Periodic Review Report

Olean Redevelopment Parcel 3
Olean, New York
BCP Site No. C905033

November 2019
Revised December 2019

0334-016-001

Prepared For:

Solean LLC

Prepared By:

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

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PERIODIC REVIEW REPORT – 2018/2019

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1.0 INTRODUCTION

Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this Periodic Review Report (PRR), on behalf of Solean LLC (Solean) to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C905033, located in Olean, Cattaraugus County, New York (Site; see Figures 1-3), commonly referred to as the Olean Redevelopment Parcel 3 (Site).

This PRR has been prepared for the Site in accordance with NYSDEC DER-10/*Technical Guidance for Site Investigation and Remediation* (Ref. 1). The NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Form has been completed for the Site (see Appendix A).

This PRR and the associated inspection form has been completed for post-remedial activities at the Site during the reporting period of October 9, 2018 to October 9, 2019. The March 2018 PRR (Ref. 2) was submitted for the period March 15, 2017 to August 13, 2018. Repairs to the on-site soil vapor extraction (SVE) system wells in August 2018 required Benchmark-TurnKey to submit a Corrective Measures Report (Ref. 3) along with an updated IC/EC certification. NYSDEC approved the 2017/2018 PRR and the Corrective Measures Report on November 15, 2018 and revised the 2018/2019 reporting period for this PRR.

1.1 Site Background

Olean Gateway LLC (Olean Gateway) entered into a Brownfield Cleanup Agreement (BCA) (BCP Site No. C905033; Index No. C905033-08-12), with the New York State Department of Environmental Conservation (NYSDEC) in October 2012 to investigate and remediate the approximate 24-acre property comprised of two tax parcels identified as 1420 Buffalo Street (SBL#94.048-1-1.1; 13 acres) and 1404-1406R Buffalo Street (SBL# 94.048-1-1.2; 11 acres) in the City of Olean, Cattaraugus County, New York and referred to as Olean Redevelopment Parcel 3 (ORP3 or Site) (see Figures 1 and 4). The Site was remediated to NYSDEC Part 375 Track 4 commercial soil cleanup objectives (SCOs) and will be used for commercial purposes.

ORP3 is a portion of the larger former refinery operation that operated in the Olean area from the mid-1800s through the 1950s. Separate refineries operated on the property, were merged in 1902 into the Vacuum Oil Company and in 1931 became the Socony-

Vacuum Oil Company until 1954 when the refinery closed. The property was divided into multiple parcels in the 1960s. Felmont Oil Company (Felmont) constructed an anhydrous ammonia plant on the northern parcels where they manufactured ammonia from natural gas. Felmont sold the ammonia to Agway for use in manufacturing fertilizer at Agway's plant located on what is now referred to as Olean Redevelopment Parcel 1. In 1983, Agway purchased the portion of the Felmont property that included the ammonia production plant. Agway dismantled and sold both the ammonia and fertilizer plants in 1984.

The owner of ORP3 at the time of issuance of the Site Management Plan (SMP; Ref. 4) was Olean Gateway LLC. Olean Gateway, LLC conveyed ownership and transferred the Certification of Completion (COC) to Solean LLC in March 2016. In June 2016, the COC was transferred to leaseholders 1406RB PV LLC and 1470B PV LLC.

The properties adjoining and in the neighborhood surrounding the Site primarily include commercial and industrial properties; vacant former industrial (ORP1) immediately south of the Site remediated under the BCP and undergoing redevelopment for commercial use and Dresser-Rand Company property; the Southern Tier Rail line north and east of the Site; and ORP2 west of the Site remediated under the BCP and is undergoing redevelopment as a commercial solar farm. Figure 2 is an aerial view of the Site following remediation and prior to the redevelopment activities.

The Site has been redeveloped as a photovoltaic solar system consisting of nominally 1,000 solar arrays to in feed the nearby National Grid commercial electrical system (grid) as described in the July 2017 PRR (Ref. 5). During 2016 reconstruction activities, the cover system became rutted and vegetation disturbed. The damaged cover system was repaired in the summer and fall 2017 in accordance with the July 2017 Work Plan for Soil Cover Restoration Activities. Figure 3 is an aerial view of the Site following redevelopment.

