		mg/L		100	80 - 120
Silver	0.0500	0.0493		mg/L		99	80 - 120
Sodium	10.0	9.54		mg/L		95	80 - 120
Thallium	0.200	0.196		mg/L		98	80 - 120
Vanadium	0.200	0.194		mg/L		97	80 - 120
Zinc	0.200	0.212		mg/L		106	80 - 120

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437386

Client Sample ID: MW-2
Prep Type: Dissolved
Prep Batch: 437047

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		10.0	9.64		mg/L		96	75 - 125
Antimony	ND		0.200	0.200		mg/L		100	75 - 125
Arsenic	ND		0.200	0.204		mg/L		102	75 - 125
Barium	0.32	F1	0.200	0.468		mg/L		76	75 - 125
Beryllium	ND		0.200	0.189		mg/L		95	75 - 125
Cadmium	ND		0.200	0.198		mg/L		99	75 - 125
Calcium	259		10.0	230.6	4	mg/L		-287	75 - 125
Chromium	ND		0.200	0.186		mg/L		93	75 - 125
Cobalt	0.0029	J	0.200	0.191		mg/L		94	75 - 125
Copper	ND		0.200	0.190		mg/L		95	75 - 125
Iron	ND		10.0	9.07		mg/L		91	75 - 125
Lead	ND		0.200	0.201		mg/L		101	75 - 125
Magnesium	156		10.0	157.7	4	mg/L		14	75 - 125
Manganese	0.11		0.200	0.265		mg/L		80	75 - 125
Nickel	0.0090	J	0.200	0.204		mg/L		97	75 - 125
Potassium	54.6		10.0	49.93	4	mg/L		-47	75 - 125
Selenium	ND		0.200	0.202		mg/L		101	75 - 125
Silver	ND		0.0500	0.0506		mg/L		101	75 - 125
Sodium	185		10.0	163.9	4	mg/L		-209	75 - 125
Thallium	ND		0.200	0.195		mg/L		97	75 - 125

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

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437386

Client Sample ID: MW-2
Prep Type: Dissolved
Prep Batch: 437047

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	ND		0.200	0.191		mg/L		96	75 - 125
Zinc	0.0098	J B	0.200	0.194		mg/L		92	75 - 125

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437386

Client Sample ID: MW-2
Prep Type: Dissolved
Prep Batch: 437047

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		10.0	9.58		mg/L		96	75 - 125	1	20
Antimony	ND		0.200	0.201		mg/L		100	75 - 125	0	20
Arsenic	ND		0.200	0.207		mg/L		103	75 - 125	1	20
Barium	0.32	F1	0.200	0.464	F1	mg/L		74	75 - 125	1	20
Beryllium	ND		0.200	0.190		mg/L		95	75 - 125	0	20
Cadmium	ND		0.200	0.200		mg/L		100	75 - 125	1	20
Calcium	259		10.0	226.3	4	mg/L		-330	75 - 125	2	20
Chromium	ND		0.200	0.187		mg/L		94	75 - 125	1	20
Cobalt	0.0029	J	0.200	0.192		mg/L		94	75 - 125	0	20
Copper	ND		0.200	0.190		mg/L		95	75 - 125	0	20
Iron	ND		10.0	9.08		mg/L		91	75 - 125	0	20
Lead	ND		0.200	0.205		mg/L		103	75 - 125	2	20
Magnesium	156		10.0	154.9	4	mg/L		-14	75 - 125	2	20
Manganese	0.11		0.200	0.263		mg/L		79	75 - 125	1	20
Nickel	0.0090	J	0.200	0.204		mg/L		97	75 - 125	0	20
Potassium	54.6		10.0	49.11	4	mg/L		-55	75 - 125	2	20
Selenium	ND		0.200	0.203		mg/L		102	75 - 125	1	20
Silver	ND		0.0500	0.0513		mg/L		103	75 - 125	1	20
Sodium	185		10.0	160.5	4	mg/L		-242	75 - 125	2	20
Thallium	ND		0.200	0.194		mg/L		97	75 - 125	0	20
Vanadium	ND		0.200	0.192		mg/L		96	75 - 125	1	20
Zinc	0.0098	J B	0.200	0.194		mg/L		92	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-436911/1-F
Matrix: Water
Analysis Batch: 437344

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 437100

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/02/18 12:25	10/02/18 14:49	1

Lab Sample ID: LCS 480-436911/2-F
Matrix: Water
Analysis Batch: 437344

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 437100

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00697		mg/L		104	80 - 120

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

Lab Sample ID: 480-142475-1 MS
Matrix: Water
Analysis Batch: 437344

Client Sample ID: MW-2
Prep Type: Dissolved
Prep Batch: 437100

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00667	0.00703		mg/L		105	80 - 120		

Lab Sample ID: 480-142475-1 MSD
Matrix: Water
Analysis Batch: 437344

Client Sample ID: MW-2
Prep Type: Dissolved
Prep Batch: 437100

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00667	0.00680		mg/L		102	80 - 120	3	20

GC/MS VOA

Analysis Batch: 437186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	8260C	
480-142475-2	BD	Total/NA	Water	8260C	
MB 480-437186/7	Method Blank	Total/NA	Water	8260C	
LCS 480-437186/5	Lab Control Sample	Total/NA	Water	8260C	
480-142475-1 MS	MW-2	Total/NA	Water	8260C	
480-142475-1 MSD	MW-2	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 436943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	3510C	
480-142475-2	BD	Total/NA	Water	3510C	
MB 480-436943/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-436943/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-142475-1 MS	MW-2	Total/NA	Water	3510C	
480-142475-1 MSD	MW-2	Total/NA	Water	3510C	

Analysis Batch: 437093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	8270D	436943
MB 480-436943/1-A	Method Blank	Total/NA	Water	8270D	436943
LCS 480-436943/2-A	Lab Control Sample	Total/NA	Water	8270D	436943
480-142475-1 MS	MW-2	Total/NA	Water	8270D	436943
480-142475-1 MSD	MW-2	Total/NA	Water	8270D	436943

Analysis Batch: 438044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-2	BD	Total/NA	Water	8270D	436943

GC Semi VOA

Prep Batch: 436944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	3510C	
480-142475-2	BD	Total/NA	Water	3510C	
MB 480-436944/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-436944/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-142475-1 MS	MW-2	Total/NA	Water	3510C	
480-142475-1 MSD	MW-2	Total/NA	Water	3510C	

Prep Batch: 437009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	8151A	
480-142475-2	BD	Total/NA	Water	8151A	
MB 480-437009/1-A	Method Blank	Total/NA	Water	8151A	
LCS 480-437009/2-A	Lab Control Sample	Total/NA	Water	8151A	
480-142475-1 MS	MW-2	Total/NA	Water	8151A	
480-142475-1 MSD	MW-2	Total/NA	Water	8151A	

GC Semi VOA (Continued)

Analysis Batch: 437032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	8081B	436944
480-142475-2	BD	Total/NA	Water	8081B	436944
MB 480-436944/1-A	Method Blank	Total/NA	Water	8081B	436944
LCS 480-436944/2-A	Lab Control Sample	Total/NA	Water	8081B	436944
480-142475-1 MS	MW-2	Total/NA	Water	8081B	436944
480-142475-1 MSD	MW-2	Total/NA	Water	8081B	436944

Prep Batch: 437473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	3510C	
480-142475-2	BD	Total/NA	Water	3510C	
MB 480-437473/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-437473/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-142475-1 MS	MW-2	Total/NA	Water	3510C	
480-142475-1 MSD	MW-2	Total/NA	Water	3510C	

Analysis Batch: 437610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	8151A	437009
480-142475-2	BD	Total/NA	Water	8151A	437009
MB 480-437009/1-A	Method Blank	Total/NA	Water	8151A	437009
LCS 480-437009/2-A	Lab Control Sample	Total/NA	Water	8151A	437009
480-142475-1 MS	MW-2	Total/NA	Water	8151A	437009
480-142475-1 MSD	MW-2	Total/NA	Water	8151A	437009

Analysis Batch: 437696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Total/NA	Water	8082A	437473
480-142475-2	BD	Total/NA	Water	8082A	437473
MB 480-437473/1-A	Method Blank	Total/NA	Water	8082A	437473
LCS 480-437473/2-A	Lab Control Sample	Total/NA	Water	8082A	437473
480-142475-1 MS	MW-2	Total/NA	Water	8082A	437473
480-142475-1 MSD	MW-2	Total/NA	Water	8082A	437473

Metals

Filtration Batch: 436911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Dissolved	Water	FILTRATION	
480-142475-2	BD	Dissolved	Water	FILTRATION	
MB 480-436911/1-E	Method Blank	Dissolved	Water	FILTRATION	
MB 480-436911/1-F	Method Blank	Dissolved	Water	FILTRATION	
LCS 480-436911/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 480-436911/2-F	Lab Control Sample	Dissolved	Water	FILTRATION	
480-142475-1 MS	MW-2	Dissolved	Water	FILTRATION	
480-142475-1 MSD	MW-2	Dissolved	Water	FILTRATION	

Prep Batch: 437047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Dissolved	Water	3005A	436911

Metals (Continued)

Prep Batch: 437047 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-2	BD	Dissolved	Water	3005A	436911
MB 480-436911/1-E	Method Blank	Dissolved	Water	3005A	436911
LCS 480-436911/2-E	Lab Control Sample	Dissolved	Water	3005A	436911
480-142475-1 MS	MW-2	Dissolved	Water	3005A	436911
480-142475-1 MSD	MW-2	Dissolved	Water	3005A	436911

Prep Batch: 437100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Dissolved	Water	7470A	436911
480-142475-2	BD	Dissolved	Water	7470A	436911
MB 480-436911/1-F	Method Blank	Dissolved	Water	7470A	436911
LCS 480-436911/2-F	Lab Control Sample	Dissolved	Water	7470A	436911
480-142475-1 MS	MW-2	Dissolved	Water	7470A	436911
480-142475-1 MSD	MW-2	Dissolved	Water	7470A	436911

Analysis Batch: 437344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Dissolved	Water	7470A	437100
480-142475-2	BD	Dissolved	Water	7470A	437100
MB 480-436911/1-F	Method Blank	Dissolved	Water	7470A	437100
LCS 480-436911/2-F	Lab Control Sample	Dissolved	Water	7470A	437100
480-142475-1 MS	MW-2	Dissolved	Water	7470A	437100
480-142475-1 MSD	MW-2	Dissolved	Water	7470A	437100

Analysis Batch: 437386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142475-1	MW-2	Dissolved	Water	6010C	437047
480-142475-2	BD	Dissolved	Water	6010C	437047
MB 480-436911/1-E	Method Blank	Dissolved	Water	6010C	437047
LCS 480-436911/2-E	Lab Control Sample	Dissolved	Water	6010C	437047
480-142475-1 MS	MW-2	Dissolved	Water	6010C	437047
480-142475-1 MSD	MW-2	Dissolved	Water	6010C	437047

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Client Sample ID: MW-2

Lab Sample ID: 480-142475-1

Date Collected: 09/26/18 12:30

Matrix: Water

Date Received: 09/27/18 14:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437186	10/02/18 16:59	NMC	TAL BUF
Total/NA	Prep	3510C			436943	09/29/18 20:33	AAP	TAL BUF
Total/NA	Analysis	8270D		1	437093	10/01/18 20:38	PJQ	TAL BUF
Total/NA	Prep	3510C			436944	09/29/18 23:18	AAP	TAL BUF
Total/NA	Analysis	8081B		1	437032	10/01/18 13:30	JLS	TAL BUF
Total/NA	Prep	3510C			437473	10/03/18 10:51	AAP	TAL BUF
Total/NA	Analysis	8082A		1	437696	10/05/18 00:06	W1T	TAL BUF
Total/NA	Prep	8151A			437009	10/01/18 07:51	JMP	TAL BUF
Total/NA	Analysis	8151A		1	437610	10/04/18 14:54	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			436911	09/29/18 11:09	KMP	TAL BUF
Dissolved	Prep	3005A			437047	10/01/18 12:10	KMP	TAL BUF
Dissolved	Analysis	6010C		1	437386	10/02/18 14:26	EMB	TAL BUF
Dissolved	Filtration	FILTRATION			436911	09/29/18 11:09	KMP	TAL BUF
Dissolved	Prep	7470A			437100	10/02/18 12:25	BMB	TAL BUF
Dissolved	Analysis	7470A		1	437344	10/02/18 15:22	BMB	TAL BUF

Client Sample ID: BD

Lab Sample ID: 480-142475-2

Date Collected: 09/26/18 12:45

Matrix: Water

Date Received: 09/27/18 14:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437186	10/02/18 17:26	NMC	TAL BUF
Total/NA	Prep	3510C			436943	09/29/18 20:33	AAP	TAL BUF
Total/NA	Analysis	8270D		1	438044	10/06/18 14:56	PJQ	TAL BUF
Total/NA	Prep	3510C			436944	09/29/18 23:18	AAP	TAL BUF
Total/NA	Analysis	8081B		1	437032	10/01/18 15:47	JLS	TAL BUF
Total/NA	Prep	3510C			437473	10/03/18 10:51	AAP	TAL BUF
Total/NA	Analysis	8082A		1	437696	10/05/18 00:37	W1T	TAL BUF
Total/NA	Prep	8151A			437009	10/01/18 07:51	JMP	TAL BUF
Total/NA	Analysis	8151A		10	437610	10/04/18 13:52	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			436911	09/29/18 11:09	KMP	TAL BUF
Dissolved	Prep	3005A			437047	10/01/18 12:10	KMP	TAL BUF
Dissolved	Analysis	6010C		1	437386	10/02/18 14:38	EMB	TAL BUF
Dissolved	Filtration	FILTRATION			436911	09/29/18 11:09	KMP	TAL BUF
Dissolved	Prep	7470A			437100	10/02/18 12:25	BMB	TAL BUF
Dissolved	Analysis	7470A		1	437344	10/02/18 15:30	BMB	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
TestAmerica Job ID: 480-142475-1
Project/Site: Benchmark - 990 Niagara St. site

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
7470A	Preparation, Mercury	SW846	TAL BUF
8151A	Extraction (Herbicides)	SW846	TAL BUF
FILTRATION	Sample Filtration	None	TAL BUF

Protocol References:

None = None

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 - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-142475-1	MW-2	Water	09/26/18 12:30	09/27/18 14:52
480-142475-2	BD	Water	09/26/18 12:45	09/27/18 14:52

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Nick Sufana	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-114743-26550
Client Contact: Bryan Mayback	Phone: 716-713-3957	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 2
Company: Benchmark Env. Eng. & Science, PLLC				Job #:

Address: 2558 Hamburg Turnpike	Due Date Requested:	Analysis Requested	Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify); Other:
City: Lackawanna	TAT Requested (days): B0462-018-001		
State, Zip: NY, 14218	PO #: Purchase Order Requested		
Phone: 716-856-0599(Tel)	WO #:		
Email: bmayback@turnkeyllc.com	Project #: 48018286		
Project Name: Benchmark - 990 Niagara St. site	SSOW#:		
Site: 990 Niagara St			

480-142475 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (21 Analytes)	8270D - (MOD) TCL SVOA - OLM04.2+TICs	8260C - (MOD) TCL list OLM04.2+CP-51(Stars)	8270D_SIM_MS_ID - SIM List	6010C, 7470A	8082A - TCL PCBs - OLM04.2	8081B - TCL Pesticides - OLM04.2	8151A - (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A	N	N	N	N	N		
MW-2	9/26/18	12:30	G	Water		X		X	X	X	X	X	X	X	36	MS/MSD
BD	9/26/18	12:45	G	Water				X	X		X	X	X	X	12	
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Category B, NYSPEC EQUIS

Special Instructions/QC Requirements: Category B, MS/MSD

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: #1 3.6 - 4.2°

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/27/18 1600	BSTK	Rebecca Tovey	9/27/18 1315	TAL
Relinquished by: Rebecca Tovey	9/27/18 1452	TBI		9/27/18 1452	DAB.
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-142475-1

Login Number: 142475

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kinecki, Kenneth P

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 (Excluding tests with immediate HTs)..	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	BM/TK
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	

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: 480-142853-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Joseph V. Giacomazza

Authorized for release by:
10/22/2018 5:37:12 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

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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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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.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
H	Sample was prepped or analyzed beyond the specified holding time

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-142853-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-142853-1

Comments
No additional comments.

Receipt
The samples were received on 10/3/2018 10:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-437996 recovered above the upper control limit for Cyclohexane, 1,1,2-Trichloro-1,2,2-trifluoroethane and Methylcyclohexane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-1 (480-142853-1), MW-3 (480-142853-2), MW-5 (480-142853-3) and TRIP BLANK (480-142853-4).

Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-5 (480-142853-3). 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/MS Semi VOA
Method(s) 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 480-437947 and analytical batch 480-438383 recovered outside control limits for the following analytes: Isophorone, 3,3'-Dichlorobenzidine, 4-Nitroaniline and Carbazole. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: MW-1 (480-142853-1) and MW-3 (480-142853-2).

Method(s) 8270D: The following compound has been spiked at a level above the upper range of the initial calibration: 3,3'-Dichlorobenzidine. The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) associated with preparation batch 480-437947 and analytical batch 480-438365 have been qualified with an "E" flag.

Method(s) 8270D: The initial calibration curve analyzed in analytical batch 480-437197 associated with analytical batches 480-438365 and 480-438383 was outside method criteria for the analyte Pentachlorophenol. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for this analyte is considered an estimated concentration. The following samples are impacted: MW-1 (480-142853-1) and MW-3 (480-142853-2).

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: All primary data for analytical batch 438185 is reported from the RTX-CLPI column.

Method(s) 8082A: All primary data for analytical batch 438403 is reported from the ZB-5 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 for analytical batches 439391 and 440646 is reported from the RTX-CLPI column.

Method(s) 8151A: Sample MW-1 (480-142853-1) required re-extraction and re-analysis due to low surrogate recovery. This sample was re-extracted outside extraction hold time, therefore both sets of data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Job ID: 480-142853-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: The following sample: MW-3 (480-142853-2) was decanted prior to preparation.

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 480-438070.

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 480-438079.

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-438349.

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-439898.

Method(s) 8151A: The following sample was re-prepared outside of preparation holding time due to low surrogate recovery in the sample: MW-1 (480-142853-1).

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 - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-1 — Lab Sample ID: 480-142853-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.9	J	10	3.0	ug/L	1		8260C	Total/NA
Carbon disulfide	0.65	J	1.0	0.19	ug/L	1		8260C	Total/NA
Barium	0.092		0.0020	0.00070	mg/L	1		6010C	Dissolved
Cadmium	0.00077	J	0.0020	0.00050	mg/L	1		6010C	Dissolved
Calcium	173		0.50	0.10	mg/L	1		6010C	Dissolved
Copper	0.0030	J	0.010	0.0016	mg/L	1		6010C	Dissolved
Magnesium	114		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.10		0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0020	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	12.8	B	0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	121		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.016	B	0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: MW-3 — Lab Sample ID: 480-142853-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.5	J	10	3.0	ug/L	1		8260C	Total/NA
Carbon disulfide	0.88	J	1.0	0.19	ug/L	1		8260C	Total/NA
Caprolactam	3.7	J	5.0	2.2	ug/L	1		8270D	Total/NA
Barium	0.20		0.0020	0.00070	mg/L	1		6010C	Dissolved
Cadmium	0.00073	J	0.0020	0.00050	mg/L	1		6010C	Dissolved
Calcium	76.5		0.50	0.10	mg/L	1		6010C	Dissolved
Copper	0.0037	J	0.010	0.0016	mg/L	1		6010C	Dissolved
Magnesium	144		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.039		0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0029	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	13.2	B	0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	31.5		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.018	B	0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: MW-5 — Lab Sample ID: 480-142853-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	0.54	J	2.0	0.38	ug/L	2		8260C	Total/NA
Methylene Chloride	1.6	J	2.0	0.88	ug/L	2		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-142853-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1
Date Collected: 10/02/18 15:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-1
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			10/06/18 00:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/06/18 00:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/06/18 00:25	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/06/18 00:25	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/06/18 00:25	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/06/18 00:25	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/06/18 00:25	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/06/18 00:25	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/06/18 00:25	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/06/18 00:25	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/06/18 00:25	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/06/18 00:25	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/06/18 00:25	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/06/18 00:25	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/06/18 00:25	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/06/18 00:25	1
2-Hexanone	ND		5.0	1.2	ug/L			10/06/18 00:25	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/06/18 00:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/06/18 00:25	1
Acetone	**4.9**	**J**	10	3.0	ug/L			10/06/18 00:25	1
Benzene	ND		1.0	0.41	ug/L			10/06/18 00:25	1
Bromoform	ND		1.0	0.26	ug/L			10/06/18 00:25	1
Bromomethane	ND		1.0	0.69	ug/L			10/06/18 00:25	1
Carbon disulfide	**0.65**	**J**	1.0	0.19	ug/L			10/06/18 00:25	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/06/18 00:25	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/06/18 00:25	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/06/18 00:25	1
Chloroethane	ND		1.0	0.32	ug/L			10/06/18 00:25	1
Chloroform	ND		1.0	0.34	ug/L			10/06/18 00:25	1
Chloromethane	ND		1.0	0.35	ug/L			10/06/18 00:25	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/06/18 00:25	1
Cyclohexane	ND		1.0	0.18	ug/L			10/06/18 00:25	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/06/18 00:25	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/06/18 00:25	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/06/18 00:25	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/06/18 00:25	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/06/18 00:25	1
Methyl acetate	ND		2.5	1.3	ug/L			10/06/18 00:25	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/06/18 00:25	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/06/18 00:25	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/06/18 00:25	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/06/18 00:25	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/06/18 00:25	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/06/18 00:25	1
o-Xylene	ND		1.0	0.76	ug/L			10/06/18 00:25	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/06/18 00:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/06/18 00:25	1
Toluene	ND		1.0	0.51	ug/L			10/06/18 00:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/06/18 00:25	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-1
Date Collected: 10/02/18 15:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-1
Matrix: Water