1.2 Purpose/Scope

The SMP requires, among other things, periodic inspection and certification that the institutional and engineering controls implemented at the Site remain in place and are functioning as designed. This PRR serves that purpose as well as documenting post-remedial actions taken during this reporting period.

2.0 SITE OVERVIEW

Interim Remedial Measures (IRM) activities were performed per the IRM Work Plan prepared by ExxonMobil (Ref. 6). The IRM Report for the Buffalo Street Properties (Olean Redevelopment Parcels 1, 2 & 3) was prepared in March 2011 (Ref. 7). A Remedial Action Work Plan (RAWP) was submitted by Olean Gateway, LLC in March 2014 (Ref. 8) to address the residual soil and groundwater remediation and was approved by the NYSDEC on April 11, 2014. The remedial program was successful in achieving the remedial objectives for the Site. The October 2015 SMP (Ref. 4) and Final Engineering Report (FER; Ref. 9) were approved by the Department. The COC was issued to Olean Gateway LLC and recorded on December 24, 2015.

Prior remedial activities described below occurred between 2010 and 2015 and were performed under an approved Interim Remedial Measures (IRM) Work Plan and the approved RAWP.

2.1 Interim Remedial Measures (IRMs)

IRMs were previously performed in 2010 (prior to purchase of the property by Olean Gateway) by ExxonMobil in accordance with the IRM Work Plan. The IRM Report for the Buffalo Street Properties (Olean Redevelopment Parcels 1, 2 & 3) was prepared in March 2011. The previous IRM activities associated with ORP3 consisted of the following:

- Removal of one 2,000-gallon and two 500-gallon steel USTs associated with former Building 2. The purpose and original contents of these tanks was not provided by W&C. Upon excavation, the 2,000-gallon UST was filled with water and minor amounts of sediment. The water sample from the tank contained minor detections of petroleum constituents. The two 500-gallon USTs were reportedly empty except for the presence of nominally 2 inches of rust-colored material in the bottom of one of the tanks. The tanks and their contents were disposed off-site per the IRM Report.
- Closure/removal of several suspected septic tanks:
    - Building 1: One vertical concrete tank (36" diameter) of unreported length had its liquid and solid contents removed. The tank and its contents were disposed off-Site.
    - Pump House Tank: One 500-gallon steel tank had its liquid and solid contents removed and was closed in-place.

  - Trench 8: One steel tank filled with soil/fill of unknown size removed.

- Targeted removal of soil/fill in the vicinity of former soil boring SB28 to remove elevated levels of arsenic and lead in shallow soil (0 to 2 feet below grade).
- Targeted removal of soil/fill in the vicinity of former soil boring SB48 to remove elevated levels of chromium, copper, selenium, zinc and lead.
- Recovery of measurable light non-aqueous phase liquid (LNAPL) from groundwater monitoring wells via sorbent socks.

2.2 Remedial Actions

The following is a summary of the remedial actions completed by Olean Gateway at ORP3:

- Approximately 425 tons of arsenic-contaminated soil/fill was excavated, loaded, and transported off-site by D&H Excavating for disposal at Waste Management's Chaffee Landfill, located in Chaffee, NY.
- Approximately 235 tons of grossly contaminated petroleum soil (GCPS) was excavated, loaded, and transported off-site by D&H Excavating for disposal at Waste Management's Chaffee Landfill, located in Chaffee, NY.
- Approximately 7,592 tons of lead-contaminated soil/fill were stabilized in-place using a mixture of Portland cement to treat the soil and render it non-hazardous.
- Approximately 50,667 linear feet of subsurface metallic product piping (steel, cast iron, lead and copper) was exposed, tapped, evacuated of contents, removed, cleaned and recycled or disposed. An additional 232 linear feet of wood pipe was also exposed, tapped, evacuated of contents, removed, cleaned and disposed off-site. Piping that extended beyond the property boundary was capped and/or grouted at the apparent property line. Approximately 2,552 cubic yards of GCPS was excavated during piping removal activities and treated on the on-site forced-vented biopiles (FVBPs) and reused as backfill below the cover system.
- Approximately 33, 55-gallon drums were generated from the removal of the abandoned subsurface piping. The contents of the piping included LNAPL, residual pipe scale, and product sludge. The 33 drums (21 non-hazardous and 12 hazardous) were disposed at CWM Chemical Services, LLC, located in Model City, NY. In addition to the drums, approximately 4.9 tons of tank contents that were placed into roll-off containers and solidified with Portland cement due to liquid content were disposed at Waste Management's Chaffee Landfill, located in Chaffee, NY. Water extracted from excavations during piping removal was pumped into holding tanks, treated with bag filters and granular activated carbon