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			10/06/18 00:25	1
Trichloroethene	ND		1.0	0.46	ug/L			10/06/18 00:25	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/06/18 00:25	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/06/18 00:25	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/06/18 00:25	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/06/18 00:25	1
Styrene	ND		1.0	0.73	ug/L			10/06/18 00:25	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/06/18 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*		*10/06/18 00:25*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/06/18 00:25*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*10/06/18 00:25*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*10/06/18 00:25*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		10/05/18 14:34	10/10/18 01:02	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		10/05/18 14:34	10/10/18 01:02	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		10/05/18 14:34	10/10/18 01:02	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		10/05/18 14:34	10/10/18 01:02	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		10/05/18 14:34	10/10/18 01:02	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		10/05/18 14:34	10/10/18 01:02	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:02	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		10/05/18 14:34	10/10/18 01:02	1
2-Chlorophenol	ND		5.0	0.53	ug/L		10/05/18 14:34	10/10/18 01:02	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		10/05/18 14:34	10/10/18 01:02	1
2-Methylphenol	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:02	1
2-Nitroaniline	ND		10	0.42	ug/L		10/05/18 14:34	10/10/18 01:02	1
2-Nitrophenol	ND		5.0	0.48	ug/L		10/05/18 14:34	10/10/18 01:02	1
3,3'-Dichlorobenzidine	ND	*	5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:02	1
3-Nitroaniline	ND		10	0.48	ug/L		10/05/18 14:34	10/10/18 01:02	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Chloroaniline	ND		5.0	0.59	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Methylphenol	ND		10	0.36	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Nitroaniline	ND	*	10	0.25	ug/L		10/05/18 14:34	10/10/18 01:02	1
4-Nitrophenol	ND		10	1.5	ug/L		10/05/18 14:34	10/10/18 01:02	1
Acenaphthene	ND		5.0	0.41	ug/L		10/05/18 14:34	10/10/18 01:02	1
Acenaphthylene	ND		5.0	0.38	ug/L		10/05/18 14:34	10/10/18 01:02	1
Acetophenone	ND		5.0	0.54	ug/L		10/05/18 14:34	10/10/18 01:02	1
Anthracene	ND		5.0	0.28	ug/L		10/05/18 14:34	10/10/18 01:02	1
Atrazine	ND		5.0	0.46	ug/L		10/05/18 14:34	10/10/18 01:02	1
Benzaldehyde	ND		5.0	0.27	ug/L		10/05/18 14:34	10/10/18 01:02	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		10/05/18 14:34	10/10/18 01:02	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		10/05/18 14:34	10/10/18 01:02	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		10/05/18 14:34	10/10/18 01:02	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		10/05/18 14:34	10/10/18 01:02	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-1
Date Collected: 10/02/18 15:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		10/05/18 14:34	10/10/18 01:02	1
Biphenyl	ND		5.0	0.65	ug/L		10/05/18 14:34	10/10/18 01:02	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		10/05/18 14:34	10/10/18 01:02	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		10/05/18 14:34	10/10/18 01:02	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:02	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		10/05/18 14:34	10/10/18 01:02	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		10/05/18 14:34	10/10/18 01:02	1
Caprolactam	ND		5.0	2.2	ug/L		10/05/18 14:34	10/10/18 01:02	1
Carbazole	ND	*	5.0	0.30	ug/L		10/05/18 14:34	10/10/18 01:02	1
Chrysene	ND		5.0	0.33	ug/L		10/05/18 14:34	10/10/18 01:02	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		10/05/18 14:34	10/10/18 01:02	1
Dibenzofuran	ND		10	0.51	ug/L		10/05/18 14:34	10/10/18 01:02	1
Diethyl phthalate	ND		5.0	0.22	ug/L		10/05/18 14:34	10/10/18 01:02	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		10/05/18 14:34	10/10/18 01:02	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		10/05/18 14:34	10/10/18 01:02	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		10/05/18 14:34	10/10/18 01:02	1
Fluoranthene	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:02	1
Fluorene	ND		5.0	0.36	ug/L		10/05/18 14:34	10/10/18 01:02	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		10/05/18 14:34	10/10/18 01:02	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		10/05/18 14:34	10/10/18 01:02	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		10/05/18 14:34	10/10/18 01:02	1
Hexachloroethane	ND		5.0	0.59	ug/L		10/05/18 14:34	10/10/18 01:02	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		10/05/18 14:34	10/10/18 01:02	1
Isophorone	ND	*	5.0	0.43	ug/L		10/05/18 14:34	10/10/18 01:02	1
Naphthalene	ND		5.0	0.76	ug/L		10/05/18 14:34	10/10/18 01:02	1
Nitrobenzene	ND		5.0	0.29	ug/L		10/05/18 14:34	10/10/18 01:02	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		10/05/18 14:34	10/10/18 01:02	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		10/05/18 14:34	10/10/18 01:02	1
Pentachlorophenol	ND		10	2.2	ug/L		10/05/18 14:34	10/10/18 01:02	1
Phenanthrene	ND		5.0	0.44	ug/L		10/05/18 14:34	10/10/18 01:02	1
Phenol	ND		5.0	0.39	ug/L		10/05/18 14:34	10/10/18 01:02	1
Pyrene	ND		5.0	0.34	ug/L		10/05/18 14:34	10/10/18 01:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*93*		*41 - 120*	*10/05/18 14:34*	*10/10/18 01:02*	*1*
2-Fluorobiphenyl	*93*		*48 - 120*	*10/05/18 14:34*	*10/10/18 01:02*	*1*
2-Fluorophenol	*65*		*35 - 120*	*10/05/18 14:34*	*10/10/18 01:02*	*1*
Nitrobenzene-d5	*94*		*46 - 120*	*10/05/18 14:34*	*10/10/18 01:02*	*1*
Phenol-d5	*48*		*22 - 120*	*10/05/18 14:34*	*10/10/18 01:02*	*1*
p-Terphenyl-d14	*83*		*59 - 136*	*10/05/18 14:34*	*10/10/18 01:02*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		10/06/18 15:55	10/08/18 12:55	1
4,4'-DDE	ND		0.050	0.012	ug/L		10/06/18 15:55	10/08/18 12:55	1
4,4'-DDT	ND		0.050	0.011	ug/L		10/06/18 15:55	10/08/18 12:55	1
Aldrin	ND		0.050	0.0081	ug/L		10/06/18 15:55	10/08/18 12:55	1
alpha-BHC	ND		0.050	0.0077	ug/L		10/06/18 15:55	10/08/18 12:55	1
cis-Chlordane	ND		0.050	0.015	ug/L		10/06/18 15:55	10/08/18 12:55	1
beta-BHC	ND		0.050	0.025	ug/L		10/06/18 15:55	10/08/18 12:55	1

Client Sample ID: MW-1
Date Collected: 10/02/18 15:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-1
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	ND		0.050	0.010	ug/L		10/06/18 15:55	10/08/18 12:55	1
Dieldrin	ND		0.050	0.0098	ug/L		10/06/18 15:55	10/08/18 12:55	1
Endosulfan I	ND		0.050	0.011	ug/L		10/06/18 15:55	10/08/18 12:55	1
Endosulfan II	ND		0.050	0.012	ug/L		10/06/18 15:55	10/08/18 12:55	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		10/06/18 15:55	10/08/18 12:55	1
Endrin	ND		0.050	0.014	ug/L		10/06/18 15:55	10/08/18 12:55	1
Endrin aldehyde	ND		0.050	0.016	ug/L		10/06/18 15:55	10/08/18 12:55	1
Endrin ketone	ND		0.050	0.012	ug/L		10/06/18 15:55	10/08/18 12:55	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		10/06/18 15:55	10/08/18 12:55	1
trans-Chlordane	ND		0.050	0.011	ug/L		10/06/18 15:55	10/08/18 12:55	1
Heptachlor	ND		0.050	0.0085	ug/L		10/06/18 15:55	10/08/18 12:55	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		10/06/18 15:55	10/08/18 12:55	1
Methoxychlor	ND		0.050	0.014	ug/L		10/06/18 15:55	10/08/18 12:55	1
Toxaphene	ND		0.50	0.12	ug/L		10/06/18 15:55	10/08/18 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*33*		*20 - 120*	*10/06/18 15:55*	*10/08/18 12:55*	*1*
DCB Decachlorobiphenyl	*37*		*20 - 120*	*10/06/18 15:55*	*10/08/18 12:55*	*1*
Tetrachloro-m-xylene	*72*		*44 - 120*	*10/06/18 15:55*	*10/08/18 12:55*	*1*
Tetrachloro-m-xylene	*78*		*44 - 120*	*10/06/18 15:55*	*10/08/18 12:55*	*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		10/06/18 17:26	10/10/18 00:06	1
PCB-1221	ND		0.50	0.18	ug/L		10/06/18 17:26	10/10/18 00:06	1
PCB-1232	ND		0.50	0.18	ug/L		10/06/18 17:26	10/10/18 00:06	1
PCB-1242	ND		0.50	0.18	ug/L		10/06/18 17:26	10/10/18 00:06	1
PCB-1248	ND		0.50	0.18	ug/L		10/06/18 17:26	10/10/18 00:06	1
PCB-1254	ND		0.50	0.25	ug/L		10/06/18 17:26	10/10/18 00:06	1
PCB-1260	ND		0.50	0.25	ug/L		10/06/18 17:26	10/10/18 00:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*19 - 120*	*10/06/18 17:26*	*10/10/18 00:06*	*1*
DCB Decachlorobiphenyl	*59*		*19 - 120*	*10/06/18 17:26*	*10/10/18 00:06*	*1*
Tetrachloro-m-xylene	*101*		*39 - 121*	*10/06/18 17:26*	*10/10/18 00:06*	*1*
Tetrachloro-m-xylene	*81*		*39 - 121*	*10/06/18 17:26*	*10/10/18 00:06*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.48	0.065	ug/L		10/09/18 07:48	10/15/18 16:06	1
Silvex (2,4,5-TP)	ND		0.48	0.048	ug/L		10/09/18 07:48	10/15/18 16:06	1
2,4-D	ND		0.48	0.16	ug/L		10/09/18 07:48	10/15/18 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*16*	*X*	*48 - 132*	*10/09/18 07:48*	*10/15/18 16:06*	*1*
2,4-Dichlorophenylacetic acid	*13*	*X*	*48 - 132*	*10/09/18 07:48*	*10/15/18 16:06*	*1*

Method: 8151A - Herbicides (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	H	0.48	0.065	ug/L		10/17/18 08:00	10/20/18 15:02	1
Silvex (2,4,5-TP)	ND	H	0.48	0.048	ug/L		10/17/18 08:00	10/20/18 15:02	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-1
Date Collected: 10/02/18 15:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-1
Matrix: Water

Method: 8151A - Herbicides (GC) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND	H	0.48	0.17	ug/L		10/17/18 08:00	10/20/18 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*68*		*48 - 132*	*10/17/18 08:00*	*10/20/18 15:02*	*1*
2,4-Dichlorophenylacetic acid	*45*	*X*	*48 - 132*	*10/17/18 08:00*	*10/20/18 15:02*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/11/18 14:29	10/12/18 16:40	1
Antimony	ND		0.020	0.0068	mg/L		10/11/18 14:29	10/12/18 16:40	1
Arsenic	ND		0.015	0.0056	mg/L		10/11/18 14:29	10/12/18 16:40	1
Barium	**0.092**		0.0020	0.00070	mg/L		10/11/18 14:29	10/12/18 16:40	1
Beryllium	ND		0.0020	0.00030	mg/L		10/11/18 14:29	10/12/18 16:40	1
Cadmium	**0.00077**	**J**	0.0020	0.00050	mg/L		10/11/18 14:29	10/12/18 16:40	1
Calcium	**173**		0.50	0.10	mg/L		10/11/18 14:29	10/12/18 16:40	1
Chromium	ND		0.0040	0.0010	mg/L		10/11/18 14:29	10/12/18 16:40	1
Cobalt	ND		0.0040	0.00063	mg/L		10/11/18 14:29	10/12/18 16:40	1
Copper	**0.0030**	**J**	0.010	0.0016	mg/L		10/11/18 14:29	10/12/18 16:40	1
Iron	ND		0.050	0.019	mg/L		10/11/18 14:29	10/12/18 16:40	1
Lead	ND		0.010	0.0030	mg/L		10/11/18 14:29	10/12/18 16:40	1
Magnesium	**114**		0.20	0.043	mg/L		10/11/18 14:29	10/12/18 16:40	1
Manganese	**0.10**		0.0030	0.00040	mg/L		10/11/18 14:29	10/12/18 16:40	1
Nickel	**0.0020**	**J**	0.010	0.0013	mg/L		10/11/18 14:29	10/12/18 16:40	1
Potassium	**12.8**	**B**	0.50	0.10	mg/L		10/11/18 14:29	10/12/18 16:40	1
Selenium	ND		0.025	0.0087	mg/L		10/11/18 14:29	10/12/18 16:40	1
Silver	ND		0.0060	0.0017	mg/L		10/11/18 14:29	10/12/18 16:40	1
Sodium	**121**		1.0	0.32	mg/L		10/11/18 14:29	10/12/18 16:40	1
Thallium	ND		0.020	0.010	mg/L		10/11/18 14:29	10/12/18 16:40	1
Vanadium	ND		0.0050	0.0015	mg/L		10/11/18 14:29	10/12/18 16:40	1
Zinc	**0.016**	**B**	0.010	0.0015	mg/L		10/11/18 14:29	10/12/18 16:40	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/12/18 12:10	10/12/18 16:27	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-3
Date Collected: 10/02/18 14:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-2
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			10/06/18 00:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/06/18 00:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/06/18 00:52	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/06/18 00:52	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/06/18 00:52	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/06/18 00:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/06/18 00:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/06/18 00:52	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/06/18 00:52	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/06/18 00:52	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/06/18 00:52	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/06/18 00:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/06/18 00:52	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/06/18 00:52	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/06/18 00:52	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/06/18 00:52	1
2-Hexanone	ND		5.0	1.2	ug/L			10/06/18 00:52	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/06/18 00:52	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/06/18 00:52	1
Acetone	**5.5**	**J**	10	3.0	ug/L			10/06/18 00:52	1
Benzene	ND		1.0	0.41	ug/L			10/06/18 00:52	1
Bromoform	ND		1.0	0.26	ug/L			10/06/18 00:52	1
Bromomethane	ND		1.0	0.69	ug/L			10/06/18 00:52	1
Carbon disulfide	**0.88**	**J**	1.0	0.19	ug/L			10/06/18 00:52	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/06/18 00:52	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/06/18 00:52	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/06/18 00:52	1
Chloroethane	ND		1.0	0.32	ug/L			10/06/18 00:52	1
Chloroform	ND		1.0	0.34	ug/L			10/06/18 00:52	1
Chloromethane	ND		1.0	0.35	ug/L			10/06/18 00:52	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/06/18 00:52	1
Cyclohexane	ND		1.0	0.18	ug/L			10/06/18 00:52	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/06/18 00:52	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/06/18 00:52	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/06/18 00:52	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/06/18 00:52	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/06/18 00:52	1
Methyl acetate	ND		2.5	1.3	ug/L			10/06/18 00:52	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/06/18 00:52	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/06/18 00:52	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/06/18 00:52	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/06/18 00:52	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/06/18 00:52	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/06/18 00:52	1
o-Xylene	ND		1.0	0.76	ug/L			10/06/18 00:52	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/06/18 00:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/06/18 00:52	1
Toluene	ND		1.0	0.51	ug/L			10/06/18 00:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/06/18 00:52	1

Client Sample ID: MW-3
Date Collected: 10/02/18 14:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-2
Matrix: Water

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			10/06/18 00:52	1
Trichloroethene	ND		1.0	0.46	ug/L			10/06/18 00:52	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/06/18 00:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/06/18 00:52	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/06/18 00:52	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/06/18 00:52	1
Styrene	ND		1.0	0.73	ug/L			10/06/18 00:52	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/06/18 00:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*77 - 120*		*10/06/18 00:52*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*10/06/18 00:52*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/06/18 00:52*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*10/06/18 00:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		10/05/18 14:34	10/10/18 01:31	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		10/05/18 14:34	10/10/18 01:31	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		10/05/18 14:34	10/10/18 01:31	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		10/05/18 14:34	10/10/18 01:31	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		10/05/18 14:34	10/10/18 01:31	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		10/05/18 14:34	10/10/18 01:31	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:31	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		10/05/18 14:34	10/10/18 01:31	1
2-Chlorophenol	ND		5.0	0.53	ug/L		10/05/18 14:34	10/10/18 01:31	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		10/05/18 14:34	10/10/18 01:31	1
2-Methylphenol	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:31	1
2-Nitroaniline	ND		10	0.42	ug/L		10/05/18 14:34	10/10/18 01:31	1
2-Nitrophenol	ND		5.0	0.48	ug/L		10/05/18 14:34	10/10/18 01:31	1
3,3'-Dichlorobenzidine	ND	*	5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:31	1
3-Nitroaniline	ND		10	0.48	ug/L		10/05/18 14:34	10/10/18 01:31	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Chloroaniline	ND		5.0	0.59	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Methylphenol	ND		10	0.36	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Nitroaniline	ND	*	10	0.25	ug/L		10/05/18 14:34	10/10/18 01:31	1
4-Nitrophenol	ND		10	1.5	ug/L		10/05/18 14:34	10/10/18 01:31	1
Acenaphthene	ND		5.0	0.41	ug/L		10/05/18 14:34	10/10/18 01:31	1
Acenaphthylene	ND		5.0	0.38	ug/L		10/05/18 14:34	10/10/18 01:31	1
Acetophenone	ND		5.0	0.54	ug/L		10/05/18 14:34	10/10/18 01:31	1
Anthracene	ND		5.0	0.28	ug/L		10/05/18 14:34	10/10/18 01:31	1
Atrazine	ND		5.0	0.46	ug/L		10/05/18 14:34	10/10/18 01:31	1
Benzaldehyde	ND		5.0	0.27	ug/L		10/05/18 14:34	10/10/18 01:31	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		10/05/18 14:34	10/10/18 01:31	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		10/05/18 14:34	10/10/18 01:31	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		10/05/18 14:34	10/10/18 01:31	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		10/05/18 14:34	10/10/18 01:31	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-3
Date Collected: 10/02/18 14:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		10/05/18 14:34	10/10/18 01:31	1
Biphenyl	ND		5.0	0.65	ug/L		10/05/18 14:34	10/10/18 01:31	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		10/05/18 14:34	10/10/18 01:31	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		10/05/18 14:34	10/10/18 01:31	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:31	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		10/05/18 14:34	10/10/18 01:31	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		10/05/18 14:34	10/10/18 01:31	1
Caprolactam	**3.7**	**J**	5.0	2.2	ug/L		10/05/18 14:34	10/10/18 01:31	1
Carbazole	ND	*	5.0	0.30	ug/L		10/05/18 14:34	10/10/18 01:31	1
Chrysene	ND		5.0	0.33	ug/L		10/05/18 14:34	10/10/18 01:31	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		10/05/18 14:34	10/10/18 01:31	1
Dibenzofuran	ND		10	0.51	ug/L		10/05/18 14:34	10/10/18 01:31	1
Diethyl phthalate	ND		5.0	0.22	ug/L		10/05/18 14:34	10/10/18 01:31	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		10/05/18 14:34	10/10/18 01:31	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		10/05/18 14:34	10/10/18 01:31	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		10/05/18 14:34	10/10/18 01:31	1
Fluoranthene	ND		5.0	0.40	ug/L		10/05/18 14:34	10/10/18 01:31	1
Fluorene	ND		5.0	0.36	ug/L		10/05/18 14:34	10/10/18 01:31	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		10/05/18 14:34	10/10/18 01:31	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		10/05/18 14:34	10/10/18 01:31	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		10/05/18 14:34	10/10/18 01:31	1
Hexachloroethane	ND		5.0	0.59	ug/L		10/05/18 14:34	10/10/18 01:31	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		10/05/18 14:34	10/10/18 01:31	1
Isophorone	ND	*	5.0	0.43	ug/L		10/05/18 14:34	10/10/18 01:31	1
Naphthalene	ND		5.0	0.76	ug/L		10/05/18 14:34	10/10/18 01:31	1
Nitrobenzene	ND		5.0	0.29	ug/L		10/05/18 14:34	10/10/18 01:31	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		10/05/18 14:34	10/10/18 01:31	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		10/05/18 14:34	10/10/18 01:31	1
Pentachlorophenol	ND		10	2.2	ug/L		10/05/18 14:34	10/10/18 01:31	1
Phenanthrene	ND		5.0	0.44	ug/L		10/05/18 14:34	10/10/18 01:31	1
Phenol	ND		5.0	0.39	ug/L		10/05/18 14:34	10/10/18 01:31	1
Pyrene	ND		5.0	0.34	ug/L		10/05/18 14:34	10/10/18 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*78*		*41 - 120*	*10/05/18 14:34*	*10/10/18 01:31*	*1*
2-Fluorobiphenyl	*94*		*48 - 120*	*10/05/18 14:34*	*10/10/18 01:31*	*1*
2-Fluorophenol	*70*		*35 - 120*	*10/05/18 14:34*	*10/10/18 01:31*	*1*
Nitrobenzene-d5	*95*		*46 - 120*	*10/05/18 14:34*	*10/10/18 01:31*	*1*
Phenol-d5	*53*		*22 - 120*	*10/05/18 14:34*	*10/10/18 01:31*	*1*
p-Terphenyl-d14	*85*		*59 - 136*	*10/05/18 14:34*	*10/10/18 01:31*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/11/18 14:29	10/12/18 16:43	1
Antimony	ND		0.020	0.0068	mg/L		10/11/18 14:29	10/12/18 16:43	1
Arsenic	ND		0.015	0.0056	mg/L		10/11/18 14:29	10/12/18 16:43	1
Barium	**0.20**		0.0020	0.00070	mg/L		10/11/18 14:29	10/12/18 16:43	1
Beryllium	ND		0.0020	0.00030	mg/L		10/11/18 14:29	10/12/18 16:43	1
Cadmium	**0.00073**	**J**	0.0020	0.00050	mg/L		10/11/18 14:29	10/12/18 16:43	1
Calcium	**76.5**		0.50	0.10	mg/L		10/11/18 14:29	10/12/18 16:43	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-3
Date Collected: 10/02/18 14:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0040	0.0010	mg/L		10/11/18 14:29	10/12/18 16:43	1
Cobalt	ND		0.0040	0.00063	mg/L		10/11/18 14:29	10/12/18 16:43	1
Copper	**0.0037**	**J**	0.010	0.0016	mg/L		10/11/18 14:29	10/12/18 16:43	1
Iron	ND		0.050	0.019	mg/L		10/11/18 14:29	10/12/18 16:43	1
Lead	ND		0.010	0.0030	mg/L		10/11/18 14:29	10/12/18 16:43	1
Magnesium	**144**		0.20	0.043	mg/L		10/11/18 14:29	10/12/18 16:43	1
Manganese	**0.039**		0.0030	0.00040	mg/L		10/11/18 14:29	10/12/18 16:43	1
Nickel	**0.0029**	**J**	0.010	0.0013	mg/L		10/11/18 14:29	10/12/18 16:43	1
Potassium	**13.2**	**B**	0.50	0.10	mg/L		10/11/18 14:29	10/12/18 16:43	1
Selenium	ND		0.025	0.0087	mg/L		10/11/18 14:29	10/12/18 16:43	1
Silver	ND		0.0060	0.0017	mg/L		10/11/18 14:29	10/12/18 16:43	1
Sodium	**31.5**		1.0	0.32	mg/L		10/11/18 14:29	10/12/18 16:43	1
Thallium	ND		0.020	0.010	mg/L		10/11/18 14:29	10/12/18 16:43	1
Vanadium	ND		0.0050	0.0015	mg/L		10/11/18 14:29	10/12/18 16:43	1
Zinc	**0.018**	**B**	0.010	0.0015	mg/L		10/11/18 14:29	10/12/18 16:43	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/12/18 12:10	10/12/18 16:32	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-5
Date Collected: 10/02/18 16:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-3
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		2.0	1.6	ug/L			10/06/18 01:19	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			10/06/18 01:19	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62	ug/L			10/06/18 01:19	2
1,1,2-Trichloroethane	ND		2.0	0.46	ug/L			10/06/18 01:19	2
1,1-Dichloroethane	ND		2.0	0.76	ug/L			10/06/18 01:19	2
1,1-Dichloroethene	ND		2.0	0.58	ug/L			10/06/18 01:19	2
1,2,4-Trichlorobenzene	ND		2.0	0.82	ug/L			10/06/18 01:19	2
1,2,4-Trimethylbenzene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
1,2-Dibromo-3-Chloropropane	ND		2.0	0.78	ug/L			10/06/18 01:19	2
1,2-Dichlorobenzene	ND		2.0	1.6	ug/L			10/06/18 01:19	2
1,2-Dichloroethane	ND		2.0	0.42	ug/L			10/06/18 01:19	2
1,2-Dichloropropane	ND		2.0	1.4	ug/L			10/06/18 01:19	2
1,3,5-Trimethylbenzene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
1,3-Dichlorobenzene	ND		2.0	1.6	ug/L			10/06/18 01:19	2
1,4-Dichlorobenzene	ND		2.0	1.7	ug/L			10/06/18 01:19	2
2-Butanone (MEK)	ND		20	2.6	ug/L			10/06/18 01:19	2
2-Hexanone	ND		10	2.5	ug/L			10/06/18 01:19	2
4-Isopropyltoluene	ND		2.0	0.62	ug/L			10/06/18 01:19	2
4-Methyl-2-pentanone (MIBK)	ND		10	4.2	ug/L			10/06/18 01:19	2
Acetone	ND		20	6.0	ug/L			10/06/18 01:19	2
Benzene	ND		2.0	0.82	ug/L			10/06/18 01:19	2
Bromoform	ND		2.0	0.52	ug/L			10/06/18 01:19	2
Bromomethane	ND		2.0	1.4	ug/L			10/06/18 01:19	2
Carbon disulfide	**0.54**	**J**	2.0	0.38	ug/L			10/06/18 01:19	2
Carbon tetrachloride	ND		2.0	0.54	ug/L			10/06/18 01:19	2
Chlorobenzene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
Dibromochloromethane	ND		2.0	0.64	ug/L			10/06/18 01:19	2
Chloroethane	ND		2.0	0.64	ug/L			10/06/18 01:19	2
Chloroform	ND		2.0	0.68	ug/L			10/06/18 01:19	2
Chloromethane	ND		2.0	0.70	ug/L			10/06/18 01:19	2
cis-1,2-Dichloroethene	ND		2.0	1.6	ug/L			10/06/18 01:19	2
Cyclohexane	ND		2.0	0.36	ug/L			10/06/18 01:19	2
Bromodichloromethane	ND		2.0	0.78	ug/L			10/06/18 01:19	2
Dichlorodifluoromethane	ND		2.0	1.4	ug/L			10/06/18 01:19	2
Ethylbenzene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
1,2-Dibromoethane	ND		2.0	1.5	ug/L			10/06/18 01:19	2
Isopropylbenzene	ND		2.0	1.6	ug/L			10/06/18 01:19	2
Methyl acetate	ND		5.0	2.6	ug/L			10/06/18 01:19	2
Methyl tert-butyl ether	ND		2.0	0.32	ug/L			10/06/18 01:19	2
Methylcyclohexane	ND		2.0	0.32	ug/L			10/06/18 01:19	2
Methylene Chloride	**1.6**	**J**	2.0	0.88	ug/L			10/06/18 01:19	2
m,p-Xylene	ND		4.0	1.3	ug/L			10/06/18 01:19	2
n-Butylbenzene	ND		2.0	1.3	ug/L			10/06/18 01:19	2
N-Propylbenzene	ND		2.0	1.4	ug/L			10/06/18 01:19	2
o-Xylene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
sec-Butylbenzene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
Tetrachloroethene	ND		2.0	0.72	ug/L			10/06/18 01:19	2
Toluene	ND		2.0	1.0	ug/L			10/06/18 01:19	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			10/06/18 01:19	2

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: MW-5
Date Collected: 10/02/18 16:00
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-3
Matrix: Water

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		2.0	0.74	ug/L			10/06/18 01:19	2
Trichloroethene	ND		2.0	0.92	ug/L			10/06/18 01:19	2
Trichlorofluoromethane	ND		2.0	1.8	ug/L			10/06/18 01:19	2
Vinyl chloride	ND		2.0	1.8	ug/L			10/06/18 01:19	2
Xylenes, Total	ND		4.0	1.3	ug/L			10/06/18 01:19	2
cis-1,3-Dichloropropene	ND		2.0	0.72	ug/L			10/06/18 01:19	2
Styrene	ND		2.0	1.5	ug/L			10/06/18 01:19	2
tert-Butylbenzene	ND		2.0	1.6	ug/L			10/06/18 01:19	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*77 - 120*		*10/06/18 01:19*	*2*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*10/06/18 01:19*	*2*
Toluene-d8 (Surr)	*94*		*80 - 120*		*10/06/18 01:19*	*2*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*10/06/18 01:19*	*2*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: TRIP BLANK
Date Collected: 10/02/18 16:30
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-4
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			10/06/18 01:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/06/18 01:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/06/18 01:46	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/06/18 01:46	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/06/18 01:46	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/06/18 01:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/06/18 01:46	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/06/18 01:46	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/06/18 01:46	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/06/18 01:46	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/06/18 01:46	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/06/18 01:46	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/06/18 01:46	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/06/18 01:46	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/06/18 01:46	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/06/18 01:46	1
2-Hexanone	ND		5.0	1.2	ug/L			10/06/18 01:46	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/06/18 01:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/06/18 01:46	1
Acetone	ND		10	3.0	ug/L			10/06/18 01:46	1
Benzene	ND		1.0	0.41	ug/L			10/06/18 01:46	1
Bromoform	ND		1.0	0.26	ug/L			10/06/18 01:46	1
Bromomethane	ND		1.0	0.69	ug/L			10/06/18 01:46	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/06/18 01:46	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/06/18 01:46	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/06/18 01:46	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/06/18 01:46	1
Chloroethane	ND		1.0	0.32	ug/L			10/06/18 01:46	1
Chloroform	ND		1.0	0.34	ug/L			10/06/18 01:46	1
Chloromethane	ND		1.0	0.35	ug/L			10/06/18 01:46	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/06/18 01:46	1
Cyclohexane	ND		1.0	0.18	ug/L			10/06/18 01:46	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/06/18 01:46	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/06/18 01:46	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/06/18 01:46	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/06/18 01:46	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/06/18 01:46	1
Methyl acetate	ND		2.5	1.3	ug/L			10/06/18 01:46	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/06/18 01:46	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/06/18 01:46	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/06/18 01:46	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/06/18 01:46	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/06/18 01:46	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/06/18 01:46	1
o-Xylene	ND		1.0	0.76	ug/L			10/06/18 01:46	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/06/18 01:46	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/06/18 01:46	1
Toluene	ND		1.0	0.51	ug/L			10/06/18 01:46	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/06/18 01:46	1

Client Sample ID: TRIP BLANK
Date Collected: 10/02/18 16:30
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-4
Matrix: Water

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			10/06/18 01:46	1
Trichloroethene	ND		1.0	0.46	ug/L			10/06/18 01:46	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/06/18 01:46	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/06/18 01:46	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/06/18 01:46	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/06/18 01:46	1
Styrene	ND		1.0	0.73	ug/L			10/06/18 01:46	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/06/18 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*10/06/18 01:46*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*10/06/18 01:46*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/06/18 01:46*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 123*		*10/06/18 01:46*	*1*

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(80-120)	(75-123)
480-142853-1	MW-1	94	102	92	95
480-142853-2	MW-3	88	103	96	95
480-142853-3	MW-5	93	100	94	95
480-142853-4	TRIP BLANK	98	105	97	96
LCS 480-437996/6	Lab Control Sample	99	104	94	104
MB 480-437996/8	Method Blank	94	99	101	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(41-120)	(48-120)	(35-120)	(46-120)	(22-120)	(59-136)
480-142853-1	MW-1	93	93	65	94	48	83
480-142853-2	MW-3	78	94	70	95	53	85
LCS 480-437947/2-A	Lab Control Sample	86	94	78	99	64	102
LCSD 480-437947/3-A	Lab Control Sample Dup	85	93	78	109	66	103
MB 480-437947/1-A	Method Blank	65	89	69	92	53	101

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHd14 = p-Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(20-120)	(20-120)	(44-120)	(44-120)
480-142853-1	MW-1	33	37	72	78
LCS 480-438070/2-A	Lab Control Sample	47	51	75	73
LCSD 480-438070/3-A	Lab Control Sample Dup	30	32	74	69
MB 480-438070/1-A	Method Blank	41	44	72	66

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(19-120)	(19-120)	(39-121)	(39-121)
480-142853-1	MW-1	59	59	101	81
LCS 480-438079/2-A	Lab Control Sample	46	43	114	89
LCSD 480-438079/3-A	Lab Control Sample Dup	49	46	116	93
MB 480-438079/1-A	Method Blank	46	42	112	91

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPAA1	DCPAA2
Lab Sample ID	Client Sample ID	(48-132)	(48-132)
480-142853-1	MW-1	16 X	13 X
480-142853-1 - RE	MW-1	68	45 X
LCS 480-438349/2-A	Lab Control Sample	100	122
LCS 480-439898/2-A	Lab Control Sample	100	99
LCSD 480-438349/3-A	Lab Control Sample Dup	90	108
LCSD 480-439898/3-A	Lab Control Sample Dup	82	91
MB 480-438349/1-A	Method Blank	68	66
MB 480-439898/1-A	Method Blank	77	97

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 480-437996/8
Matrix: Water
Analysis Batch: 437996

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			10/05/18 21:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/05/18 21:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/05/18 21:59	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/05/18 21:59	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/05/18 21:59	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/05/18 21:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/05/18 21:59	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/05/18 21:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/05/18 21:59	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/05/18 21:59	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/05/18 21:59	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/05/18 21:59	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/05/18 21:59	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/05/18 21:59	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/05/18 21:59	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/05/18 21:59	1
2-Hexanone	ND		5.0	1.2	ug/L			10/05/18 21:59	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			10/05/18 21:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/05/18 21:59	1
Acetone	ND		10	3.0	ug/L			10/05/18 21:59	1
Benzene	ND		1.0	0.41	ug/L			10/05/18 21:59	1
Bromoform	ND		1.0	0.26	ug/L			10/05/18 21:59	1
Bromomethane	ND		1.0	0.69	ug/L			10/05/18 21:59	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/05/18 21:59	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/05/18 21:59	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/05/18 21:59	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/05/18 21:59	1
Chloroethane	ND		1.0	0.32	ug/L			10/05/18 21:59	1
Chloroform	ND		1.0	0.34	ug/L			10/05/18 21:59	1
Chloromethane	ND		1.0	0.35	ug/L			10/05/18 21:59	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/05/18 21:59	1
Cyclohexane	ND		1.0	0.18	ug/L			10/05/18 21:59	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/05/18 21:59	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/05/18 21:59	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/05/18 21:59	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/05/18 21:59	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/05/18 21:59	1
Methyl acetate	ND		2.5	1.3	ug/L			10/05/18 21:59	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/05/18 21:59	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/05/18 21:59	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/05/18 21:59	1
m,p-Xylene	ND		2.0	0.66	ug/L			10/05/18 21:59	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/05/18 21:59	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/05/18 21:59	1
o-Xylene	ND		1.0	0.76	ug/L			10/05/18 21:59	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			10/05/18 21:59	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/05/18 21:59	1
Toluene	ND		1.0	0.51	ug/L			10/05/18 21:59	1

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

Lab Sample ID: MB 480-437996/8
Matrix: Water
Analysis Batch: 437996

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			10/05/18 21:59	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/05/18 21:59	1
Trichloroethene	ND		1.0	0.46	ug/L			10/05/18 21:59	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/05/18 21:59	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/05/18 21:59	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/05/18 21:59	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/05/18 21:59	1
Styrene	ND		1.0	0.73	ug/L			10/05/18 21:59	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			10/05/18 21:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*		*10/05/18 21:59*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*10/05/18 21:59*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/05/18 21:59*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*10/05/18 21:59*	*1*

Lab Sample ID: LCS 480-437996/6
Matrix: Water
Analysis Batch: 437996

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	28.7		ug/L		115	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.5		ug/L		106	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	31.8		ug/L		127	61 - 148
1,1,2-Trichloroethane	25.0	25.4		ug/L		101	76 - 122
1,1-Dichloroethane	25.0	25.4		ug/L		102	77 - 120
1,1-Dichloroethene	25.0	27.3		ug/L		109	66 - 127
1,2,4-Trichlorobenzene	25.0	25.8		ug/L		103	79 - 122
1,2,4-Trimethylbenzene	25.0	26.3		ug/L		105	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	28.2		ug/L		113	56 - 134
1,2-Dichlorobenzene	25.0	25.7		ug/L		103	80 - 124
1,2-Dichloroethane	25.0	26.1		ug/L		104	75 - 120
1,2-Dichloropropane	25.0	26.7		ug/L		107	76 - 120
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	77 - 121
1,3-Dichlorobenzene	25.0	25.9		ug/L		104	77 - 120
1,4-Dichlorobenzene	25.0	25.5		ug/L		102	80 - 120
2-Butanone (MEK)	125	141		ug/L		113	57 - 140
2-Hexanone	125	132		ug/L		106	65 - 127
4-Isopropyltoluene	25.0	26.2		ug/L		105	73 - 120
4-Methyl-2-pentanone (MIBK)	125	128		ug/L		103	71 - 125
Acetone	125	151		ug/L		121	56 - 142
Benzene	25.0	27.0		ug/L		108	71 - 124
Bromoform	25.0	26.0		ug/L		104	61 - 132
Bromomethane	25.0	25.6		ug/L		102	55 - 144
Carbon disulfide	25.0	25.9		ug/L		104	59 - 134
Carbon tetrachloride	25.0	27.7		ug/L		111	72 - 134
Chlorobenzene	25.0	25.8		ug/L		103	80 - 120

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

Lab Sample ID: LCS 480-437996/6
Matrix: Water
Analysis Batch: 437996

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	25.0	24.8		ug/L		99	75 - 125
Chloroethane	25.0	22.9		ug/L		92	69 - 136
Chloroform	25.0	25.9		ug/L		104	73 - 127
Chloromethane	25.0	24.3		ug/L		97	68 - 124
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	74 - 124
Cyclohexane	25.0	28.4		ug/L		113	59 - 135
Bromodichloromethane	25.0	25.9		ug/L		104	80 - 122
Dichlorodifluoromethane	25.0	25.3		ug/L		101	59 - 135
Ethylbenzene	25.0	25.8		ug/L		103	77 - 123
1,2-Dibromoethane	25.0	26.5		ug/L		106	77 - 120
Isopropylbenzene	25.0	26.2		ug/L		105	77 - 122
Methyl acetate	50.0	53.3		ug/L		107	74 - 133
Methyl tert-butyl ether	25.0	27.4		ug/L		110	77 - 120
Methylcyclohexane	25.0	31.1		ug/L		125	68 - 134
Methylene Chloride	25.0	27.3		ug/L		109	75 - 124
m,p-Xylene	25.0	23.0		ug/L		92	76 - 122
Naphthalene	25.0	26.9		ug/L		108	66 - 125
n-Butylbenzene	25.0	26.3		ug/L		105	71 - 128
N-Propylbenzene	25.0	25.5		ug/L		102	75 - 127
o-Xylene	25.0	25.2		ug/L		101	76 - 122
sec-Butylbenzene	25.0	28.0		ug/L		112	74 - 127
Tetrachloroethene	25.0	27.8		ug/L		111	74 - 122
Toluene	25.0	25.4		ug/L		102	80 - 122
trans-1,2-Dichloroethene	25.0	27.6		ug/L		111	73 - 127
trans-1,3-Dichloropropene	25.0	25.9		ug/L		104	80 - 120
Trichloroethene	25.0	27.3		ug/L		109	74 - 123
Trichlorofluoromethane	25.0	23.0		ug/L		92	62 - 150
Vinyl chloride	25.0	26.6		ug/L		106	65 - 133
cis-1,3-Dichloropropene	25.0	26.6		ug/L		106	74 - 124
Styrene	25.0	24.7		ug/L		99	80 - 120
tert-Butylbenzene	25.0	27.5		ug/L		110	75 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Toluene-d8 (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*75 - 123*

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

Lab Sample ID: MB 480-437947/1-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		10/05/18 14:34	10/09/18 13:33	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		10/05/18 14:34	10/09/18 13:33	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		10/05/18 14:34	10/09/18 13:33	1

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

Lab Sample ID: MB 480-437947/1-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		10/05/18 14:34	10/09/18 13:33	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		10/05/18 14:34	10/09/18 13:33	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		10/05/18 14:34	10/09/18 13:33	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		10/05/18 14:34	10/09/18 13:33	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		10/05/18 14:34	10/09/18 13:33	1
2-Chlorophenol	ND		5.0	0.53	ug/L		10/05/18 14:34	10/09/18 13:33	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		10/05/18 14:34	10/09/18 13:33	1
2-Methylphenol	ND		5.0	0.40	ug/L		10/05/18 14:34	10/09/18 13:33	1
2-Nitroaniline	ND		10	0.42	ug/L		10/05/18 14:34	10/09/18 13:33	1
2-Nitrophenol	ND		5.0	0.48	ug/L		10/05/18 14:34	10/09/18 13:33	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		10/05/18 14:34	10/09/18 13:33	1
3-Nitroaniline	ND		10	0.48	ug/L		10/05/18 14:34	10/09/18 13:33	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Chloroaniline	ND		5.0	0.59	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Methylphenol	ND		10	0.36	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Nitroaniline	ND		10	0.25	ug/L		10/05/18 14:34	10/09/18 13:33	1
4-Nitrophenol	ND		10	1.5	ug/L		10/05/18 14:34	10/09/18 13:33	1
Acenaphthene	ND		5.0	0.41	ug/L		10/05/18 14:34	10/09/18 13:33	1
Acenaphthylene	ND		5.0	0.38	ug/L		10/05/18 14:34	10/09/18 13:33	1
Acetophenone	ND		5.0	0.54	ug/L		10/05/18 14:34	10/09/18 13:33	1
Anthracene	ND		5.0	0.28	ug/L		10/05/18 14:34	10/09/18 13:33	1
Atrazine	ND		5.0	0.46	ug/L		10/05/18 14:34	10/09/18 13:33	1
Benzaldehyde	ND		5.0	0.27	ug/L		10/05/18 14:34	10/09/18 13:33	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		10/05/18 14:34	10/09/18 13:33	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		10/05/18 14:34	10/09/18 13:33	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		10/05/18 14:34	10/09/18 13:33	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		10/05/18 14:34	10/09/18 13:33	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		10/05/18 14:34	10/09/18 13:33	1
Biphenyl	ND		5.0	0.65	ug/L		10/05/18 14:34	10/09/18 13:33	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		10/05/18 14:34	10/09/18 13:33	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		10/05/18 14:34	10/09/18 13:33	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		10/05/18 14:34	10/09/18 13:33	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		10/05/18 14:34	10/09/18 13:33	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		10/05/18 14:34	10/09/18 13:33	1
Caprolactam	ND		5.0	2.2	ug/L		10/05/18 14:34	10/09/18 13:33	1
Carbazole	ND		5.0	0.30	ug/L		10/05/18 14:34	10/09/18 13:33	1
Chrysene	ND		5.0	0.33	ug/L		10/05/18 14:34	10/09/18 13:33	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		10/05/18 14:34	10/09/18 13:33	1
Dibenzofuran	ND		10	0.51	ug/L		10/05/18 14:34	10/09/18 13:33	1
Diethyl phthalate	ND		5.0	0.22	ug/L		10/05/18 14:34	10/09/18 13:33	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		10/05/18 14:34	10/09/18 13:33	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		10/05/18 14:34	10/09/18 13:33	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		10/05/18 14:34	10/09/18 13:33	1
Fluoranthene	ND		5.0	0.40	ug/L		10/05/18 14:34	10/09/18 13:33	1
Fluorene	ND		5.0	0.36	ug/L		10/05/18 14:34	10/09/18 13:33	1