(GAC) on-site, pumped into a secondary on-site temporary holding tank, sampled, and discharged to the City of the Olean sanitary sewer with approval under an Industrial Pretreatment Program permit. Approximately 6 drums of wash water generated during holding tank cleaning were disposed at CWM Chemical Services, LLC, located in Model City, NY.

- An SVE system was installed to address GCPS remaining in-place in the deeper soil/fill from approximately 2 to 15 feet below ground surface (fbgs). The SVE system included the installation of 58 SVE wells, associated conveyance piping, and placement of three trailer-mounted SVE blowers (refer to Figure 8). Emissions from the SVE system are controlled using biofilters contained within an approximate 20-foot by 8-foot steel roll-off box outfitted with perforated pipe. The biofilters contain an approximate 1-foot thick gravel layer at the base of the box overlain by approximately 3 feet of wood chip and compost filter medium, which allows the naturally occurring microbes to bioremediate the air stream and control the nuisance odors from the SVE systems.
- LNAPL recovery was completed using hydrocarbon absorbent socks at groundwater monitoring wells W22 and W24. LNAPL thickness at these locations varied between approximately 0.01 and 0.3 feet in 2014-2015. During LNAPL monitoring events, the socks were wrung of product and reinstalled. Recovered product was transferred to properly labeled and sealed 55-gallon drums for future off-site disposal. Socks with obvious LNAPL staining/saturation were removed and replaced with new socks.
- A final cover system consisting of a demarcation layer, minimum 12 inches of clean imported soil, and vegetation was installed at the Site in 2015.
- An Environmental Easement was executed in December 2015 between Olean Gateway and the NYSDEC and recorded with the deed in Cattaraugus County to restrict land use to commercial/industrial purposes; restrict the use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or County DOH; and prevent future exposure to any contamination remaining at the Site.

2.3 Site Redevelopment Activities

The Site was sold by Olean Gateway, LLC to Solean LLC on March 17, 2016. The COC was transferred on June 21, 2016 to the following new leaseholders: 1406RB PV LLC and 1470B PV LLC. The Site was redeveloped as a photovoltaic solar system consisting of nominally 1,000 solar arrays to in-feed the nearby National Grid commercial electrical

system (grid) in accordance with an August 31, 2016 Work Plan for Redevelopment Activities (Ref. 10) approved by the NYSDEC. Redevelopment construction began in October 2016 and was substantially complete in July 2017. During solar facility construction, there was some rutting of the soil cover system and damage to the vegetation. Solar facility construction activities included installation of a new access road, concrete pads, above ground equipment, power poles, fence gates and support poles, and conduits. Three power poles, four equipment support poles, 10 gate posts, fence posts, and approximately 80 linear feet of conduit (for Verizon/National Grid communications) penetrated through the cover system; all other construction activities occurred on the ground surface or above the demarcation layer.

Cover system repairs were needed in areas where the redevelopment activities caused rutting to the cover and damage to the vegetation as documented in the July 2017 Work Plan for Soil Cover Restoration Activities (Ref. 11). The damaged cover system was repaired during the summer and fall 2017. Benchmark was on-site to observe and document that all imported material was placed and graded to meet pre-positioned grade stakes set to assure at least 12 inches of cover over the original subgrade elevations measured prior to redevelopment activities (Ref. 2).

3.0 SITE MANAGEMENT PLAN

An SMP was approved by the Department on October 23, 2015. The SMP includes an IC/EC Plan, a Monitoring and Sampling Plan, an Operation & Maintenance (O&M) Plan, an Excavation Work Plan (EWP), and a copy of the Environmental Easements. A brief description of the components of the SMP is presented below.

3.1 IC/EC Plan

As detailed in the Environmental Easement, several IC/ECs need to be maintained as a requirement of the BCA.