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

Lab Sample ID: MB 480-437947/1-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		5.0	0.51	ug/L		10/05/18 14:34	10/09/18 13:33	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		10/05/18 14:34	10/09/18 13:33	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		10/05/18 14:34	10/09/18 13:33	1
Hexachloroethane	ND		5.0	0.59	ug/L		10/05/18 14:34	10/09/18 13:33	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		10/05/18 14:34	10/09/18 13:33	1
Isophorone	ND		5.0	0.43	ug/L		10/05/18 14:34	10/09/18 13:33	1
Naphthalene	ND		5.0	0.76	ug/L		10/05/18 14:34	10/09/18 13:33	1
Nitrobenzene	ND		5.0	0.29	ug/L		10/05/18 14:34	10/09/18 13:33	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		10/05/18 14:34	10/09/18 13:33	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		10/05/18 14:34	10/09/18 13:33	1
Pentachlorophenol	ND		10	2.2	ug/L		10/05/18 14:34	10/09/18 13:33	1
Phenanthrene	ND		5.0	0.44	ug/L		10/05/18 14:34	10/09/18 13:33	1
Phenol	ND		5.0	0.39	ug/L		10/05/18 14:34	10/09/18 13:33	1
Pyrene	ND		5.0	0.34	ug/L		10/05/18 14:34	10/09/18 13:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*65*		*41 - 120*	*10/05/18 14:34*	*10/09/18 13:33*	*1*
2-Fluorobiphenyl	*89*		*48 - 120*	*10/05/18 14:34*	*10/09/18 13:33*	*1*
2-Fluorophenol	*69*		*35 - 120*	*10/05/18 14:34*	*10/09/18 13:33*	*1*
Nitrobenzene-d5	*92*		*46 - 120*	*10/05/18 14:34*	*10/09/18 13:33*	*1*
Phenol-d5	*53*		*22 - 120*	*10/05/18 14:34*	*10/09/18 13:33*	*1*
p-Terphenyl-d14	*101*		*59 - 136*	*10/05/18 14:34*	*10/09/18 13:33*	*1*

Lab Sample ID: LCS 480-437947/2-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	32.0	36.0		ug/L		112	65 - 126
2,4,6-Trichlorophenol	32.0	35.7		ug/L		112	64 - 120
2,4-Dichlorophenol	32.0	34.0		ug/L		106	63 - 120
2,4-Dimethylphenol	32.0	35.3		ug/L		110	47 - 120
2,4-Dinitrophenol	64.0	69.6		ug/L		109	31 - 137
2,4-Dinitrotoluene	32.0	36.4		ug/L		114	69 - 120
2,6-Dinitrotoluene	32.0	36.3		ug/L		113	68 - 120
2-Chloronaphthalene	32.0	31.1		ug/L		97	58 - 120
2-Chlorophenol	32.0	31.8		ug/L		99	48 - 120
2-Methylnaphthalene	32.0	31.3		ug/L		98	59 - 120
2-Methylphenol	32.0	32.4		ug/L		101	39 - 120
2-Nitroaniline	32.0	36.9		ug/L		115	54 - 127
2-Nitrophenol	32.0	33.4		ug/L		104	52 - 125
3,3'-Dichlorobenzidine	64.0	95.5	E *	ug/L		149	49 - 135
3-Nitroaniline	32.0	34.8		ug/L		109	51 - 120
4,6-Dinitro-2-methylphenol	64.0	75.7		ug/L		118	46 - 136
4-Bromophenyl phenyl ether	32.0	33.1		ug/L		103	65 - 120
4-Chloro-3-methylphenol	32.0	36.1		ug/L		113	61 - 123
4-Chloroaniline	32.0	27.4		ug/L		86	30 - 120
4-Chlorophenyl phenyl ether	32.0	34.2		ug/L		107	62 - 120

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

Lab Sample ID: LCS 480-437947/2-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methylphenol	32.0	32.0		ug/L		100	29 - 131
4-Nitroaniline	32.0	40.7	*	ug/L		127	65 - 120
4-Nitrophenol	64.0	61.1		ug/L		95	45 - 120
Acenaphthene	32.0	34.0		ug/L		106	60 - 120
Acenaphthylene	32.0	34.1		ug/L		107	63 - 120
Acetophenone	32.0	35.4		ug/L		111	45 - 120
Anthracene	32.0	36.7		ug/L		115	67 - 120
Atrazine	64.0	82.9		ug/L		129	71 - 130
Benzaldehyde	64.0	69.4		ug/L		108	10 - 140
Benzo(a)anthracene	32.0	36.5		ug/L		114	70 - 121
Benzo(a)pyrene	32.0	35.9		ug/L		112	60 - 123
Benzo(b)fluoranthene	32.0	37.2		ug/L		116	66 - 126
Benzo(g,h,i)perylene	32.0	35.7		ug/L		112	66 - 150
Benzo(k)fluoranthene	32.0	37.9		ug/L		118	65 - 124
Biphenyl	32.0	32.3		ug/L		101	59 - 120
bis (2-chloroisopropyl) ether	32.0	32.2		ug/L		101	21 - 136
Bis(2-chloroethoxy)methane	32.0	34.6		ug/L		108	50 - 128
Bis(2-chloroethyl)ether	32.0	32.9		ug/L		103	44 - 120
Bis(2-ethylhexyl) phthalate	32.0	37.5		ug/L		117	63 - 139
Butyl benzyl phthalate	32.0	38.3		ug/L		120	70 - 129
Caprolactam	64.0	30.6		ug/L		48	22 - 120
Carbazole	32.0	40.9	*	ug/L		128	66 - 123
Chrysene	32.0	35.9		ug/L		112	69 - 120
Dibenz(a,h)anthracene	32.0	36.6		ug/L		114	65 - 135
Dibenzofuran	32.0	34.3		ug/L		107	66 - 120
Diethyl phthalate	32.0	38.4		ug/L		120	59 - 127
Dimethyl phthalate	32.0	36.9		ug/L		115	68 - 120
Di-n-butyl phthalate	32.0	37.5		ug/L		117	69 - 131
Di-n-octyl phthalate	32.0	39.0		ug/L		122	63 - 140
Fluoranthene	32.0	38.4		ug/L		120	69 - 126
Fluorene	32.0	35.2		ug/L		110	66 - 120
Hexachlorobenzene	32.0	32.0		ug/L		100	61 - 120
Hexachlorobutadiene	32.0	25.2		ug/L		79	35 - 120
Hexachlorocyclopentadiene	32.0	19.9		ug/L		62	31 - 120
Hexachloroethane	32.0	26.7		ug/L		83	43 - 120
Indeno(1,2,3-cd)pyrene	32.0	36.0		ug/L		112	69 - 146
Isophorone	32.0	38.7	*	ug/L		121	55 - 120
Naphthalene	32.0	31.1		ug/L		97	57 - 120
Nitrobenzene	32.0	35.9		ug/L		112	53 - 123
N-Nitrosodi-n-propylamine	32.0	38.3		ug/L		120	32 - 140
Pentachlorophenol	64.0	59.3		ug/L		93	29 - 136
Phenanthrene	32.0	35.6		ug/L		111	68 - 120
Phenol	32.0	22.9		ug/L		72	17 - 120
Pyrene	32.0	37.6		ug/L		117	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*86*		*41 - 120*
2-Fluorobiphenyl	*94*		*48 - 120*

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

Lab Sample ID: LCS 480-437947/2-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437947

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	78		35 - 120
Nitrobenzene-d5	99		46 - 120
Phenol-d5	64		22 - 120
p-Terphenyl-d14	102		59 - 136

Lab Sample ID: LCSD 480-437947/3-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 437947

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol			32.0	35.5		ug/L		111	65 - 126	1	18
2,4,6-Trichlorophenol			32.0	36.1		ug/L		113	64 - 120	1	19
2,4-Dichlorophenol			32.0	34.6		ug/L		108	63 - 120	2	19
2,4-Dimethylphenol			32.0	36.2		ug/L		113	47 - 120	3	42
2,4-Dinitrophenol			64.0	70.9		ug/L		111	31 - 137	2	22
2,4-Dinitrotoluene			32.0	36.9		ug/L		115	69 - 120	1	20
2,6-Dinitrotoluene			32.0	35.7		ug/L		112	68 - 120	2	15
2-Chloronaphthalene			32.0	30.6		ug/L		95	58 - 120	2	21
2-Chlorophenol			32.0	32.3		ug/L		101	48 - 120	2	25
2-Methylnaphthalene			32.0	30.6		ug/L		96	59 - 120	2	21
2-Methylphenol			32.0	33.9		ug/L		106	39 - 120	5	27
2-Nitroaniline			32.0	38.8		ug/L		121	54 - 127	5	15
2-Nitrophenol			32.0	34.3		ug/L		107	52 - 125	3	18
3,3'-Dichlorobenzidine			64.0	98.5	E *	ug/L		154	49 - 135	3	25
3-Nitroaniline			32.0	35.4		ug/L		111	51 - 120	2	19
4,6-Dinitro-2-methylphenol			64.0	75.1		ug/L		117	46 - 136	1	15
4-Bromophenyl phenyl ether			32.0	31.9		ug/L		100	65 - 120	4	15
4-Chloro-3-methylphenol			32.0	36.8		ug/L		115	61 - 123	2	27
4-Chloroaniline			32.0	28.0		ug/L		88	30 - 120	2	22
4-Chlorophenyl phenyl ether			32.0	32.2		ug/L		101	62 - 120	6	16
4-Methylphenol			32.0	33.3		ug/L		104	29 - 131	4	24
4-Nitroaniline			32.0	42.0	*	ug/L		131	65 - 120	3	24
4-Nitrophenol			64.0	62.2		ug/L		97	45 - 120	2	48
Acenaphthene			32.0	33.4		ug/L		105	60 - 120	2	24
Acenaphthylene			32.0	33.0		ug/L		103	63 - 120	3	18
Acetophenone			32.0	36.7		ug/L		115	45 - 120	4	20
Anthracene			32.0	36.5		ug/L		114	67 - 120	0	15
Atrazine			64.0	82.9		ug/L		129	71 - 130	0	20
Benzaldehyde			64.0	72.4		ug/L		113	10 - 140	4	20
Benzo(a)anthracene			32.0	37.3		ug/L		117	70 - 121	2	15
Benzo(a)pyrene			32.0	36.8		ug/L		115	60 - 123	3	15
Benzo(b)fluoranthene			32.0	38.8		ug/L		121	66 - 126	4	15
Benzo(g,h,i)perylene			32.0	36.6		ug/L		114	66 - 150	3	15
Benzo(k)fluoranthene			32.0	39.1		ug/L		122	65 - 124	3	22
Biphenyl			32.0	31.8		ug/L		99	59 - 120	1	20
bis (2-chloroisopropyl) ether			32.0	33.5		ug/L		105	21 - 136	4	24
Bis(2-chloroethoxy)methane			32.0	36.3		ug/L		113	50 - 128	5	17
Bis(2-chloroethyl)ether			32.0	35.0		ug/L		109	44 - 120	6	21

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

Lab Sample ID: LCSD 480-437947/3-A
Matrix: Water
Analysis Batch: 438365

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 437947

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate			32.0	38.1		ug/L		119	63 - 139	1	15
Butyl benzyl phthalate			32.0	38.7		ug/L		121	70 - 129	1	16
Caprolactam			64.0	30.7		ug/L		48	22 - 120	0	20
Carbazole			32.0	41.0	*	ug/L		128	66 - 123	0	20
Chrysene			32.0	36.4		ug/L		114	69 - 120	1	15
Dibenz(a,h)anthracene			32.0	37.3		ug/L		117	65 - 135	2	15
Dibenzofuran			32.0	33.3		ug/L		104	66 - 120	3	15
Diethyl phthalate			32.0	38.3		ug/L		120	59 - 127	0	15
Dimethyl phthalate			32.0	36.7		ug/L		115	68 - 120	1	15
Di-n-butyl phthalate			32.0	38.1		ug/L		119	69 - 131	2	15
Di-n-octyl phthalate			32.0	39.7		ug/L		124	63 - 140	2	16
Fluoranthene			32.0	38.5		ug/L		120	69 - 126	0	15
Fluorene			32.0	34.5		ug/L		108	66 - 120	2	15
Hexachlorobenzene			32.0	31.2		ug/L		97	61 - 120	3	15
Hexachlorobutadiene			32.0	24.5		ug/L		77	35 - 120	3	44
Hexachlorocyclopentadiene			32.0	19.1		ug/L		60	31 - 120	4	49
Hexachloroethane			32.0	27.4		ug/L		86	43 - 120	3	46
Indeno(1,2,3-cd)pyrene			32.0	37.3		ug/L		116	69 - 146	3	15
Isophorone			32.0	39.3	*	ug/L		123	55 - 120	2	17
Naphthalene			32.0	31.6		ug/L		99	57 - 120	1	29
Nitrobenzene			32.0	37.3		ug/L		117	53 - 123	4	24
N-Nitrosodi-n-propylamine			32.0	38.5		ug/L		120	32 - 140	1	31
Pentachlorophenol			64.0	59.2		ug/L		92	29 - 136	0	37
Phenanthrene			32.0	35.6		ug/L		111	68 - 120	0	15
Phenol			32.0	23.3		ug/L		73	17 - 120	2	34
Pyrene			32.0	38.8		ug/L		121	70 - 125	3	19

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*85*		*41 - 120*
2-Fluorobiphenyl	*93*		*48 - 120*
2-Fluorophenol	*78*		*35 - 120*
Nitrobenzene-d5	*109*		*46 - 120*
Phenol-d5	*66*		*22 - 120*
p-Terphenyl-d14	*103*		*59 - 136*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-438070/1-A
Matrix: Water
Analysis Batch: 438185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		10/06/18 15:55	10/08/18 11:17	1
4,4'-DDE	ND		0.050	0.012	ug/L		10/06/18 15:55	10/08/18 11:17	1
4,4'-DDT	ND		0.050	0.011	ug/L		10/06/18 15:55	10/08/18 11:17	1
Aldrin	ND		0.050	0.0081	ug/L		10/06/18 15:55	10/08/18 11:17	1
alpha-BHC	ND		0.050	0.0077	ug/L		10/06/18 15:55	10/08/18 11:17	1
cis-Chlordane	ND		0.050	0.015	ug/L		10/06/18 15:55	10/08/18 11:17	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-438070/1-A
Matrix: Water
Analysis Batch: 438185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	ND		0.050	0.025	ug/L		10/06/18 15:55	10/08/18 11:17	1
delta-BHC	ND		0.050	0.010	ug/L		10/06/18 15:55	10/08/18 11:17	1
Dieldrin	ND		0.050	0.0098	ug/L		10/06/18 15:55	10/08/18 11:17	1
Endosulfan I	ND		0.050	0.011	ug/L		10/06/18 15:55	10/08/18 11:17	1
Endosulfan II	ND		0.050	0.012	ug/L		10/06/18 15:55	10/08/18 11:17	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		10/06/18 15:55	10/08/18 11:17	1
Endrin	ND		0.050	0.014	ug/L		10/06/18 15:55	10/08/18 11:17	1
Endrin aldehyde	ND		0.050	0.016	ug/L		10/06/18 15:55	10/08/18 11:17	1
Endrin ketone	ND		0.050	0.012	ug/L		10/06/18 15:55	10/08/18 11:17	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		10/06/18 15:55	10/08/18 11:17	1
trans-Chlordane	ND		0.050	0.011	ug/L		10/06/18 15:55	10/08/18 11:17	1
Heptachlor	ND		0.050	0.0085	ug/L		10/06/18 15:55	10/08/18 11:17	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		10/06/18 15:55	10/08/18 11:17	1
Methoxychlor	ND		0.050	0.014	ug/L		10/06/18 15:55	10/08/18 11:17	1
Toxaphene	ND		0.50	0.12	ug/L		10/06/18 15:55	10/08/18 11:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*41*		*20 - 120*	*10/06/18 15:55*	*10/08/18 11:17*	*1*
DCB Decachlorobiphenyl	*44*		*20 - 120*	*10/06/18 15:55*	*10/08/18 11:17*	*1*
Tetrachloro-m-xylene	*72*		*44 - 120*	*10/06/18 15:55*	*10/08/18 11:17*	*1*
Tetrachloro-m-xylene	*66*		*44 - 120*	*10/06/18 15:55*	*10/08/18 11:17*	*1*

Lab Sample ID: LCS 480-438070/2-A
Matrix: Water
Analysis Batch: 438185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.400	0.376		ug/L		94	64 - 129
4,4'-DDE	0.400	0.305		ug/L		76	50 - 120
4,4'-DDT	0.400	0.359		ug/L		90	59 - 120
Aldrin	0.400	0.263		ug/L		66	40 - 125
alpha-BHC	0.400	0.271		ug/L		68	52 - 125
cis-Chlordane	0.400	0.246		ug/L		62	52 - 120
beta-BHC	0.400	0.324		ug/L		81	51 - 120
delta-BHC	0.400	0.322		ug/L		80	51 - 120
Dieldrin	0.400	0.365		ug/L		91	66 - 128
Endosulfan I	0.400	0.356		ug/L		89	57 - 120
Endosulfan II	0.400	0.395		ug/L		99	66 - 131
Endosulfan sulfate	0.400	0.389		ug/L		97	66 - 136
Endrin	0.400	0.386		ug/L		96	65 - 135
Endrin aldehyde	0.400	0.323		ug/L		81	61 - 134
Endrin ketone	0.400	0.461		ug/L		115	71 - 133
gamma-BHC (Lindane)	0.400	0.295		ug/L		74	56 - 120
trans-Chlordane	0.400	0.289		ug/L		72	54 - 120
Heptachlor	0.400	0.306		ug/L		76	58 - 120
Heptachlor epoxide	0.400	0.348		ug/L		87	65 - 125
Methoxychlor	0.400	0.382		ug/L		95	50 - 150

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-438070/2-A
Matrix: Water
Analysis Batch: 438185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438070

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	47		20 - 120
DCB Decachlorobiphenyl	51		20 - 120
Tetrachloro-m-xylene	75		44 - 120
Tetrachloro-m-xylene	73		44 - 120

Lab Sample ID: LCSD 480-438070/3-A
Matrix: Water
Analysis Batch: 438185

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438070

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.400	0.346		ug/L		86	64 - 129	9	23
4,4'-DDE			0.400	0.320		ug/L		80	50 - 120	5	22
4,4'-DDT			0.400	0.330		ug/L		83	59 - 120	8	24
Aldrin			0.400	0.250		ug/L		62	40 - 125	5	25
alpha-BHC			0.400	0.259		ug/L		65	52 - 125	5	24
cis-Chlordane			0.400	0.278		ug/L		70	52 - 120	12	23
beta-BHC			0.400	0.310		ug/L		77	51 - 120	4	24
delta-BHC			0.400	0.319		ug/L		80	51 - 120	1	24
Dieldrin			0.400	0.376		ug/L		94	66 - 128	3	24
Endosulfan I			0.400	0.427		ug/L		107	57 - 120	18	30
Endosulfan II			0.400	0.376		ug/L		94	66 - 131	5	40
Endosulfan sulfate			0.400	0.354		ug/L		88	66 - 136	10	24
Endrin			0.400	0.362		ug/L		90	65 - 135	6	24
Endrin aldehyde			0.400	0.325		ug/L		81	61 - 134	1	28
Endrin ketone			0.400	0.420		ug/L		105	71 - 133	9	26
gamma-BHC (Lindane)			0.400	0.291		ug/L		73	56 - 120	1	24
trans-Chlordane			0.400	0.257		ug/L		64	54 - 120	12	24
Heptachlor			0.400	0.324		ug/L		81	58 - 120	6	25
Heptachlor epoxide			0.400	0.289		ug/L		72	65 - 125	18	23
Methoxychlor			0.400	0.356		ug/L		89	50 - 150	7	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	30		20 - 120
DCB Decachlorobiphenyl	32		20 - 120
Tetrachloro-m-xylene	74		44 - 120
Tetrachloro-m-xylene	69		44 - 120

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

Lab Sample ID: MB 480-438079/1-A
Matrix: Water
Analysis Batch: 438403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438079

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		10/06/18 17:26	10/09/18 21:11	1
PCB-1221	ND		0.50	0.18	ug/L		10/06/18 17:26	10/09/18 21:11	1
PCB-1232	ND		0.50	0.18	ug/L		10/06/18 17:26	10/09/18 21:11	1

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

Lab Sample ID: MB 480-438079/1-A
Matrix: Water
Analysis Batch: 438403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438079

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		0.50	0.18	ug/L		10/06/18 17:26	10/09/18 21:11	1
PCB-1248	ND		0.50	0.18	ug/L		10/06/18 17:26	10/09/18 21:11	1
PCB-1254	ND		0.50	0.25	ug/L		10/06/18 17:26	10/09/18 21:11	1
PCB-1260	ND		0.50	0.25	ug/L		10/06/18 17:26	10/09/18 21:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*		*19 - 120*	*10/06/18 17:26*	*10/09/18 21:11*	*1*
DCB Decachlorobiphenyl	*42*		*19 - 120*	*10/06/18 17:26*	*10/09/18 21:11*	*1*
Tetrachloro-m-xylene	*112*		*39 - 121*	*10/06/18 17:26*	*10/09/18 21:11*	*1*
Tetrachloro-m-xylene	*91*		*39 - 121*	*10/06/18 17:26*	*10/09/18 21:11*	*1*

Lab Sample ID: LCS 480-438079/2-A
Matrix: Water
Analysis Batch: 438403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438079

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			4.00	3.82		ug/L		96	62 - 130		
PCB-1260			4.00	3.05		ug/L		76	56 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*46*		*19 - 120*
DCB Decachlorobiphenyl	*43*		*19 - 120*
Tetrachloro-m-xylene	*114*		*39 - 121*
Tetrachloro-m-xylene	*89*		*39 - 121*

Lab Sample ID: LCSD 480-438079/3-A
Matrix: Water
Analysis Batch: 438403

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438079

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			4.00	3.98		ug/L		100	62 - 130	4	50
PCB-1260			4.00	3.26		ug/L		81	56 - 123	7	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*49*		*19 - 120*
DCB Decachlorobiphenyl	*46*		*19 - 120*
Tetrachloro-m-xylene	*116*		*39 - 121*
Tetrachloro-m-xylene	*93*		*39 - 121*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 480-438349/1-A
Matrix: Water
Analysis Batch: 439391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.068	ug/L		10/09/18 07:48	10/15/18 12:35	1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: MB 480-438349/1-A
Matrix: Water
Analysis Batch: 439391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	ND		0.50	0.050	ug/L		10/09/18 07:48	10/15/18 12:35	1
2,4-D	ND		0.50	0.17	ug/L		10/09/18 07:48	10/15/18 12:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*68*		*48 - 132*	*10/09/18 07:48*	*10/15/18 12:35*	*1*
2,4-Dichlorophenylacetic acid	*66*		*48 - 132*	*10/09/18 07:48*	*10/15/18 12:35*	*1*