3.1.1 Institutional Controls

- Groundwater-Use Restriction: The use of groundwater for potable and non-potable purposes is prohibited.
- Land-Use Restriction: The controlled property may be used for commercial and/or industrial use.
- Implementation of the SMP: The OM&M Plan and EWP must be followed.

3.1.2 Engineering Controls

- Vapor Mitigation: There are no buildings on-site and, as such, no sub-slab depressurization system exists.
- SVE System: The SVE system was operated and monitored nearly continuously between July 2014 and October 2019 and continues to operate.
- LNAPL Recovery/Monitoring: LNAPL recovery and monitoring is performed monthly.
- Groundwater Monitoring: Groundwater monitoring was completed annually in June 2018.
- Cover System: The cover system is intact and functioning as intended (see Figure 5).

3.1.3 Site Inspection & IC/EC Compliance

On April 30, 2019, Benchmark's Certifying Professional Engineer performed a Site visit and assessment. During the visit, the Site covered by this PRR was found to be

compliant with the IC/EC requirements. Appendix A includes the completed and P.E.-certified IC/EC Form for the Site. Appendix B includes the site photo log.

3.2 Monitoring and Sampling Plan

The Monitoring and Sampling Plan specifies the methods used for sampling of:

- LNAPL monitoring and collection;
- Sampling and analysis of groundwater;
- Remedial SVE system monitoring;
- Site-wide inspection; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

3.2.1 LNAPL Monitoring/Recovery System

LNAPL has historically been detected in Site monitoring wells W22 and W24. Table 1 presents a summary of the monthly LNAPL measurements for the period July 17, 2014 through September 30, 2019. Over this reporting period, the LNAPL thickness ranged from not detectable to 0.06 feet in wells W22 and W24, with no LNAPL detected in either well in July through September 2019. A total of 0.6 gallons (Well W22) and 0.7 gallons (Well W24) of LNAPL were recovered from the collection wells during the reporting period.

LNAPL is recovered using hydrocarbon absorbent socks installed in the well at the LNAPL/water interface. During monthly inspections, socks that have obvious LNAPL staining/saturation are removed and replaced with new socks. Both wells had four sock change-outs during the reporting period. Used socks are containerized, labeled, and characterized for off-site disposal.

3.2.2 Groundwater Sampling and Analysis

The SMP states that groundwater monitoring is to be performed semi-annually for the first two years (2016 and 2017) and annually thereafter. Since the last reporting period, groundwater monitoring was completed in June 2018 and July 2019 using the procedures in the approved SMP. Well WCMW9 did not recover after purging in June 2018; therefore, a sample was not obtained for analysis. Wells W22 (July 2019) and W24 (June 2018) were

sampled and analyzed since there was no measurable LNAPL at the time of sampling. A groundwater sample was obtained from each well and analyzed for target compound list (TCL) volatile organic compounds (VOCs) and tentatively identified compounds (TICs) using USEPA Method 8260; semi-VOCs (SVOCs) and TICs via USEPA Method 8270; and arsenic, chromium and lead using USEPA Method 6010. Table 2 summarizes groundwater elevations from 2012 through 2019. Tables 3 and 4 summarize the analytical results as well as historic groundwater quality data. Appendix C (electronic version) includes the laboratory analytical data packages and field notes from the groundwater sampling event.

3.2.2.1 Groundwater Elevations

Figures 6 (June 2018) and 7 (July 2019) are groundwater isopotential maps for the two sampling events using the elevations on Table 2. Overall groundwater flow direction in the uppermost sand and gravel aquifer is toward the southeast consistent with the prior groundwater contour maps. This indicates that wells MW5 and MW18 are upgradient wells, and wells W29, MWSW and MW4 and are downgradient wells. A perched water condition exists at well WCMW9; therefore, elevations measured in June 2018 (1415.45) and July 2019 (1419.73) referenced per NAVD 88 were not used to prepare the isopotential maps. It appears well MW4 is impacted by this perched water condition. Well W29 is downgradient of SVE System 3-SVE-1, and wells MWSW, MW4 and WCMW9 are downgradient of SVE Systems 3-SVE-2 and 3-SVE-3 (refer to Figure 8).

3.2.2.2 Analytical Data

Analytical results since the last PRR reporting period are incorporated into Table 3 (VOCs and SVOCs) and Table 4 (metals). Although the results from June 2018 are not within the newly defined reporting period, they are discussed below with the July 2019 data.

VOCs

Groundwater quality significantly improved between the June 2018 and July 2019 monitoring events. In June 20018, eight VOCs were detected in well MWSW at concentrations above GWQS/GVs; none of the eight VOCs were detected in the July 2019 sample. Similarly, three VOCs were detected in well MW4 at concentrations above GWQS/ GVs in June 2018 and only benzene remained slightly above the GWQS/GV in July 2019. In upgradient well MW5, 1,2,4-trimethylbenzene was detected above its GWQS/GV in June

2018 but not detected in July 2019. The only other exceedances of GWQS/GVs were 1,2,4-trimethylbenzene in well W24 (June 2018) and acetone in well W22 (July 2019). Wells MWSW, MW5, WCMW9, W18, and W29 had no GWQS exceedances in July 2019. VOC-TICs decreased at all well locations between the June 2018 and July 2019 sampling events.

SVOCs

SVOCs were not detected at concentrations above GWQS/GVs for the June 2018 and July 2019 sampling events. SVOC-TIC concentrations were generally higher than those detected in June 2018 but consistent with historical results.

Metals

The metals analyses included arsenic, chromium and lead. The 2019 concentration of lead in well W22 (61 ug/L) exceeded the GWQS of 25 ug/L. The 2019 concentrations in well WCMW9 exceeded the GWQS of 25 ug/L for arsenic (910 ug/L) and lead (210 ug/L).

Historically, downgradient well WCMW-9 is purged dry and does not recharge for sampling; a perched water condition exists at the location of this well. No sample was collected in May 2017 as the well went dry before a sample could be collected for metals analysis. In July 2019, only 1.3 well volumes were purged before the well went dry and it only recharged one foot in a 24-hour period. At the time of sampling, the turbidity was >1,000 NTU and TurnKey did not request laboratory filtering of the sample prior to analysis. Therefore, these concentrations are not considered to be representative of groundwater quality.

3.2.3 SVE System and Monitoring

The three SVE systems at Olean Redevelopment Parcel 3 have been operating nearly continuously since March 2015. The SVE systems are comprised of two main components:

1. The collection system is a constructed of a series of vertical extraction wells and extraction well manifold piping; and,
2. The trailer-mounted mechanical SVE systems, which consist of the blowers, motors and ancillary equipment that generate the vacuum and move the extracted vapor to the biofilter treatment vessel. There are three SVE blowers, denoted 3-SVE-1, 3-SVE-2, and 3-SVE-3, connected to a series of wells (refer to Figure 8). There are 58 wells connected to the three blowers as follows: wells SVE3-1 to 3-

19 are connected to 3-SVE-1 blower; wells SVE3-20 to SVE3-38 are connected to 3-SVE-3 blower; and wells SVE3-39 to SVE3-58 are connected to 3-SVE-2 blower. The extracted air is conveyed through 6" PVC piping installed below grade from the wells to the blower. The approximate piping network is shown on Figure 8. The extracted air is treated in a biofilter prior to discharge to the atmosphere. The biofilter treatment medium consists of a mixture of compost and mulch (approx. 50% each by weight). The natural bacteria in the biofilter use the organics in the waste stream as a source of energy. The biofilter medium needs to be maintained in a slightly wet state and needs to be periodically mixed (fluffed-up). Biofilter media requires mixing when nuisance odors become an issue or when a thick cake layer forms on top preventing proper venting. The top 4-6" of the biofilter media is mixed/raked periodically to keep the media broken up and loose. The tables in Appendix D include dates when the biofilter material is raked.

SVE systems 3-SVE-1, 3-SVE-2 and 3-SVE-3 have all been successful in removing volatile organic vapors from the subsurface soil/fill. As shown on Tables D-1 to D-3, the estimated mass of organic petroleum hydrocarbons removed for each system through September 2019 is 9,019 lb (3-SVE-1); 90,182 lb (3-SVE-2) and 30,700 lb (3-SVE-3). Appendix D also includes a graphic chart for each system showing VOC mass removal over time. The rate of removal for 3-SVE-1 was at its maximum of 115 lb/day in March 2015 and has been 0 lb/day since October 2017 (except for a 0.1 lb/day rate of removal in September 2019). The rate of removal for 3-SVE-2 has consistently been below 100 lb/day since January 2017, dropped below 10 lb/day in March 2018, and has fluctuated between 1.9 and 0.7 lb/day during the reporting period. The rate of removal for 3-SVE-3 dropped below 50 lb/day in 2016, below 10 lb/day beginning in February 2017, and has fluctuated between 0.4 and 1.0 lb/day during the reporting period.