Lab Sample ID: LCS 480-438349/2-A
Matrix: Water
Analysis Batch: 439391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	2.16		ug/L		108	41 - 150
Silvex (2,4,5-TP)	2.00	2.11		ug/L		106	49 - 150
2,4-D	2.00	2.11		ug/L		105	36 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*100*		*48 - 132*
2,4-Dichlorophenylacetic acid	*122*		*48 - 132*

Lab Sample ID: LCSD 480-438349/3-A
Matrix: Water
Analysis Batch: 439391

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438349

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	2.00	2.00		ug/L		100	41 - 150	8	50
Silvex (2,4,5-TP)	2.00	1.96		ug/L		98	49 - 150	7	50
2,4-D	2.00	2.06		ug/L		103	36 - 150	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*90*		*48 - 132*
2,4-Dichlorophenylacetic acid	*108*		*48 - 132*

Lab Sample ID: MB 480-439898/1-A
Matrix: Water
Analysis Batch: 440646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.068	ug/L		10/17/18 08:00	10/20/18 13:33	1
Silvex (2,4,5-TP)	ND		0.50	0.050	ug/L		10/17/18 08:00	10/20/18 13:33	1
2,4-D	ND		0.50	0.17	ug/L		10/17/18 08:00	10/20/18 13:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*77*		*48 - 132*	*10/17/18 08:00*	*10/20/18 13:33*	*1*
2,4-Dichlorophenylacetic acid	*97*		*48 - 132*	*10/17/18 08:00*	*10/20/18 13:33*	*1*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 480-439898/2-A
Matrix: Water
Analysis Batch: 440646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439898

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-T			2.00	1.86		ug/L		93	41 - 150		
Silvex (2,4,5-TP)			2.00	1.87		ug/L		94	49 - 150		
2,4-D			2.00	1.90		ug/L		95	36 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*100*		*48 - 132*
2,4-Dichlorophenylacetic acid	*99*		*48 - 132*

Lab Sample ID: LCSD 480-439898/3-A
Matrix: Water
Analysis Batch: 440646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439898

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T			2.00	1.67		ug/L		84	41 - 150	11	50
Silvex (2,4,5-TP)			2.00	1.68		ug/L		84	49 - 150	11	50
2,4-D			2.00	1.82		ug/L		91	36 - 150	4	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*82*		*48 - 132*
2,4-Dichlorophenylacetic acid	*91*		*48 - 132*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-438657/1-B
Matrix: Water
Analysis Batch: 439274

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 438954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		10/11/18 14:29	10/12/18 15:23	1
Antimony	ND		0.020	0.0068	mg/L		10/11/18 14:29	10/12/18 15:23	1
Arsenic	ND		0.015	0.0056	mg/L		10/11/18 14:29	10/12/18 15:23	1
Barium	ND		0.0020	0.00070	mg/L		10/11/18 14:29	10/12/18 15:23	1
Beryllium	ND		0.0020	0.00030	mg/L		10/11/18 14:29	10/12/18 15:23	1
Cadmium	ND		0.0020	0.00050	mg/L		10/11/18 14:29	10/12/18 15:23	1
Calcium	ND		0.50	0.10	mg/L		10/11/18 14:29	10/12/18 15:23	1
Chromium	ND		0.0040	0.0010	mg/L		10/11/18 14:29	10/12/18 15:23	1
Cobalt	ND		0.0040	0.00063	mg/L		10/11/18 14:29	10/12/18 15:23	1
Copper	ND		0.010	0.0016	mg/L		10/11/18 14:29	10/12/18 15:23	1
Iron	ND		0.050	0.019	mg/L		10/11/18 14:29	10/12/18 15:23	1
Lead	ND		0.010	0.0030	mg/L		10/11/18 14:29	10/12/18 15:23	1
Magnesium	ND		0.20	0.043	mg/L		10/11/18 14:29	10/12/18 15:23	1
Manganese	ND		0.0030	0.00040	mg/L		10/11/18 14:29	10/12/18 15:23	1
Nickel	ND		0.010	0.0013	mg/L		10/11/18 14:29	10/12/18 15:23	1
Potassium	0.223	J	0.50	0.10	mg/L		10/11/18 14:29	10/12/18 15:23	1
Selenium	ND		0.025	0.0087	mg/L		10/11/18 14:29	10/12/18 15:23	1
Silver	ND		0.0060	0.0017	mg/L		10/11/18 14:29	10/12/18 15:23	1
Sodium	ND		1.0	0.32	mg/L		10/11/18 14:29	10/12/18 15:23	1

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

Lab Sample ID: MB 480-438657/1-B
Matrix: Water
Analysis Batch: 439274

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 438954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.020	0.010	mg/L		10/11/18 14:29	10/12/18 15:23	1
Vanadium	ND		0.0050	0.0015	mg/L		10/11/18 14:29	10/12/18 15:23	1
Zinc	0.00781	J	0.010	0.0015	mg/L		10/11/18 14:29	10/12/18 15:23	1

Lab Sample ID: LCS 480-438657/2-B
Matrix: Water
Analysis Batch: 439274

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 438954

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.26		mg/L		93	80 - 120
Antimony	0.200	0.190		mg/L		95	80 - 120
Arsenic	0.200	0.186		mg/L		93	80 - 120
Barium	0.200	0.188		mg/L		94	80 - 120
Beryllium	0.200	0.192		mg/L		96	80 - 120
Cadmium	0.200	0.182		mg/L		91	80 - 120
Calcium	10.0	9.19		mg/L		92	80 - 120
Chromium	0.200	0.187		mg/L		93	80 - 120
Cobalt	0.200	0.179		mg/L		90	80 - 120
Copper	0.200	0.185		mg/L		92	80 - 120
Iron	10.0	9.29		mg/L		93	80 - 120
Lead	0.200	0.188		mg/L		94	80 - 120
Magnesium	10.0	9.20		mg/L		92	80 - 120
Manganese	0.200	0.184		mg/L		92	80 - 120
Nickel	0.200	0.191		mg/L		96	80 - 120
Potassium	10.0	9.41		mg/L		94	80 - 120
Selenium	0.200	0.182		mg/L		91	80 - 120
Silver	0.0500	0.0460		mg/L		92	80 - 120
Sodium	10.0	9.19		mg/L		92	80 - 120
Thallium	0.200	0.185		mg/L		93	80 - 120
Vanadium	0.200	0.192		mg/L		96	80 - 120
Zinc	0.200	0.194		mg/L		97	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-438657/1-D
Matrix: Water
Analysis Batch: 439228

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 439124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		10/12/18 12:10	10/12/18 15:55	1

Lab Sample ID: LCS 480-438657/2-D
Matrix: Water
Analysis Batch: 439228

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 439124

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00712		mg/L		107	80 - 120

GC/MS VOA

Analysis Batch: 437996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	8260C	
480-142853-2	MW-3	Total/NA	Water	8260C	
480-142853-3	MW-5	Total/NA	Water	8260C	
480-142853-4	TRIP BLANK	Total/NA	Water	8260C	
MB 480-437996/8	Method Blank	Total/NA	Water	8260C	
LCS 480-437996/6	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 437947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	3510C	
480-142853-2	MW-3	Total/NA	Water	3510C	
MB 480-437947/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-437947/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-437947/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 438365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-437947/1-A	Method Blank	Total/NA	Water	8270D	437947
LCS 480-437947/2-A	Lab Control Sample	Total/NA	Water	8270D	437947
LCSD 480-437947/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	437947

Analysis Batch: 438383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	8270D	437947
480-142853-2	MW-3	Total/NA	Water	8270D	437947

GC Semi VOA

Prep Batch: 438070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	3510C	
MB 480-438070/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-438070/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-438070/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 438079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	3510C	
MB 480-438079/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-438079/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-438079/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 438185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	8081B	438070
MB 480-438070/1-A	Method Blank	Total/NA	Water	8081B	438070
LCS 480-438070/2-A	Lab Control Sample	Total/NA	Water	8081B	438070
LCSD 480-438070/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	438070

GC Semi VOA (Continued)

Prep Batch: 438349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	8151A	
MB 480-438349/1-A	Method Blank	Total/NA	Water	8151A	
LCS 480-438349/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 480-438349/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 438403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	8082A	438079
MB 480-438079/1-A	Method Blank	Total/NA	Water	8082A	438079
LCS 480-438079/2-A	Lab Control Sample	Total/NA	Water	8082A	438079
LCSD 480-438079/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	438079

Analysis Batch: 439391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Total/NA	Water	8151A	438349
MB 480-438349/1-A	Method Blank	Total/NA	Water	8151A	438349
LCS 480-438349/2-A	Lab Control Sample	Total/NA	Water	8151A	438349
LCSD 480-438349/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	438349

Prep Batch: 439898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1 - RE	MW-1	Total/NA	Water	8151A	
MB 480-439898/1-A	Method Blank	Total/NA	Water	8151A	
LCS 480-439898/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 480-439898/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 440646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1 - RE	MW-1	Total/NA	Water	8151A	439898
MB 480-439898/1-A	Method Blank	Total/NA	Water	8151A	439898
LCS 480-439898/2-A	Lab Control Sample	Total/NA	Water	8151A	439898
LCSD 480-439898/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	439898

Metals

Filtration Batch: 438657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Dissolved	Water	FILTRATION	
480-142853-2	MW-3	Dissolved	Water	FILTRATION	
MB 480-438657/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 480-438657/1-D	Method Blank	Dissolved	Water	FILTRATION	
LCS 480-438657/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 480-438657/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	

Prep Batch: 438954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Dissolved	Water	3005A	438657
480-142853-2	MW-3	Dissolved	Water	3005A	438657
MB 480-438657/1-B	Method Blank	Dissolved	Water	3005A	438657
LCS 480-438657/2-B	Lab Control Sample	Dissolved	Water	3005A	438657

Metals (Continued)

Prep Batch: 439124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Dissolved	Water	7470A	438657
480-142853-2	MW-3	Dissolved	Water	7470A	438657
MB 480-438657/1-D	Method Blank	Dissolved	Water	7470A	438657
LCS 480-438657/2-D	Lab Control Sample	Dissolved	Water	7470A	438657

Analysis Batch: 439228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Dissolved	Water	7470A	439124
480-142853-2	MW-3	Dissolved	Water	7470A	439124
MB 480-438657/1-D	Method Blank	Dissolved	Water	7470A	439124
LCS 480-438657/2-D	Lab Control Sample	Dissolved	Water	7470A	439124

Analysis Batch: 439274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142853-1	MW-1	Dissolved	Water	6010C	438954
480-142853-2	MW-3	Dissolved	Water	6010C	438954
MB 480-438657/1-B	Method Blank	Dissolved	Water	6010C	438954
LCS 480-438657/2-B	Lab Control Sample	Dissolved	Water	6010C	438954

Client Sample ID: MW-1

Lab Sample ID: 480-142853-1

Date Collected: 10/02/18 15:00

Matrix: Water

Date Received: 10/03/18 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437996	10/06/18 00:25	AMM	TAL BUF
Total/NA	Prep	3510C			437947	10/05/18 14:34	ATG	TAL BUF
Total/NA	Analysis	8270D		1	438383	10/10/18 01:02	RJS	TAL BUF
Total/NA	Prep	3510C			438070	10/06/18 15:55	AAP	TAL BUF
Total/NA	Analysis	8081B		1	438185	10/08/18 12:55	MAN	TAL BUF
Total/NA	Prep	3510C			438079	10/06/18 17:26	AAP	TAL BUF
Total/NA	Analysis	8082A		1	438403	10/10/18 00:06	W1T	TAL BUF
Total/NA	Prep	8151A			438349	10/09/18 07:48	JMP	TAL BUF
Total/NA	Analysis	8151A		1	439391	10/15/18 16:06	MAN	TAL BUF
Total/NA	Prep	8151A	RE		439898	10/17/18 08:00	JMP	TAL BUF
Total/NA	Analysis	8151A	RE	1	440646	10/20/18 15:02	MAN	TAL BUF
Dissolved	Filtration	FILTRATION			438657	10/10/18 11:44	KMP	TAL BUF
Dissolved	Prep	3005A			438954	10/11/18 14:29	KMP	TAL BUF
Dissolved	Analysis	6010C		1	439274	10/12/18 16:40	LMH	TAL BUF
Dissolved	Filtration	FILTRATION			438657	10/10/18 11:44	KMP	TAL BUF
Dissolved	Prep	7470A			439124	10/12/18 12:10	BMB	TAL BUF
Dissolved	Analysis	7470A		1	439228	10/12/18 16:27	BMB	TAL BUF

Client Sample ID: MW-3

Lab Sample ID: 480-142853-2

Date Collected: 10/02/18 14:00

Matrix: Water

Date Received: 10/03/18 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437996	10/06/18 00:52	AMM	TAL BUF
Total/NA	Prep	3510C			437947	10/05/18 14:34	ATG	TAL BUF
Total/NA	Analysis	8270D		1	438383	10/10/18 01:31	RJS	TAL BUF
Dissolved	Filtration	FILTRATION			438657	10/10/18 11:44	KMP	TAL BUF
Dissolved	Prep	3005A			438954	10/11/18 14:29	KMP	TAL BUF
Dissolved	Analysis	6010C		1	439274	10/12/18 16:43	LMH	TAL BUF
Dissolved	Filtration	FILTRATION			438657	10/10/18 11:44	KMP	TAL BUF
Dissolved	Prep	7470A			439124	10/12/18 12:10	BMB	TAL BUF
Dissolved	Analysis	7470A		1	439228	10/12/18 16:32	BMB	TAL BUF

Client Sample ID: MW-5

Lab Sample ID: 480-142853-3

Date Collected: 10/02/18 16:00

Matrix: Water

Date Received: 10/03/18 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	437996	10/06/18 01:19	AMM	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Client Sample ID: TRIP BLANK
Date Collected: 10/02/18 16:30
Date Received: 10/03/18 10:35

Lab Sample ID: 480-142853-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	437996	10/06/18 01:46	AMM	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
TestAmerica Job ID: 480-142853-1
Project/Site: Benchmark - 990 Niagara St. site

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
7470A	Preparation, Mercury	SW846	TAL BUF
8151A	Extraction (Herbicides)	SW846	TAL BUF
FILTRATION	Sample Filtration	None	TAL BUF

Protocol References:

None = None

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 - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-142853-1	MW-1	Water	10/02/18 15:00	10/03/18 10:35
480-142853-2	MW-3	Water	10/02/18 14:00	10/03/18 10:35
480-142853-3	MW-5	Water	10/02/18 16:00	10/03/18 10:35
480-142853-4	TRIP BLANK	Water	10/02/18 16:30	10/03/18 10:35

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONME

480-142853 COC

Client Information	Sampler: Nick Surian	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-114743-26550.2
Client Contact: Bryan Mayback	Phone: 716-713-3437	E-Mail: brian.fischer@testamericainc.com		Page: Page 2 of 2
Company: Benchmark Env. Eng. & Science, PLLC				Job #:
Address: 2558 Hamburg Turnpike	Due Date Requested:			
City: Lackawanna	TAT Requested (days):			
State, Zip: NY, 14218	B0462-018-001			
Phone: 716-856-0599(Tel)	PO #: Purchase Order Requested			
Email: bmayback@turnkeyllc.com	WO #:			
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286			
Site: 990 Niagara St	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (21 Analytes)	8270D - (MOD) TCL SVOA - OLM04.2+TICs	8260C - (MOD) TCL list OLM04.2+CP-51(Stars)	8270D_SIM_MS_ID - SIM List	6010C, 7470A	8082A - TCL PCBs - OLM04.2	8081B - TCL Pesticides - OLM04.2	8151A - (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A	N	N	N	N	N		
MW-1	10/2/18	15:00	G	Water				X	X		X	X	X	X	12	
MW-3		14:00	G	Water				X	X		X				6	
MW-5		16:00	G	Water					X						3	
TRIP BLANK		16:30	G	Water					X						2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat B, NYSDEC equis

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		10/3/18 16:35			10/3/18 1035	TAB.
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 2.9

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-142853-1

Login Number: 142853

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wallace, Cameron

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 (Excluding tests with immediate HTs)..	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	
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: 480-143392-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Authorized for release by:
10/30/2018 9:04:33 AM

Brian Fischer, Manager of Project Management
(716)504-9835
brian.fischer@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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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Qualifiers

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-143392-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-143392-1

Comments
No additional comments.

Receipt
The samples were received on 10/12/2018 12:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1° C.

GC Semi VOA
Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-440720/31) that had recoveries for the surrogate Decachlorobiphenyl that were above acceptance limits: MW-3 (480-143392-1) and MW-5 (480-143392-2). The secondary surrogate Tetrachloro-m-xylene is within limits. Therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-439771.

Method(s) 3510C: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: MW-5 (480-143392-2).

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-439898.

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 - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Client Sample ID: MW-3 — Lab Sample ID: 480-143392-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
delta-BHC	0.012	J	0.050	0.010	ug/L	1		8081B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 480-143392-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1254	0.67	J	0.83	0.42	ug/L	1		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3
Date Collected: 10/11/18 09:00
Date Received: 10/12/18 12:15

Lab Sample ID: 480-143392-1
Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		10/16/18 15:16	10/17/18 16:21	1
4,4'-DDE	ND		0.050	0.012	ug/L		10/16/18 15:16	10/17/18 16:21	1
4,4'-DDT	ND		0.050	0.011	ug/L		10/16/18 15:16	10/17/18 16:21	1
Aldrin	ND		0.050	0.0081	ug/L		10/16/18 15:16	10/17/18 16:21	1
alpha-BHC	ND		0.050	0.0077	ug/L		10/16/18 15:16	10/17/18 16:21	1
cis-Chlordane	ND		0.050	0.015	ug/L		10/16/18 15:16	10/17/18 16:21	1
beta-BHC	ND		0.050	0.025	ug/L		10/16/18 15:16	10/17/18 16:21	1
delta-BHC	**0.012**	**J**	0.050	0.010	ug/L		10/16/18 15:16	10/17/18 16:21	1
Dieldrin	ND		0.050	0.0098	ug/L		10/16/18 15:16	10/17/18 16:21	1
Endosulfan I	ND		0.050	0.011	ug/L		10/16/18 15:16	10/17/18 16:21	1
Endosulfan II	ND		0.050	0.012	ug/L		10/16/18 15:16	10/17/18 16:21	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		10/16/18 15:16	10/17/18 16:21	1
Endrin	ND		0.050	0.014	ug/L		10/16/18 15:16	10/17/18 16:21	1
Endrin aldehyde	ND		0.050	0.016	ug/L		10/16/18 15:16	10/17/18 16:21	1
Endrin ketone	ND		0.050	0.012	ug/L		10/16/18 15:16	10/17/18 16:21	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		10/16/18 15:16	10/17/18 16:21	1
trans-Chlordane	ND		0.050	0.011	ug/L		10/16/18 15:16	10/17/18 16:21	1
Heptachlor	ND		0.050	0.0085	ug/L		10/16/18 15:16	10/17/18 16:21	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		10/16/18 15:16	10/17/18 16:21	1
Methoxychlor	ND		0.050	0.014	ug/L		10/16/18 15:16	10/17/18 16:21	1
Toxaphene	ND		0.50	0.12	ug/L		10/16/18 15:16	10/17/18 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*69*		*20 - 120*	*10/16/18 15:16*	*10/17/18 16:21*	*1*
Tetrachloro-m-xylene	*66*		*44 - 120*	*10/16/18 15:16*	*10/17/18 16:21*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		10/18/18 14:29	10/22/18 01:31	1
PCB-1221	ND		0.50	0.18	ug/L		10/18/18 14:29	10/22/18 01:31	1
PCB-1232	ND		0.50	0.18	ug/L		10/18/18 14:29	10/22/18 01:31	1
PCB-1242	ND		0.50	0.18	ug/L		10/18/18 14:29	10/22/18 01:31	1
PCB-1248	ND		0.50	0.18	ug/L		10/18/18 14:29	10/22/18 01:31	1
PCB-1254	ND		0.50	0.25	ug/L		10/18/18 14:29	10/22/18 01:31	1
PCB-1260	ND		0.50	0.25	ug/L		10/18/18 14:29	10/22/18 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*80*		*19 - 120*	*10/18/18 14:29*	*10/22/18 01:31*	*1*
DCB Decachlorobiphenyl	*104*		*19 - 120*	*10/18/18 14:29*	*10/22/18 01:31*	*1*
Tetrachloro-m-xylene	*106*		*39 - 121*	*10/18/18 14:29*	*10/22/18 01:31*	*1*
Tetrachloro-m-xylene	*107*		*39 - 121*	*10/18/18 14:29*	*10/22/18 01:31*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.48	0.065	ug/L		10/17/18 08:00	10/22/18 16:15	1
Silvex (2,4,5-TP)	ND		0.48	0.048	ug/L		10/17/18 08:00	10/22/18 16:15	1
2,4-D	ND		0.48	0.16	ug/L		10/17/18 08:00	10/22/18 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*93*		*48 - 132*	*10/17/18 08:00*	*10/22/18 16:15*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Client Sample ID: MW-5
Date Collected: 10/11/18 10:00
Date Received: 10/12/18 12:15

Lab Sample ID: 480-143392-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.83	0.29	ug/L		10/18/18 14:29	10/22/18 01:47	1
PCB-1221	ND		0.83	0.29	ug/L		10/18/18 14:29	10/22/18 01:47	1
PCB-1232	ND		0.83	0.29	ug/L		10/18/18 14:29	10/22/18 01:47	1
PCB-1242	ND		0.83	0.29	ug/L		10/18/18 14:29	10/22/18 01:47	1
PCB-1248	ND		0.83	0.29	ug/L		10/18/18 14:29	10/22/18 01:47	1
PCB-1254	0.67	J	0.83	0.42	ug/L		10/18/18 14:29	10/22/18 01:47	1
PCB-1260	ND		0.83	0.42	ug/L		10/18/18 14:29	10/22/18 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*54*		*19 - 120*	*10/18/18 14:29*	*10/22/18 01:47*	*1*
DCB Decachlorobiphenyl	*74*		*19 - 120*	*10/18/18 14:29*	*10/22/18 01:47*	*1*
Tetrachloro-m-xylene	*71*		*39 - 121*	*10/18/18 14:29*	*10/22/18 01:47*	*1*
Tetrachloro-m-xylene	*72*		*39 - 121*	*10/18/18 14:29*	*10/22/18 01:47*	*1*