3.2.4 Site-Wide Inspection – Cover System Monitoring

The existing cover system is comprised of a minimum of 12 inches of clean soil (vegetated to prevent erosion) and 12 inches of gravel/stone for the access roads. A demarcation layer, consisting of orange plastic mesh material, provides a visual reference to the top of the remaining contamination zone, which is the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP.

In accordance with the SMP, the cover system must be maintained and replaced in the event it is breached as described in the EWP (SMP, Appendix B). The cover will be

inspected on an annual basis and following severe storm events. If frequent areas of distress are noted, they will be repaired based on the following conditions:

- Vegetative Soil Cover Monitoring: A brief summary of the key maintenance concerns and the respective corrective actions is provided below:
  - *Areas where erosion problems (i.e., rills or gullies) are observed will be repaired by re-grading the localized area, adding the required fill material and/or topsoil, and reseeding/replanting as necessary.*
  - *If burrowing animals are observed breaching the soil cover, as evidenced by exposed fill material, they will be eradicated by a licensed exterminator.*

- Gravel/Stone Cover Monitoring: A brief summary of the key maintenance concerns and the respective corrective actions is provided below:
  - *Ruts or erosion along the access roads will be repaired by re-grading the localized area and adding additional material as necessary.*

At the time of the Site inspection, the cover systems were intact and functioning as intended. Appendix B provides photographic documentation of Site conditions at the time of the Site inspection.

3.2.5 Discussion of Monitoring Results

The results of LNAPL monitoring show that there is a decrease in the amount of LNAPL present in both wells W22 and W24 since the completion of the remediation (December 2015). Less than 0.06 feet of LNAPL has been detected during the reporting period, with no LNAPL detected in July through September 2019.

The groundwater quality has improved significantly at all upgradient and downgradient wells. Minor GWQS exceedances remain at well W22 (acetone, lead), well W24 (1,2,4-trimethylbenzene), and well MW4 (benzene). The exceedances of arsenic and lead in downgradient well WCMW9 are not considered indicative of actual groundwater quality due to the sample's high turbidity.

The SVE systems have been very effective in removing organic vapors from the vadose zone. All three SVE Systems show a diminished and asymptotic organic removal rate. Over the monitoring period, the rates of organic vapor removal are constant at 0 lb/day (3-SVE-1 System), less than 2.0 lb/day (3-SVE-2 System), and less than 1.0 lb/day (3-SVE-3 System).

3.3 Operation & Maintenance Plan

The operation and maintenance (O&M) addresses operation and maintenance for the SVE systems.

3.3.1 SVE System

3.3.1.1 Routine System Operation and Maintenance

The SVE system is designed to require little maintenance over the expected duration of use at the Olean Redevelopment Parcel 3 site. The blower bearing housing is oil-filled and is checked once per month, if the level is below the overflow, SAE 40 weight oil is added through the top fill port on the housing. Grease fittings for the blower shaft are topped-off periodically (i.e., every 2 months).

3.3.1.2 System Monitoring Devices and Alarms

Monitored system operating conditions, which trigger a local (red panel light) and remote (common autodialer channel) alarm condition include low air vacuum, high air pressure, moisture separator tank high level, condensate tank high level, and heater/exhaust fan failure. Except for heater/exhaust fan failure, these alarm conditions automatically shut down the SVE system. A trailer entry (security) relay also triggers a local and remote alarm but does not cause system shutdown. Blower and condensate pump failure (e.g., due to thermal overload, power loss, or manual shut down) also triggers the autodialer. If the SVE system alarm is activated, the autodialer will contact Benchmark. Based on the alarm fault, Benchmark will respond and/or contact the appropriate repair vendor (e.g. electrician, mechanical repair service).