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		DCBP2	TCX2								
Lab Sample ID	Client Sample ID	(20-120)	(44-120)								
480-143392-1	MW-3	69	66								
LCS 480-439771/2-A	Lab Control Sample	34	57								
LCSD 480-439771/3-A	Lab Control Sample Dup	34	67								
MB 480-439771/1-A	Method Blank	45	74								

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		DCBP1	DCBP2	TCX1	TCX2						
Lab Sample ID	Client Sample ID	(19-120)	(19-120)	(39-121)	(39-121)						
480-143392-1	MW-3	80	104	106	107						
480-143392-2	MW-5	54	74	71	72						
LCS 480-440271/2-A	Lab Control Sample	47	62	71	71						
LCSD 480-440271/3-A	Lab Control Sample Dup	51	67	75	76						
MB 480-440271/1-A	Method Blank	51	71	69	74						

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		DCPAA2									
Lab Sample ID	Client Sample ID	(48-132)									
480-143392-1	MW-3	93									

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-439771/1-A
Matrix: Water
Analysis Batch: 439923

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.0092	ug/L		10/16/18 15:16	10/17/18 10:48	1
4,4'-DDE	ND		0.050	0.012	ug/L		10/16/18 15:16	10/17/18 10:48	1
4,4'-DDT	ND		0.050	0.011	ug/L		10/16/18 15:16	10/17/18 10:48	1
Aldrin	ND		0.050	0.0081	ug/L		10/16/18 15:16	10/17/18 10:48	1
alpha-BHC	ND		0.050	0.0077	ug/L		10/16/18 15:16	10/17/18 10:48	1
cis-Chlordane	ND		0.050	0.015	ug/L		10/16/18 15:16	10/17/18 10:48	1
beta-BHC	0.0345	J	0.050	0.025	ug/L		10/16/18 15:16	10/17/18 10:48	1
delta-BHC	ND		0.050	0.010	ug/L		10/16/18 15:16	10/17/18 10:48	1
Dieldrin	ND		0.050	0.0098	ug/L		10/16/18 15:16	10/17/18 10:48	1
Endosulfan I	ND		0.050	0.011	ug/L		10/16/18 15:16	10/17/18 10:48	1
Endosulfan II	ND		0.050	0.012	ug/L		10/16/18 15:16	10/17/18 10:48	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		10/16/18 15:16	10/17/18 10:48	1
Endrin	ND		0.050	0.014	ug/L		10/16/18 15:16	10/17/18 10:48	1
Endrin aldehyde	ND		0.050	0.016	ug/L		10/16/18 15:16	10/17/18 10:48	1
Endrin ketone	ND		0.050	0.012	ug/L		10/16/18 15:16	10/17/18 10:48	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		10/16/18 15:16	10/17/18 10:48	1
trans-Chlordane	ND		0.050	0.011	ug/L		10/16/18 15:16	10/17/18 10:48	1
Heptachlor	ND		0.050	0.0085	ug/L		10/16/18 15:16	10/17/18 10:48	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		10/16/18 15:16	10/17/18 10:48	1
Methoxychlor	ND		0.050	0.014	ug/L		10/16/18 15:16	10/17/18 10:48	1
Toxaphene	ND		0.50	0.12	ug/L		10/16/18 15:16	10/17/18 10:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*45*		*20 - 120*	*10/16/18 15:16*	*10/17/18 10:48*	*1*
Tetrachloro-m-xylene	*74*		*44 - 120*	*10/16/18 15:16*	*10/17/18 10:48*	*1*

Lab Sample ID: LCS 480-439771/2-A
Matrix: Water
Analysis Batch: 439923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.400	0.365		ug/L		91	64 - 129
4,4'-DDE	0.400	0.256		ug/L		64	50 - 120
4,4'-DDT	0.400	0.313		ug/L		78	59 - 120
Aldrin	0.400	0.239		ug/L		60	40 - 125
alpha-BHC	0.400	0.261		ug/L		65	52 - 125
cis-Chlordane	0.400	0.299		ug/L		75	52 - 120
beta-BHC	0.400	0.323		ug/L		81	51 - 120
delta-BHC	0.400	0.315		ug/L		79	51 - 120
Dieldrin	0.400	0.301		ug/L		75	66 - 128
Endosulfan I	0.400	0.268		ug/L		67	57 - 120
Endosulfan II	0.400	0.369		ug/L		92	66 - 131
Endosulfan sulfate	0.400	0.330		ug/L		82	66 - 136
Endrin	0.400	0.320		ug/L		80	65 - 135
Endrin aldehyde	0.400	0.311		ug/L		78	61 - 134
Endrin ketone	0.400	0.358		ug/L		89	71 - 133
gamma-BHC (Lindane)	0.400	0.294		ug/L		74	56 - 120
trans-Chlordane	0.400	0.286		ug/L		71	54 - 120

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 480-439771/2-A
Matrix: Water
Analysis Batch: 439923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439771

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Heptachlor			0.400	0.236		ug/L		59	58 - 120		
Heptachlor epoxide			0.400	0.302		ug/L		76	65 - 125		
Methoxychlor			0.400	0.337		ug/L		84	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*34*		*20 - 120*
Tetrachloro-m-xylene	*57*		*44 - 120*

Lab Sample ID: LCSD 480-439771/3-A
Matrix: Water
Analysis Batch: 439923

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439771

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.400	0.403		ug/L		101	64 - 129	10	23
4,4'-DDE			0.400	0.300		ug/L		75	50 - 120	16	22
4,4'-DDT			0.400	0.339		ug/L		85	59 - 120	8	24
Aldrin			0.400	0.297		ug/L		74	40 - 125	22	25
alpha-BHC			0.400	0.331		ug/L		83	52 - 125	24	24
cis-Chlordane			0.400	0.358		ug/L		90	52 - 120	18	23
beta-BHC			0.400	0.376		ug/L		94	51 - 120	15	24
delta-BHC			0.400	0.378		ug/L		95	51 - 120	18	24
Dieldrin			0.400	0.362		ug/L		90	66 - 128	18	24
Endosulfan I			0.400	0.324		ug/L		81	57 - 120	19	30
Endosulfan II			0.400	0.415		ug/L		104	66 - 131	12	40
Endosulfan sulfate			0.400	0.361		ug/L		90	66 - 136	9	24
Endrin			0.400	0.377		ug/L		94	65 - 135	16	24
Endrin aldehyde			0.400	0.366		ug/L		92	61 - 134	16	28
Endrin ketone			0.400	0.407		ug/L		102	71 - 133	13	26
gamma-BHC (Lindane)			0.400	0.363		ug/L		91	56 - 120	21	24
trans-Chlordane			0.400	0.345		ug/L		86	54 - 120	19	24
Heptachlor			0.400	0.298		ug/L		74	58 - 120	23	25
Heptachlor epoxide			0.400	0.362		ug/L		90	65 - 125	18	23
Methoxychlor			0.400	0.367		ug/L		92	50 - 150	9	26

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*34*		*20 - 120*
Tetrachloro-m-xylene	*67*		*44 - 120*

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

Lab Sample ID: MB 480-440271/1-A
Matrix: Water
Analysis Batch: 440720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		10/18/18 14:29	10/21/18 22:36	1
PCB-1221	ND		0.50	0.18	ug/L		10/18/18 14:29	10/21/18 22:36	1

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

Lab Sample ID: MB 480-440271/1-A
Matrix: Water
Analysis Batch: 440720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		0.50	0.18	ug/L		10/18/18 14:29	10/21/18 22:36	1
PCB-1242	ND		0.50	0.18	ug/L		10/18/18 14:29	10/21/18 22:36	1
PCB-1248	ND		0.50	0.18	ug/L		10/18/18 14:29	10/21/18 22:36	1
PCB-1254	ND		0.50	0.25	ug/L		10/18/18 14:29	10/21/18 22:36	1
PCB-1260	ND		0.50	0.25	ug/L		10/18/18 14:29	10/21/18 22:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*51*		*19 - 120*	*10/18/18 14:29*	*10/21/18 22:36*	*1*
DCB Decachlorobiphenyl	*71*		*19 - 120*	*10/18/18 14:29*	*10/21/18 22:36*	*1*
Tetrachloro-m-xylene	*69*		*39 - 121*	*10/18/18 14:29*	*10/21/18 22:36*	*1*
Tetrachloro-m-xylene	*74*		*39 - 121*	*10/18/18 14:29*	*10/21/18 22:36*	*1*

Lab Sample ID: LCS 480-440271/2-A
Matrix: Water
Analysis Batch: 440720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440271

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			4.00	2.83		ug/L		71	62 - 130		
PCB-1260			4.00	3.42		ug/L		85	56 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*47*		*19 - 120*
DCB Decachlorobiphenyl	*62*		*19 - 120*
Tetrachloro-m-xylene	*71*		*39 - 121*
Tetrachloro-m-xylene	*71*		*39 - 121*

Lab Sample ID: LCSD 480-440271/3-A
Matrix: Water
Analysis Batch: 440720

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 440271

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			4.00	2.96		ug/L		74	62 - 130	4	50
PCB-1260			4.00	3.49		ug/L		87	56 - 123	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*51*		*19 - 120*
DCB Decachlorobiphenyl	*67*		*19 - 120*
Tetrachloro-m-xylene	*75*		*39 - 121*
Tetrachloro-m-xylene	*76*		*39 - 121*

GC Semi VOA

Prep Batch: 439771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143392-1	MW-3	Total/NA	Water	3510C	
MB 480-439771/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-439771/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-439771/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 439898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143392-1	MW-3	Total/NA	Water	8151A	

Analysis Batch: 439923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143392-1	MW-3	Total/NA	Water	8081B	439771
MB 480-439771/1-A	Method Blank	Total/NA	Water	8081B	439771
LCS 480-439771/2-A	Lab Control Sample	Total/NA	Water	8081B	439771
LCSD 480-439771/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	439771

Prep Batch: 440271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143392-1	MW-3	Total/NA	Water	3510C	
480-143392-2	MW-5	Total/NA	Water	3510C	
MB 480-440271/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-440271/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-440271/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 440720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143392-1	MW-3	Total/NA	Water	8082A	440271
480-143392-2	MW-5	Total/NA	Water	8082A	440271
MB 480-440271/1-A	Method Blank	Total/NA	Water	8082A	440271
LCS 480-440271/2-A	Lab Control Sample	Total/NA	Water	8082A	440271
LCSD 480-440271/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	440271

Analysis Batch: 440873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143392-1	MW-3	Total/NA	Water	8151A	439898

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Client Sample ID: MW-3

Lab Sample ID: 480-143392-1

Date Collected: 10/11/18 09:00

Matrix: Water

Date Received: 10/12/18 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			439771	10/16/18 15:16	AAP	TAL BUF
Total/NA	Analysis	8081B		1	439923	10/17/18 16:21	JLS	TAL BUF
Total/NA	Prep	3510C			440271	10/18/18 14:29	ATG	TAL BUF
Total/NA	Analysis	8082A		1	440720	10/22/18 01:31	W1T	TAL BUF
Total/NA	Prep	8151A			439898	10/17/18 08:00	JMP	TAL BUF
Total/NA	Analysis	8151A		1	440873	10/22/18 16:15	MAN	TAL BUF

Client Sample ID: MW-5

Lab Sample ID: 480-143392-2

Date Collected: 10/11/18 10:00

Matrix: Water

Date Received: 10/12/18 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			440271	10/18/18 14:29	ATG	TAL BUF
Total/NA	Analysis	8082A		1	440720	10/22/18 01:47	W1T	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
TestAmerica Job ID: 480-143392-1
Project/Site: Benchmark - 990 Niagara St. site

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Method	Method Description	Protocol	Laboratory
8081B	Organochlorine Pesticides (GC)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
8151A	Herbicides (GC)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
8151A	Extraction (Herbicides)	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 - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-143392-1	MW-3	Water	10/11/18 09:00	10/12/18 12:15
480-143392-2	MW-5	Water	10/11/18 10:00	10/12/18 12:15

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Nick Surai	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-114743-265
Client Contact: Bryan Mayback	Phone: 716-713-3437	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 2
Company: Benchmark Env. Eng. & Science, PLLC				Job #:

480-143392 COC

Address: 2558 Hamburg Turnpike	Due Date Requested: Standard
City: Lackawanna	TAT Requested (days):
State, Zip: NY, 14218	B0462-018-001
Phone: 716-856-0599(Tel)	PO #: Purchase Order Requested
Email: bmayback@turnkeyllc.com	WO #:
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286
Site: 990 Niagara Street S.+C	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (21 Analytes)	8270D - (MOD) TCL SVOA - OLM04.2+TICs	8260C - (MOD) TCL list OLM04.2+CP-51(Stars)	8270D_SIM_MS_ID - SIM List	6010C, 7470A	8082A - TCL PCBs - OLM04.2	8081B - TCL Pesticides - OLM04.2	8151A - (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A	N	N	N	N	N		
MW-3	10/11/18	9:00	6	Water								X	X	X	6	
MW-5	10/11/18	10:00	6	Water								X			2	* Limited Volume 1.5 Bottles
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												
				Water												

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat B, NYSDec EQuIS

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/11/18 12:00		Rebecca Terry	10/12/18 1038	TAL
Relinquished by: Rebecca Terry	Date/Time: 10/12/18 1215	Company TAL	Received by:	Date/Time: 10/12/18 1215	Company TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

4.1 °C #3

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-143392-1

Login Number: 143392

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kinecki, Kenneth P

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 (Excluding tests with immediate HTs)..	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	BENCHMARK
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	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-145339-1
Client Project/Site: Benchmark - 990 Niagara St. site

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Joseph V. Giacomazza

Authorized for release by:
12/11/2018 12:42:43 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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
*	ISTD response or retention time outside acceptable limits
E	Result exceeded calibration range.

LCMS

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.
*	Isotope Dilution analyte is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-145339-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-145339-1

Comments
No additional comments.

Receipt
The samples were received on 11/16/2018 3:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

GC/MS Semi VOA
Method(s) 8270D SIM ID: The laboratory control sample (LCS) for preparation batch 480-447793 and analytical batch 480-449683 recovered outside control limits for the following analytes: 1,4-dioxane. The associated sample(s) was re-prepared outside of holding time. Both sets of data have been reported. The following samples are impacted: MW-1 (480-145339-1), MW-2 (480-145339-2), MW-3 (480-145339-3) and EQUIPMENT BLANK (480-145339-4).

Method(s) 8270D SIM ID: The method blank associated with preparation batch 480-447793 and analytical batch 480-449683 contained 1,4-dioxane greater than the reporting limit (RL). The following associated samples were re-prepared outside of holding time: MW-1 (480-145339-1), MW-2 (480-145339-2), MW-3 (480-145339-3) and EQUIPMENT BLANK (480-145339-4). Both sets of data have been reported.

Method(s) 8270D SIM ID: Internal standard responses were outside of acceptance limits for the following sample: MW-3 (480-145339-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS
Method(s) 537 (modified): 6:2 FTS and/or 8:2 FTS Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: MW-1 (480-145339-1) and EQUIPMENT BLANK (480-145339-4). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (modified): The continuing calibration verification (CCV) associated with batch 200-137260 recovered above the upper control limit for Perfluorotetradecanoic acid (PFTeA) and Perfluorotridecanoic acid (PFTriA). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 200-137260/6).

Method(s) 537 (modified): The Isotope Dilution Analyte (IDA) 13C2 PFTeDA recovery associated with the following CCV is low for the following(CCVIS 200-137260/6). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). The recovery of 13C2 PFTeDA in the next two CCVs is passing acceptance criteria, therefore the data has been reported. NOTE that the low recovery of this IDA resulted in the high failing recoveries of its associated target analytes (Perfluorotridecanoic acid (PFTriA) and Perfluorotetradecanoic acid (PFTeA). This outage is also noted in NCM 200-93713; there were no detects for these compounds in the analytical window following the outage. These two analytes were within acceptance limits in the two CCVs analyzed immediately following this injection.

Method(s) 537 (modified): The Isotope Dilution Analytes (IDA) 13C8 FOSA and 13C2 PFTeDA recovery associated with the following CCV is low for the following (CCV 200-137260/76). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). The recoveries of 13C8 FOSA and 13C2 PFTeDA in the analytical window immediately following this CCV are all within acceptance criteria and are trending with similar IDAs.

Method(s) 537 (modified): The method blank for preparation batch 200-137230 and analytical batch 200-137377 contained Perfluorooctanoic acid (PFOA) and Perfluorobutanoic acid (PFBA) 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 additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: The following samples were re-prepared outside of preparation holding time due to the method blank (MB) and

Job ID: 480-145339-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

laboratory control sample (LCS) being contaminated: MW-1 (480-145339-1), MW-2 (480-145339-2), MW-3 (480-145339-3) and EQUIPMENT BLANK (480-145339-4).

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 - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: MW-1 — Lab Sample ID: 480-145339-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.46	B *	0.19	0.096	ug/L	1		8270D SIM ID	Total/NA
1,4-Dioxane - RE	0.38	H B *	0.19	0.096	ug/L	1		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	4.7	B	1.6	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.9		1.6	0.61	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	J	1.6	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.84	J	1.6	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.6	B	1.6	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.6	0.36	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.63	J	1.6	0.62	ng/L	1		537 (modified)	Total/NA
6:2 FTS	5.7	J	16	0.81	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 480-145339-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.0	B *	0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
1,4-Dioxane - RE	0.92	H B *	0.21	0.10	ug/L	1		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	11	B	1.6	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.2	J	1.6	0.61	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.60	J	1.6	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.41	J	1.6	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.1	J B	1.6	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.6	0.36	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.80	J	1.6	0.21	ng/L	1		537 (modified)	Total/NA
6:2 FTS	3.6	J	16	0.81	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 480-145339-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.33	B *	0.19	0.096	ug/L	1		8270D SIM ID	Total/NA
1,4-Dioxane - RE	0.35	H B *	0.19	0.095	ug/L	1		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	7.8	B	1.6	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.4		1.6	0.59	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		1.6	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.42	J	1.6	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.72	J B	1.6	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.72	J	1.6	0.35	ng/L	1		537 (modified)	Total/NA
6:2 FTS	1.3	J	16	0.79	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EQUIPMENT BLANK — Lab Sample ID: 480-145339-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.36	B *	0.19	0.095	ug/L	1		8270D SIM ID	Total/NA
1,4-Dioxane - RE	0.35	H B *	0.19	0.095	ug/L	1		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	0.33	J B	1.6	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.22	J	1.6	0.20	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1
Date Collected: 11/12/18 14:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-1
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.46	B *	0.19	0.096	ug/L		11/19/18 08:22	11/24/18 06:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*24*		*15 - 110*	*11/19/18 08:22*	*11/24/18 06:47*	*1*

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.38	H B *	0.19	0.096	ug/L		11/28/18 08:05	12/08/18 13:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*15 - 110*	*11/28/18 08:05*	*12/08/18 13:08*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.7	B	1.6	0.33	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluoropentanoic acid (PFPeA)	1.9		1.6	0.61	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorohexanoic acid (PFHxA)	1.1	J	1.6	0.20	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluoroheptanoic acid (PFHpA)	0.84	J	1.6	0.26	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorooctanoic acid (PFOA)	1.6	B	1.6	0.26	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.31	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.31	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.20	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.28	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.20	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.37	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.6	0.36	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.21	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.67	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.43	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorooctanesulfonic acid (PFOS)	0.63	J	1.6	0.62	ng/L		11/21/18 09:19	11/27/18 17:52	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6	0.46	ng/L		11/21/18 09:19	11/27/18 17:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		16	0.37	ng/L		11/21/18 09:19	11/27/18 17:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		16	0.57	ng/L		11/21/18 09:19	11/27/18 17:52	1
6:2 FTS	5.7	J	16	0.81	ng/L		11/21/18 09:19	11/27/18 17:52	1
8:2 FTS	ND		16	0.46	ng/L		11/21/18 09:19	11/27/18 17:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*48*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C4 PFBA	*52*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C5-PFPeA DNU	*40*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C2 PFHxA	*48*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C4 PFHpA	*71*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C4 PFOA	*84*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C5 PFNA	*83*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C2 PFDA	*87*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C2 PFUnA	*94*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C2 PFDoA	*97*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*
13C2 PFTeDA	*99*		*25 - 150*	*11/21/18 09:19*	*11/27/18 17:52*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: MW-1
Date Collected: 11/12/18 14:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	69		25 - 150	11/21/18 09:19	11/27/18 17:52	1
18O2 PFHxS	84		25 - 150	11/21/18 09:19	11/27/18 17:52	1
13C4 PFOS	82		25 - 150	11/21/18 09:19	11/27/18 17:52	1
d3-NMeFOSAA	76		25 - 150	11/21/18 09:19	11/27/18 17:52	1
d5-NEtFOSAA	89		25 - 150	11/21/18 09:19	11/27/18 17:52	1
M2-6:2 FTS	155	*	25 - 150	11/21/18 09:19	11/27/18 17:52	1
M2-8:2 FTS	108		25 - 150	11/21/18 09:19	11/27/18 17:52	1

Client Sample ID: MW-2
Date Collected: 11/12/18 15:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-2
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.0	B *	0.20	0.10	ug/L		11/19/18 08:22	11/24/18 07:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*26*		*15 - 110*	*11/19/18 08:22*	*11/24/18 07:11*	*1*

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.92	H B *	0.21	0.10	ug/L		11/28/18 08:05	12/08/18 13:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*35*		*15 - 110*	*11/28/18 08:05*	*12/08/18 13:32*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	11	B	1.6	0.33	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluoropentanoic acid (PFPeA)	1.2	J	1.6	0.61	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorohexanoic acid (PFHxA)	0.60	J	1.6	0.19	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluoroheptanoic acid (PFHpA)	0.41	J	1.6	0.26	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorooctanoic acid (PFOA)	1.1	J B	1.6	0.26	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.31	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.31	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.20	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.28	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.19	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.36	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.6	0.36	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorohexanesulfonic acid (PFHxS)	0.80	J	1.6	0.21	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.66	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.43	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.61	ng/L		11/21/18 09:19	11/27/18 18:08	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6	0.45	ng/L		11/21/18 09:19	11/27/18 18:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		16	0.36	ng/L		11/21/18 09:19	11/27/18 18:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		16	0.57	ng/L		11/21/18 09:19	11/27/18 18:08	1
6:2 FTS	3.6	J	16	0.81	ng/L		11/21/18 09:19	11/27/18 18:08	1
8:2 FTS	ND		16	0.45	ng/L		11/21/18 09:19	11/27/18 18:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*45*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C4 PFBA	*43*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C5-PFPeA DNU	*50*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C2 PFHxA	*58*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C4 PFHpA	*80*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C4 PFOA	*92*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C5 PFNA	*91*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C2 PFDA	*90*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C2 PFUnA	*94*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C2 PFDoA	*85*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*
13C2 PFTeDA	*96*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:08*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: MW-2
Date Collected: 11/12/18 15:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-2
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	57		25 - 150	11/21/18 09:19	11/27/18 18:08	1
18O2 PFHxS	72		25 - 150	11/21/18 09:19	11/27/18 18:08	1
13C4 PFOS	77		25 - 150	11/21/18 09:19	11/27/18 18:08	1
d3-NMeFOSAA	78		25 - 150	11/21/18 09:19	11/27/18 18:08	1
d5-NEtFOSAA	92		25 - 150	11/21/18 09:19	11/27/18 18:08	1
M2-6:2 FTS	149		25 - 150	11/21/18 09:19	11/27/18 18:08	1
M2-8:2 FTS	101		25 - 150	11/21/18 09:19	11/27/18 18:08	1

Client Sample ID: MW-3
Date Collected: 11/12/18 16:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-3
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.33	B *	0.19	0.096	ug/L		11/19/18 08:22	11/24/18 07:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*22*	*	*15 - 110*	*11/19/18 08:22*	*11/24/18 07:35*	*1*

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.35	H B *	0.19	0.095	ug/L		11/28/18 08:05	12/08/18 13:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*15 - 110*	*11/28/18 08:05*	*12/08/18 13:57*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.8	B	1.6	0.33	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluoropentanoic acid (PFPeA)	4.4		1.6	0.59	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorohexanoic acid (PFHxA)	2.1		1.6	0.19	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluoroheptanoic acid (PFHpA)	0.42	J	1.6	0.25	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorooctanoic acid (PFOA)	0.72	J B	1.6	0.25	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.30	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.30	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.20	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.28	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.19	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.36	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorobutanesulfonic acid (PFBS)	0.72	J	1.6	0.35	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.21	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.65	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.42	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.60	ng/L		11/21/18 09:19	11/27/18 18:24	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6	0.44	ng/L		11/21/18 09:19	11/27/18 18:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		16	0.36	ng/L		11/21/18 09:19	11/27/18 18:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		16	0.56	ng/L		11/21/18 09:19	11/27/18 18:24	1
6:2 FTS	1.3	J	16	0.79	ng/L		11/21/18 09:19	11/27/18 18:24	1
8:2 FTS	ND		16	0.44	ng/L		11/21/18 09:19	11/27/18 18:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*45*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C4 PFBA	*36*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C5-PFPeA DNU	*43*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C2 PFHxA	*50*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C4 PFHpA	*67*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C4 PFOA	*72*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C5 PFNA	*69*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C2 PFDA	*71*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C2 PFUnA	*72*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C2 PFDoA	*72*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C2 PFTeDA	*84*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*
13C3 PFBS	*66*		*25 - 150*	*11/21/18 09:19*	*11/27/18 18:24*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: MW-3
Date Collected: 11/12/18 16:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-3
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	74		25 - 150	11/21/18 09:19	11/27/18 18:24	1
13C4 PFOS	73		25 - 150	11/21/18 09:19	11/27/18 18:24	1
d3-NMeFOSAA	66		25 - 150	11/21/18 09:19	11/27/18 18:24	1
d5-NEtFOSAA	75		25 - 150	11/21/18 09:19	11/27/18 18:24	1
M2-6:2 FTS	112		25 - 150	11/21/18 09:19	11/27/18 18:24	1
M2-8:2 FTS	92		25 - 150	11/21/18 09:19	11/27/18 18:24	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: EQUIPMENT BLANK
Date Collected: 11/12/18 13:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-4
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.36	B *	0.19	0.095	ug/L		11/19/18 08:22	11/24/18 07:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	23		15 - 110	11/19/18 08:22	11/24/18 07:59	1

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.35	H B *	0.19	0.095	ug/L		11/28/18 08:05	12/08/18 14:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	26		15 - 110	11/28/18 08:05	12/08/18 14:21	1

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.33	J B	1.6	0.33	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.61	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.20	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.26	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.26	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.31	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.31	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluoroundecanoic acid (PFUnA)	0.22	J	1.6	0.20	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.29	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.20	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.37	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.36	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.21	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.67	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.43	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.62	ng/L		11/21/18 09:19	11/27/18 18:40	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6	0.46	ng/L		11/21/18 09:19	11/27/18 18:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		16	0.37	ng/L		11/21/18 09:19	11/27/18 18:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		16	0.57	ng/L		11/21/18 09:19	11/27/18 18:40	1
6:2 FTS	ND		16	0.81	ng/L		11/21/18 09:19	11/27/18 18:40	1
8:2 FTS	ND		16	0.46	ng/L		11/21/18 09:19	11/27/18 18:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	25		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C4 PFBA	78		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C5-PFPeA DNU	88		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C2 PFHxA	82		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C4 PFHpA	90		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C4 PFOA	89		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C5 PFNA	92		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C2 PFDA	99		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C2 PFUnA	88		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C2 PFDoA	74		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C2 PFTeDA	63		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C3 PFBS	61		25 - 150	11/21/18 09:19	11/27/18 18:40	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: EQUIPMENT BLANK
Date Collected: 11/12/18 13:00
Date Received: 11/16/18 15:30

Lab Sample ID: 480-145339-4
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	60		25 - 150	11/21/18 09:19	11/27/18 18:40	1
13C4 PFOS	60		25 - 150	11/21/18 09:19	11/27/18 18:40	1
d3-NMeFOSAA	85		25 - 150	11/21/18 09:19	11/27/18 18:40	1
d5-NEtFOSAA	88		25 - 150	11/21/18 09:19	11/27/18 18:40	1
M2-6:2 FTS	164	*	25 - 150	11/21/18 09:19	11/27/18 18:40	1
M2-8:2 FTS	231	*	25 - 150	11/21/18 09:19	11/27/18 18:40	1

Isotope Dilution Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(15-110)
480-145339-1	MW-1	24
480-145339-1 - RE	MW-1	25
480-145339-2	MW-2	26
480-145339-2 - RE	MW-2	35
480-145339-3	MW-3	22 *
480-145339-3 - RE	MW-3	25
480-145339-4	EQUIPMENT BLANK	23
480-145339-4 - RE	EQUIPMENT BLANK	26
LCS 480-446346/2-A	Lab Control Sample	29
LCS 480-447793/2-A	Lab Control Sample	29
MB 480-446346/1-A	Method Blank	27
MB 480-447793/1-A	Method Blank	29

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
480-145339-1	MW-1	48	52	40	48	71	84	83	87
480-145339-2	MW-2	45	43	50	58	80	92	91	90
480-145339-3	MW-3	45	36	43	50	67	72	69	71
480-145339-4	EQUIPMENT BLANK	25	78	88	82	90	89	92	99
LCS 200-137230/2-A	Lab Control Sample	48	94	95	79	80	93	87	84
MB 200-137230/1-A	Method Blank	49	96	91	76	82	93	86	86

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFUnA	PFDoA	PFTDA	13C3-PFBS	PFHxS	PFOS	I-NMeFOSA	5-NEtFOSA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
480-145339-1	MW-1	94	97	99	69	84	82	76	89
480-145339-2	MW-2	94	85	96	57	72	77	78	92
480-145339-3	MW-3	72	72	84	66	74	73	66	75
480-145339-4	EQUIPMENT BLANK	88	74	63	61	60	60	85	88
LCS 200-137230/2-A	Lab Control Sample	86	71	74	84	82	83	74	80
MB 200-137230/1-A	Method Blank	89	75	80	81	81	80	71	85

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		M262FTS	M282FTS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)
480-145339-1	MW-1	155 *	108
480-145339-2	MW-2	149	101
480-145339-3	MW-3	112	92
480-145339-4	EQUIPMENT BLANK	164 *	231 *
LCS 200-137230/2-A	Lab Control Sample	112	93
MB 200-137230/1-A	Method Blank	111	99

Surrogate Legend

PFOSA = 13C8 FOSA

Isotope Dilution Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

PFBA = 13C4 PFBA
PFPeA = 13C5-PFPeA DNU
PFHxA = 13C2 PFHxA
PFHpA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
13C3-PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 480-446346/1-A
Matrix: Water
Analysis Batch: 446723

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 446346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.75	E	0.20	0.10	ug/L		11/19/18 08:22	11/23/18 23:30	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*27*		*15 - 110*	*11/19/18 08:22*	*11/23/18 23:30*	*1*

Lab Sample ID: LCS 480-446346/2-A
Matrix: Water
Analysis Batch: 446723

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 446346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.00	5.87	E *	ug/L		587	40 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8	*29*		*15 - 110*

Lab Sample ID: MB 480-447793/1-A
Matrix: Water
Analysis Batch: 449683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 447793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.277		0.20	0.10	ug/L		11/28/18 08:05	12/08/18 07:55	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*29*		*15 - 110*	*11/28/18 08:05*	*12/08/18 07:55*	*1*

Lab Sample ID: LCS 480-447793/2-A
Matrix: Water
Analysis Batch: 449683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 447793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.00	1.44	E *	ug/L		144	40 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8	*29*		*15 - 110*

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 200-137230/1-A
Matrix: Water
Analysis Batch: 137377

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 137230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.577	J	2.0	0.41	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.75	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.24	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.32	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorooctanoic acid (PFOA)	0.327	J	2.0	0.32	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.38	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.38	ng/L		11/21/18 09:19	11/27/18 12:51	1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 200-137230/1-A
Matrix: Water
Analysis Batch: 137377

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 137230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.25	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.35	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.24	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.45	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.44	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.26	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.82	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.53	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.76	ng/L		11/21/18 09:19	11/27/18 12:51	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.56	ng/L		11/21/18 09:19	11/27/18 12:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	0.45	ng/L		11/21/18 09:19	11/27/18 12:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	0.70	ng/L		11/21/18 09:19	11/27/18 12:51	1
6:2 FTS	ND		20	1.0	ng/L		11/21/18 09:19	11/27/18 12:51	1
8:2 FTS	ND		20	0.56	ng/L		11/21/18 09:19	11/27/18 12:51	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*49*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C4 PFBA	*96*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C5-PFPeA DNU	*91*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C2 PFHxA	*76*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C4 PFHpA	*82*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C4 PFOA	*93*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C5 PFNA	*86*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C2 PFDA	*86*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C2 PFUnA	*89*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C2 PFDoA	*75*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C2 PFTeDA	*80*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C3 PFBS	*81*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
18O2 PFHxS	*81*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
13C4 PFOS	*80*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
d3-NMeFOSAA	*71*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
d5-NEtFOSAA	*85*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
M2-6:2 FTS	*111*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*
M2-8:2 FTS	*99*		*25 - 150*	*11/21/18 09:19*	*11/27/18 12:51*	*1*

Lab Sample ID: LCS 200-137230/2-A
Matrix: Water
Analysis Batch: 137377

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 137230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	44.0		ng/L		110	50 - 150
Perfluoropentanoic acid (PFPeA)	40.0	39.6		ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	40.0	37.9		ng/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	40.0	45.1		ng/L		113	50 - 150
Perfluorooctanoic acid (PFOA)	40.0	44.0		ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	40.0	35.8		ng/L		89	50 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 200-137230/2-A
Matrix: Water
Analysis Batch: 137377

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 137230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorodecanoic acid (PFDA)	40.0	38.4		ng/L		96	50 - 150
Perfluoroundecanoic acid (PFUnA)	40.0	39.5		ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	40.0	39.6		ng/L		99	50 - 150
Perfluorotridecanoic acid (PFTriA)	40.0	37.8		ng/L		95	50 - 150
Perfluorotetradecanoic acid (PFTeA)	40.0	34.4		ng/L		86	50 - 150
Perfluorobutanesulfonic acid (PFBS)	35.4	40.8		ng/L		116	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.5		ng/L		100	50 - 150
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.9		ng/L		105	50 - 150
Perfluorodecanesulfonic acid (PFDS)	38.6	34.0		ng/L		88	50 - 150
Perfluorooctanesulfonic acid (PFOS)	37.1	39.8		ng/L		107	50 - 150
Perfluorooctanesulfonamide (FOSA)	40.0	39.1		ng/L		98	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.6		ng/L		97	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.3		ng/L		88	50 - 150
6:2 FTS	37.9	41.2		ng/L		109	50 - 150
8:2 FTS	38.3	41.3		ng/L		108	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*48*		*25 - 150*
13C4 PFBA	*94*		*25 - 150*
13C5-PFPeA DNU	*95*		*25 - 150*
13C2 PFHxA	*79*		*25 - 150*
13C4 PFHpA	*80*		*25 - 150*
13C4 PFOA	*93*		*25 - 150*
13C5 PFNA	*87*		*25 - 150*
13C2 PFDA	*84*		*25 - 150*
13C2 PFUnA	*86*		*25 - 150*
13C2 PFDoA	*71*		*25 - 150*
13C2 PFTeDA	*74*		*25 - 150*
13C3 PFBS	*84*		*25 - 150*
18O2 PFHxS	*82*		*25 - 150*
13C4 PFOS	*83*		*25 - 150*
d3-NMeFOSAA	*74*		*25 - 150*
d5-NEtFOSAA	*80*		*25 - 150*
M2-6:2 FTS	*112*		*25 - 150*
M2-8:2 FTS	*93*		*25 - 150*

GC/MS Semi VOA

Prep Batch: 446346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-1	MW-1	Total/NA	Water	3510C	
480-145339-2	MW-2	Total/NA	Water	3510C	
480-145339-3	MW-3	Total/NA	Water	3510C	
480-145339-4	EQUIPMENT BLANK	Total/NA	Water	3510C	
MB 480-446346/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-446346/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 446723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-1	MW-1	Total/NA	Water	8270D SIM ID	446346
480-145339-2	MW-2	Total/NA	Water	8270D SIM ID	446346
480-145339-3	MW-3	Total/NA	Water	8270D SIM ID	446346
480-145339-4	EQUIPMENT BLANK	Total/NA	Water	8270D SIM ID	446346
MB 480-446346/1-A	Method Blank	Total/NA	Water	8270D SIM ID	446346
LCS 480-446346/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	446346

Prep Batch: 447793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-1 - RE	MW-1	Total/NA	Water	3510C	
480-145339-2 - RE	MW-2	Total/NA	Water	3510C	
480-145339-3 - RE	MW-3	Total/NA	Water	3510C	
480-145339-4 - RE	EQUIPMENT BLANK	Total/NA	Water	3510C	
MB 480-447793/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-447793/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 449683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-1 - RE	MW-1	Total/NA	Water	8270D SIM ID	447793
480-145339-2 - RE	MW-2	Total/NA	Water	8270D SIM ID	447793
480-145339-3 - RE	MW-3	Total/NA	Water	8270D SIM ID	447793
480-145339-4 - RE	EQUIPMENT BLANK	Total/NA	Water	8270D SIM ID	447793
MB 480-447793/1-A	Method Blank	Total/NA	Water	8270D SIM ID	447793
LCS 480-447793/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	447793

LCMS

Prep Batch: 137230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-1	MW-1	Total/NA	Water	3535	
480-145339-2	MW-2	Total/NA	Water	3535	
480-145339-3	MW-3	Total/NA	Water	3535	
480-145339-4	EQUIPMENT BLANK	Total/NA	Water	3535	
MB 200-137230/1-A	Method Blank	Total/NA	Water	3535	
LCS 200-137230/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 137377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-1	MW-1	Total/NA	Water	537 (modified)	137230
480-145339-2	MW-2	Total/NA	Water	537 (modified)	137230
480-145339-3	MW-3	Total/NA	Water	537 (modified)	137230

LCMS (Continued)

Analysis Batch: 137377 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-145339-4	EQUIPMENT BLANK	Total/NA	Water	537 (modified)	137230
MB 200-137230/1-A	Method Blank	Total/NA	Water	537 (modified)	137230
LCS 200-137230/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	137230

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Client Sample ID: MW-1

Lab Sample ID: 480-145339-1

Date Collected: 11/12/18 14:00

Matrix: Water

Date Received: 11/16/18 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			446346	11/19/18 08:22	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	446723	11/24/18 06:47	DMR	TAL BUF
Total/NA	Prep	3510C	RE		447793	11/28/18 08:05	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID	RE	1	449683	12/08/18 13:08	DMR	TAL BUF
Total/NA	Prep	3535			137230	11/21/18 09:19	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	137377	11/27/18 17:52	JM1	TAL BUR

Client Sample ID: MW-2

Lab Sample ID: 480-145339-2

Date Collected: 11/12/18 15:00

Matrix: Water

Date Received: 11/16/18 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			446346	11/19/18 08:22	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	446723	11/24/18 07:11	DMR	TAL BUF
Total/NA	Prep	3510C	RE		447793	11/28/18 08:05	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID	RE	1	449683	12/08/18 13:32	DMR	TAL BUF
Total/NA	Prep	3535			137230	11/21/18 09:19	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	137377	11/27/18 18:08	JM1	TAL BUR

Client Sample ID: MW-3

Lab Sample ID: 480-145339-3

Date Collected: 11/12/18 16:00

Matrix: Water

Date Received: 11/16/18 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			446346	11/19/18 08:22	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	446723	11/24/18 07:35	DMR	TAL BUF
Total/NA	Prep	3510C	RE		447793	11/28/18 08:05	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID	RE	1	449683	12/08/18 13:57	DMR	TAL BUF
Total/NA	Prep	3535			137230	11/21/18 09:19	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	137377	11/27/18 18:24	JM1	TAL BUR

Client Sample ID: EQUIPMENT BLANK

Lab Sample ID: 480-145339-4

Date Collected: 11/12/18 13:00

Matrix: Water

Date Received: 11/16/18 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			446346	11/19/18 08:22	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	446723	11/24/18 07:59	DMR	TAL BUF
Total/NA	Prep	3510C	RE		447793	11/28/18 08:05	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID	RE	1	449683	12/08/18 14:21	DMR	TAL BUF
Total/NA	Prep	3535			137230	11/21/18 09:19	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	137377	11/27/18 18:40	JM1	TAL BUR

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Laboratory References:

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

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	DoD ELAP		L2336	02-25-20
Connecticut	State Program	1	PH-0751	09-30-19
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-01-19
Florida	NELAP	4	E87467	06-30-19
Maine	State Program	1	VT00008	04-17-19
Minnesota	NELAP	5	050-999-436	12-31-18 *
New Hampshire	NELAP	1	2006	12-18-18 *
New Jersey	NELAP	2	VT972	06-30-19
New York	NELAP	2	10391	04-01-19
Pennsylvania	NELAP	3	68-00489	04-30-19
Rhode Island	State Program	1	LAO00298	12-30-18 *
US Fish & Wildlife	Federal		LE-058448-0	07-31-19
USDA	Federal		P330-11-00093	07-24-20
Vermont	State Program	1	VT-4000	12-31-18 *
Virginia	NELAP	3	460209	12-14-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Method	Method Description	Protocol	Laboratory
8270D SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	TAL BUF
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL BUR
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3535	Solid-Phase Extraction (SPE)	SW846	TAL BUR

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

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-145339-1	MW-1	Water	11/12/18 14:00	11/16/18 15:30
480-145339-2	MW-2	Water	11/12/18 15:00	11/16/18 15:30
480-145339-3	MW-3	Water	11/12/18 16:00	11/16/18 15:30
480-145339-4	EQUIPMENT BLANK	Water	11/12/18 13:00	11/16/18 15:30

TestAmerica Buffalo
10 Hazelwood Drive

Amherst, NY 14228
Phone: 716.691.2600 Fax: 716.691.7991

Chain of Custody Record 243455

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-145339 COC

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Bryan Maylack	Site Contact: Nicksurai	Date: 11/14/18	COC No: 1 of 1 COCs
Company Name: Benchmark ENV. Engineering	Tel/Fax: 716-856-0599	Lab Contact: Brian Fischer	Carrier: TA	
Address: 2558 Hamburg Turnpike	Analysis Turnaround Time			Sampler:
City/State/Zip: Buffalo, NY, 14218	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 716-713-3437	TAT if different from Below			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: 990 Niagara St	☐ 1 week			
Site:	☐ 2 days			Job / SDG No.:
PO # 0462-018-001	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PFAS	1-4 Dioxane	Sample Specific Notes:
MW-1	11/12/18	14:00	6	GW	4			X	X	
MW-2		15:06	6		4			X	X	
MW-3		16:00	6		4			X	X	
Equipment Blank		13:00	6	↓	4			X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
Cat B, NYSDEC ETDS

#1 3.4

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	BENCH	11/14/18 0:00	Rebecca Terry	TAL	11/15/18 1300
Relinquished by: Rebecca Terry	Company: TAL	Date/Time: 11/15/18 1530	Received by: CWallace	Company: TAB	Date/Time: 11/15/18 1530
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

12/11/2018

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record

480-145339 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fischer, Brian J	COC No: 320-135255.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: brian.fischer@testamericainc.com	State of Origin: New York
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York	Page: Page 1 of 1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 11/29/2018		Job #: 480-145339-1
City: South Burlington	TAT Requested (days):		
State, Zip: VT, 05403			
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:		
Email:	WO #:		
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_IVWT PFAS, Standard List (21 Analytes)	Special Instructions/Note:
MW-1 (480-145339-1)	11/12/18	14:00 Eastern		Water			X	
MW-2 (480-145339-2)	11/12/18	15:00 Eastern		Water			X	
MW-3 (480-145339-3)	11/12/18	16:00 Eastern		Water			X	
EQUIPMENT BLANK (480-145339-4)	11/12/18	13:00 Eastern		Water			X	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 11/19/18 1600	Company	Received by:	Date/Time: 11/20/18 10:20	Company TAL Burl	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 09/20/2016



ORIGIN ID:BLUA (916) 373-5600
SAMPLE RECEIVING
TESTAMERICA WEST SACRAMENTO
880 RIVERSIDE PARKWAY

WEST SACRAMENTO, CA 95605
UNITED STATES US

SHIP DATE: 19NOV18
ACTWGT: 14.30 LB
CAD: 852262/CAFE3211

BILL RECIPIENT

D TIMOTHY BOURDEAU
TAL BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403

(802) 660 – 1990
DEPT: SUB WORK

REF: SEND OUTS

FedEx Express

TRK# 0201 4895 5410 2120

TUE – 20 NOV 10:30A
PRIORITY OVERNIGHT

XH BTVA

05403
VT – US BTV

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-46518.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: brian.fischer@testamericainc.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-145339-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 11/23/2018			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Benchmark - 990 Niagara St. site	Project #: 48018286			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_PFC PFAS, Standard List (21 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-1 (480-145339-1)	11/12/18	14:00 Eastern		Water			X	2	
MW-2 (480-145339-2)	11/12/18	15:00 Eastern		Water			X	2	
MW-3 (480-145339-3)	11/12/18	16:00 Eastern		Water			X	2	
EQUIPMENT BLANK (480-145339-4)	11/12/18	13:00 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11/15/18 1630	TAB	[signature]	11-16-18 1000	TA Sac
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 526494	Cooler Temperature(s) °C and Other Remarks: 3.3

Ver: 09/20/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento
Sample Receiving Notes

Job:____ 480-145339 Field Sheet

Tracking #4270 0718 2869 SO / PO / FO / 2-Day / SAT / Ground / UPS / Courier /
Drop Off / GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes:_____

Therm. ID: **AK-2 / AK-3 / AK-5 / AK-6 / HACCP / Other**____ (+0.7°C)

Ice ____ Wet ____ Gel ____ Other ____

Cooler Custody Seal: 5RU494

Sample Custody Seal: —

Cooler ID: —

Temp: Observed 3.3 Corrected 3.3

From: Temp Blank ☐ Sample ☐

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace?	☐	☐	☐
Alkalinity has no headspace?	☐	☐	☐
CoC is complete w/o discrepancies?	☐	☐	☐
Samples received within holding time?	☐	☐	☐
Sample preservatives verified?	☐	☐	☐
Cooler compromised/tampered with?	☐	☐	☐
Samples compromised/tampered with?	☐	☐	☐
Samples w/o discrepancies?	☐	☐	☐
Sample containers have legible labels?	☐	☐	☐
Containers are not broken or leaking?	☐	☐	☐
Sample date/times are provided.	☐	☐	☐
Appropriate containers are used?	☐	☐	☐
Sample bottles are completely filled?	☐	☐	☐
Zero headspace?*	☐	☐	☐
Multiphasic samples are not present?	☐	☐	☐
Sample temp OK?	☐	☐	☐
Sample out of temp?	☐	☐	☐

Initials: MM Date: 11-16-18

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

R82 B

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-145339-1

Login Number: 145339

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wallace, Cameron

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 (Excluding tests with immediate HTs)..	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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-145339-1

Login Number: 145339
List Number: 3
Creator: McNabb, Robert W

List Source: TestAmerica Burlington
List Creation: 11/20/18 11:25 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are 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	0.1ºC
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

APPENDIX D

GROUNDWATER FIELD FORMS

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: 990 Niagara St Date: 9/19/18

Location: Project No.: Field Team: DAS

Well No. MW-2			Diameter (inches): 2"			Sample Date / Time: 9/19/18			
Product Depth (fbTOR):			Water Column (ft): 18.7			DTW when sampled:			
DTW (static) (fbTOR): 7.30			One Well Volume (gal): 3.04			Purpose: ☒ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 26.0			Total Volume Purged (gal): 15			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
11:00	0 Initial	0	7.09	18.3	2529	915	1.94	156	Turbid No Odor
11:15	1 10.95	3	7.34	16.5	2407	OR	1.38	100	
11:30	2 15.80	6	7.55	15.2	1737	↓	1.74	97	
12:00	3 19.40	9	7.72	14.1	1446		2.20	105	
12:15	4 23.30	12	7.82	13.8	1016		3.54	75	
12:40	5 Dry	15	7.90	13.6	1096	↓	6.62	124	
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

Well No. MW-1			Diameter (inches): 2"			Sample Date / Time: 9/19/18			
Product Depth (fbTOR): ~~26.7~~			Water Column (ft): 11.2			DTW when sampled:			
DTW (static) (fbTOR): 26.7			One Well Volume (gal): .74			Purpose: ☒ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 26.9			Total Volume Purged (gal): .40			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
12:55	0 Initial	0	7.79	15.6	1708	OR	5.14	124	Turbid No Odor
13:00	1 26.3	.2	7.75	14.0	1754	↓	—	89	
13:30	2 Dry	.4	7.77	15	1677	↓	—	117	
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: 990 Niagara St. Date: 9/19/18

Location: Project No.: Field Team:

Well No. MW-5	Diameter (inches): 1	Sample Date / Time:
Product Depth (fbTOR):	Water Column (ft): 1.5	DTW when sampled:
DTW (static) (fbTOR): 13.5	One Well Volume (gal): .02	Purpose: ☒ Development ☐ Sample ☐ Purge & Sample
Total Depth (fbTOR): 15.0	Total Volume Purged (gal): .05	Purge Method: Bailer

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1335	0	Initial	0	7.76	11.5	1233	OR	1.24	120	Turbid, moon
1350	1	Dry	.05	7.66	16.3	1246	OR	—	110	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
Sample Information:										
	S1									
	S2									

Well No. MW-3	Diameter (inches): 2"	Sample Date / Time:
Product Depth (fbTOR):	Water Column (ft): .2	DTW when sampled:
DTW (static) (fbTOR): 26.6	One Well Volume (gal): —	Purpose: ☒ Development ☐ Sample ☐ Purge & Sample
Total Depth (fbTOR): 26.8	Total Volume Purged (gal): .2	Purge Method: Bailer

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	0	Initial								
	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
Sample Information:										
	S1									
	S2									

REMARKS: ~~DO~~ Too little water in MW-3 to get Readings, Purged dry

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: 990 Niagara Date: 9/26/18

Location: Project No.: Field Team: DAS

Well No. MW-2			Diameter (inches): 2"			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft): 15.8			DTW when sampled:			
DTW (static) (fbTOR): 11.0			One Well Volume (gal): 2.57			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 26.8			Total Volume Purged (gal): 7.5			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
10:47	0 Initial	0	6.54	17.1	4546	184	4.70	241	Clear
11:00	1 15.10	2.5	7.24	16.2	3800	OR	3.71	217	Turbid
11:15	2 18.82	5	7.23	14.5	3848	OR	4.41	216	
11:30	3 21.30	7.5	7.25	13.7	4037	OR	4.68	215	
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
12:30	S1 21.30	7.5	7.38	15.4	3625	OR	4.50	161	
	S2 21.56	7.5	7.34	15.3	3654	OR	4.75	161	

Well No. MW-1			Diameter (inches): 2"			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft): 1.6'			DTW when sampled:			
DTW (static) (fbTOR): 25.50			One Well Volume (gal): .41			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 27.10			Total Volume Purged (gal): .5			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
11:30	0 Initial	0	7.48	14	2351	129	4.60	90	Clear
	1 Dry								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS: MW-1 Dry after 2 Vol Purged

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

GROUNDWATER FIELD FORM

Project Name: 990 Niagara St. Date:

Location: Project No.: Field Team: NAS

Well No. MW-3			Diameter (inches): 2"			Sample Date / Time: 9/26/18			
Product Depth (fbTOR):			Water Column (ft): .7			DTW when sampled:			
DTW (static) (fbTOR): 26.3			One Well Volume (gal): .18			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 27.0			Total Volume Purged (gal): .2			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
12:00	0 Initial	0	7.52	14.2	1567	104	4.78	167	clear
	1 Dry								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

Well No. MW-5			Diameter (inches): 1"			Sample Date / Time: 9/29/18			
Product Depth (fbTOR):			Water Column (ft): .8			DTW when sampled:			
DTW (static) (fbTOR): ~~DRY~~ 14.2			One Well Volume (gal): .13			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 15.0			Total Volume Purged (gal): .13			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
13:30	0 Initial	.1	7.67	11.7	1248	OR	1.30	124	turbid
14:00	1 Dry	.1	7.63	11.2	1230	OR	—	115	
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS: MW-5 Dry after 7 volume

Note: All measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: 990 Niagara Street Date: 10/2/18

Location: Project No.: Field Team:

Well No. MW-1			Diameter (inches): 2"			Sample Date / Time: 10/2/18			
Product Depth (fbTOR):			Water Column (ft): 2'			DTW when sampled:			
DTW (static) (fbTOR): 25.10			One Well Volume (gal):			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 27.10			Total Volume Purged (gal):			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
14:50	0 Initial	.1	7.73	14.1	1654	OR	4.15	108	Turbid, no odor
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

Well No. MW-3			Diameter (inches): 2"			Sample Date / Time: 10/2/18			
Product Depth (fbTOR): 25.30			Water Column (ft): 1.20			DTW when sampled:			
DTW (static) (fbTOR): [illegible]			One Well Volume (gal): .19			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 27			Total Volume Purged (gal):			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
13:30	0 Initial	.20	7.58	13.1	1548	112	3.74	109	clear no odor
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: 940 Niagara Date: 10/2/18

Location: Project No.: Field Team:

Well No. MW-5			Diameter (inches): 1"			Sample Date / Time: 10/2/18			
Product Depth (fbTOR):			Water Column (ft): 1.50			DTW when sampled:			
DTW (static) (fbTOR): 14.50			One Well Volume (gal):			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 15			Total Volume Purged (gal): —			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
16:00	0 Initial	0	7.69	12.3	1213	197	1.25	125	Slightly Turb
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

Well No.			Diameter (inches):			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft):			DTW when sampled:			
DTW (static) (fbTOR):			One Well Volume (gal):			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR):			Total Volume Purged (gal):			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	0 Initial								
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

APPENDIX E

DATA USABILITY SUMMARY REPORTS

Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, N. Y. 12853

Phone 518-251-4429

Facsimile 518-251-4428

January 6, 2019

Charlotte Clark
Turnkey Environmental Restoration
2558 Hamburg Turnpike Suite 300
Buffalo, NY 14218

RE: Validation of the 990 Niagara Street Laboratory Analytical Data Packages
Data Usability Summary Report (DUSR)
TestAmerica SDG Nos. 480-140944-1, 480-141069-1, 480-141620-1, 480-141736-1, 480-142475-1, 480-142853-1, 480-143392-1, and 480-145339-1

Dear Ms. Clark:

Review has been completed for the data packages generated by TestAmerica Laboratories that pertain to samples collected between 08/27/18 and 11/12/18 at the 990 Niagara Street site. Eight soil samples, two soil field duplicates, three aqueous samples, and an aqueous field duplicate were processed for TCL and 6 NYCRR Part 375 CP-51 volatiles, TCL semivolatiles, TCL Pesticides, Aroclor PCBs, TCL herbicides, and TAL metals; aqueous metals analyses were performed on filtered samples. Two soil samples and a field duplicate were processed for TCL semivolatiles, TCL Pesticides, Aroclor PCBs, TCL herbicides, and TAL metals. One soil sample was processed for TCL semivolatiles and TAL metals, and four soil samples were processed for TCL semivolatiles. One aqueous sample was processed for TCL and CP-51 volatiles and Aroclor PCBs. Three aqueous samples were processed for per- and poly fluorinated alkyl substances (PFAS) and 1,4-dioxane. The analytical methodologies are those of the USEPA SW846 and a modified USEPA method 537.

The data packages submitted by the laboratory contain 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, 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
* Method and Preparation Blanks
* Matrix Spike Recoveries/Duplicate Correlations
* Blind Field Duplicate Correlations
* Laboratory Control Sample (LCS)
* Instrumental Tunes
* Initial and Continuing Calibration Standards

* Serial Dilution Evaluation
* Method Compliance
* Sample Result Verification

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review, as discussed in NYS DER-10 Appendix B Section 2.0 (c). Documentation of the outlying parameters cited in this report can be found in the laboratory data package.

In summary, most results for the samples are usable either as reported or with minor qualification or edit to non-detection. The result for 3,3'-dichlorobenzidine in one sample is rejected and not usable due to an apparent matrix effect.

Data completeness, representativeness, accuracy, precision, reproducibility, sensitivity, and comparability are generally acceptable. However, no project matrix spike or field duplicate evaluations were performed for PFAS and 1,4-dioxane, and the accuracy and precision of those analytes have not been determined; no qualification to the data has been made due to the lack of those evaluations.

The laboratory modifications to the USEPA method 537 are significant, including acceptance ranges, consistent in many respects to the advances in the available monitoring compounds. Validation actions are based on the laboratory procedures, in consideration that the laboratory undergoes NYS DOH certifications and NYS SOP review.

Copies of the client sample identifications are attached to this text. Also included in this report are TestAmerica EQuIS EDDs with recommended qualifiers/edits applied in red.

Blind Field Duplicate

The blind field duplicate evaluations of SS-9, MW-5(6"-2'), and MW-2 show correlations within validation guidelines.

TCL and CP-51 Volatile Analyses by EPA 8260C

The matrix spike/duplicate evaluation performed on MW-2 shows acceptable recoveries and correlations.

Holding times were met, and surrogate and internal standard recoveries are compliant. Blanks show no contamination. Calibration standards showed acceptable responses.

TCL Semivolatile Analyses and 1,4-Dioxane by EPA8270D (Full Scan and SIM)

1,4-Dioxane was present in the method and equipment blanks at concentrations above the reporting limit in repeated extractions. Therefore, all detected sample results are considered contamination and edited to non-detection at the originally reported concentrations. The LCSs show elevated recoveries of 587% and 144% for that analyte, consistent with systemic contamination.

Due to lack of recovery in the matrix spikes of MW-2, the result for 3,3'-dicholorobenzidine in that parent sample is rejected. The TAL matrix spike evaluations of TCL semivolatiles on SS-8, SB-13(8-10'), MW-3(20-22'), MW-1(22'-24'), and MW-2 show recoveries and duplicate correlations that are within validation guidelines for the other analytes, with the following exceptions, results for which are qualified as estimated in the indicated parent samples:

Parent Sample	Analyte	Outlying % Recoveries	Outlying %RPD
MW-1 (22-24')	fluoranthene	124	20
	phenanthrene	133	24
MW-2	3-nitroaniline	18,26	35
	4-nitroaniline	17,18	

The result for 1,4-dioxane in MW-3 is qualified as estimated, with a low bias, due to low recovery of the surrogate standard. The recovery was acceptable in the reextraction, but the reextraction was performed 2 days beyond the allowable holding time.

The detected result for di-n-butylphthalate in BD-20180926 is considered contamination and edited to non-detection due to presence in the associated method blank.

Calibration standards show responses within validation action levels. Holding times were met. Surrogate and internal standard responses are compliant. Instrument tunes meet fragmentation requirements.

Some of the samples were processed at dilution, resulting in elevated reporting limits.

TCL Pesticide, TCL Herbicides, and Aroclor PCBs by EPA 8081B, 8151A and 8082A

Some of the detected pesticide results' responses exhibit elevated dual column quantitative correlations, and are qualified to reflect the uncertainty in identification and/or quantitation. The values have been either qualified as estimated ("J"), qualified as tentative in identification and estimated in value ("NJ"), or edited to non-detection ("U"), depending on the degree of variance. In some instances, the adjusted reporting limits are significantly elevated over the original method reporting limits.

The detected result for endosulfan sulfate in MW-5(6"-2') is considered contamination and edited to non-detection due to presence in the associated method blank.

The results for herbicides in MW-1 have been qualified as estimated, with a low bias, due to low surrogate standard recoveries. The recoveries were improved upon reextraction, but the reextraction was performed one day beyond the allowable holding time.

The herbicide and pesticide matrix spikes of MW-5(6"-2'), MW-3(20-22'), and MW-2, and Aroclor 1016/1260 matrix spikes of SB-16(10'-12'), MW-1(22-24'), and MW-2 show acceptable recoveries and duplicate correlations.

Holding times were met. Calibration standards are compliant.

TAL Metals Analyses by EPA 6010D, 7470, and 7471B

The results for dissolved metals in the aqueous samples are qualified as estimated due to the delayed preservation that results from laboratory filtration. The lack of preservation at receipt should have been noted on the laboratory login form and case narrative; those stated otherwise.

The detected results for zinc in MW-2 and BD-20180926 are considered contamination and edited to non-detection due to presence in the associated method blank.

Matrix spikes/duplicates evaluations for metals were performed on SB-13(8-10'), MW-1(22-24'), and on the dissolved fraction of MW-2. They show recoveries and correlations within validation guidelines, with the following exceptions, results for which are qualified as estimated in the indicated parent samples:

Parent Sample	Element	Outlying % Recoveries	Outlying % RPD
SB-13 (8-10')	antimony	57,52	
	barium	176,156	
	copper	62,66	
	potassium	220,261	
MW-1 (22-24')	antimony	58,65	
	barium	152,158	
	potassium	236,179	
	calcium		36
	magnesium		49

The ICP serial dilution evaluations of SB-13 (8-10'), MW-1 (22-24'), and MW-2 show acceptable correlations, with the following exceptions, results for which are qualified as estimated in the indicated parent samples:

Parent Sample	Element	%Difference
SB-13 (8-10')	calcium	17
	chromium	16
	iron	19
	manganese	16
	zinc	25
MW-1 (22-24')	zinc	24

Instrument performance was compliant.

Certain of the elements were processed at dilution due to interferences from other elements.

PFAS by Modified EPA Method 537

PFAS compounds are identified by their common acronyms in this report. The EDDs reference both the technical names and the acronyms.

The detection of 6:2-FTS in MW-1 is qualified as estimated due to elevated recovery in the associated isotopic dilution standard.

Due to presence in the associated method blank, the detections of PFOA in MW-2 and MW-3 are considered external contamination and edited to reflect non-detection.

No matrix spikes were processed, and accuracy and precision have not been evaluated for this matrix.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Attachments: Validation Qualifier Definitions
Sample Identifications
Qualified Laboratory EQuIS EDDs

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
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-140944-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-140944-1	TP-1 (5-7)	Solid	08/27/18 09:30	08/28/18 09:40
480-140944-2	TP-2 (8-10)	Solid	08/27/18 10:00	08/28/18 09:40
480-140944-3	TP-3 (2-4)	Solid	08/27/18 10:30	08/28/18 09:40
480-140944-4	TP-4 (1-3)	Solid	08/27/18 11:30	08/28/18 09:40
480-140944-5	TP-5 (9-11)	Solid	08/27/18 11:45	08/28/18 09:40
480-140944-6	SS-5	Solid	08/27/18 12:00	08/28/18 09:40
480-140944-7	SS-6	Solid	08/27/18 12:15	08/28/18 09:40
480-140944-8	SS-7	Solid	08/27/18 12:30	08/28/18 09:40
480-140944-9	SS-8	Solid	08/27/18 12:45	08/28/18 09:40
480-140944-10	SS-9	Solid	08/27/18 13:00	08/28/18 09:40
480-140944-11	BD	Solid	08/27/18 13:05	08/28/18 09:40

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141069-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141069-1	MW-5 (6"-2')	Solid	08/29/18 12:30	08/30/18 18:00
480-141069-2	SB-14 (8'-10')	Solid	08/29/18 16:00	08/30/18 18:00
480-141069-3	SB-16 (10'-12')	Solid	08/29/18 14:30	08/30/18 18:00
480-141069-4	SB-13 (8-10')	Solid	08/29/18 11:00	08/30/18 18:00
480-141069-5	BD-2	Solid	08/29/18 12:45	08/30/18 18:00
480-141069-6	MW-4 (16-18')	Solid	08/30/18 12:30	08/30/18 18:00
480-141069-7	SB-15 (1-3')	Solid	08/30/18 14:00	08/30/18 18:00
480-141069-8	SB-17 (4-6')	Solid	08/30/18 15:00	08/30/18 18:00
480-141069-9	MW-6 (2-4)	Solid	08/30/18 17:00	08/30/18 18:00

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141620-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141620-1	MW-3 (20-22')	Solid	09/11/18 13:00	09/12/18 15:53

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-141736-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141736-1	MW-1 (22-24')	Solid	09/12/18 13:00	09/13/18 16:30
480-141736-2	MW-2 (0-2')	Solid	09/13/18 09:00	09/13/18 16:30

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-142475-1	MW-2	Water	09/26/18 12:30	09/27/18 14:52
480-142475-2	BD	Water	09/26/18 12:45	09/27/18 14:52

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-142853-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-142853-1	MW-1	Water	10/02/18 15:00	10/03/18 10:35
480-142853-2	MW-3	Water	10/02/18 14:00	10/03/18 10:35
480-142853-3	MW-5	Water	10/02/18 16:00	10/03/18 10:35
480-142853-4	TRIP BLANK	Water	10/02/18 16:30	10/03/18 10:35

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-143392-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-143392-1	MW-3	Water	10/11/18 09:00	10/12/18 12:15
480-143392-2	MW-5	Water	10/11/18 10:00	10/12/18 12:15

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - 990 Niagara St. site

TestAmerica Job ID: 480-145339-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-145339-1	MW-1	Water	11/12/18 14:00	11/16/18 15:30
480-145339-2	MW-2	Water	11/12/18 15:00	11/16/18 15:30
480-145339-3	MW-3	Water	11/12/18 16:00	11/16/18 15:30
480-145339-4	EQUIPMENT BLANK	Water	11/12/18 13:00	11/16/18 15:30

APPENDIX F

FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS

Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key		If YES Go to:	If NO Go to:
1.	Is the site or area of concern a discharge or spill event?	13	2
2.	Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	13	3
3.	Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation?	4	9
4.	Does the site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5
5.	Has the contamination gone off-site?	6	14
6.	Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7	14
7.	Are the site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8
8.	Does contamination exist at concentrations that could exceed ecological impact SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14
9.	Does the site or any adjacent or downgradient property contain any of the following resources? i. Any endangered, threatened or special concern species or rare plants or their habitat ii. Any DEC designated significant habitats or rare NYS Ecological Communities iii. Tidal or freshwater wetlands iv. Stream, creek or river v. Pond, lake, lagoon vi. Drainage ditch or channel vii. Other surface water feature viii. Other marine or freshwater habitat ix. Forest x. Grassland or grassy field xi. Parkland or woodland xii. Shrubby area xiii. Urban wildlife habitat xiv. Other terrestrial habitat	11	10
10.	Is the lack of resources due to the contamination?	3.10.1	14
11.	Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14	12
12.	Does the site have widespread surface soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	12
13.	Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact DEC for information regarding endangered species.)	Section 3.10.1	14
14.	No Fish and Wildlife Resources Impact Analysis needed.		