On August 20, 2018, Benchmark in association with TurnKey submitted to the Department a Corrective Measures Work Plan for SVE Well Repair (Ref. 12) on behalf of 1406RB PV LLC and 1470B PV LLC. A total of 10 wells at the Solean Site were damaged and some wells required excavation to assess the damage. Excavation work was completed in accordance with the Excavation Work Plan (SMP, Appendix B). As a preventative measure, 4-foot high metal posts were installed around all SVE wells and painted with bright reflective paint to increase visibility. Once repair work was completed, Benchmark collected vacuum and PID measurements of the extracted air at each well to assure the wells were functioning

as designed. Benchmark submitted and NYSDEC approved the Corrective Measures Report for SVE Well Repair (Ref. 3). The SVE wells were operational in September 2018.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- At the time of the Site inspection, the Site complied with the SMP. Specifically, the Site is fully compliant with the Institutional Controls including land-use restrictions, groundwater-use restrictions, and the soil/fill management plan component; and fully compliant with the Engineering Controls (operation of the SVE system, and monthly LNAPL monitoring).
- Long-term groundwater monitoring indicates that there has been significant overall improvement to groundwater quality across the Site with limited exceedances of GWQS/GVs.
- Groundwater was not collected from well W22 in June 2018 or well W24 in July 2019 due to measurable LNAPL at the time of sampling. LNAPL has not been detected in either well since July 30, 2019.
- The rate of removal with all three SVE Systems has plateaued and appears to have reached a regulatory end-point.

Recommendations

- The next annual groundwater sampling event in June/July 2020 will include wells W22 and W24 provided LNAPL is not detected per the SMP.
- If downgradient well WCMW-9 produces enough water for sampling during the 2020 monitoring event, both filtered and unfiltered groundwater will be analyzed for arsenic, chromium and lead.
- Since contaminant concentrations at all three SVE Systems have become asymptotic to a low level over an extended period, Benchmark proposes to discontinue operation of all three systems. In the short-term, Benchmark will optimize the SVE systems and subsequently provide a site-wide verification soil sampling work plan for Department approval. The work plan will gather the data necessary to demonstrate the systems have achieved the remedial criteria outlined in Section 3.3.5.2 of the SMP.

5.0 DECLARATION/LIMITATION

Benchmark Environmental Engineering & Science, PLLC personnel conducted the annual site inspection for Brownfield Cleanup Program Site No. C905033, Olean, New York, according to generally accepted practices. This report complied with the scope of work provided to Solean LLC by Benchmark Environmental Engineering & Science, PLLC.

This report has been prepared for the exclusive use of Solean LLC. The contents of this report are limited to information available at the time of the site inspection. The findings herein may be relied upon only at the discretion of Solean LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering & Science, PLLC.

6.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10/Technical Guidance for Site Investigation and Remediation.* May 2010.
2. Benchmark Environmental Engineering & Science, PLLC. *Periodic Review Report, Olean Redevelopment Parcel 3, Olean New York, BCP Site No. C905033.* March 2018.
3. TurnKey Environmental Restoration, LLC. *Corrective Measures Report for SVE Well Repair, Solean (Olean Redevelopment Parcel 3) Site No. C905033.* October 9, 2018.
4. Benchmark Environmental Engineering & Science, PLLC. *Site Management Plan, Olean Redevelopment Parcel 3, Olean, New York, BCP Site No. C905033.* October 2015.
5. Benchmark Environmental Engineering & Science, PLLC. *Periodic Review Report, Olean Redevelopment Parcel 3, Olean New York, BCP Site No. C905033.* May 2017; revised July 2017.
6. Woodward & Curran. *Interim Remedial Measures Work Plan, ExxonMobil, Buffalo Street Properties, Olean New York.* September 31, 2009.
7. Woodward & Curran. *Interim Remedial Measure Report, Olean Redevelopment Parcels 1, 2, and 3, Olean, New York.* March 2011.
8. TurnKey Environmental Restoration, LLC. *Remedial Action Work Plan, Olean Redevelopment Property, Olean, New York, BCP Site Nos. 905031, 905032, 905033.* March 2014.
9. Benchmark Environmental Engineering & Science, PLLC. *Final Engineering Report, Olean Redevelopment Parcel 3, Olean, New York, BCP Site No. C905033.* October 2015
10. Benchmark Environmental Engineering & Science, PLLC. *Work Plan for Redevelopment Activities, Solean West (Olean Redevelopment Parcel 2) Site No. C905032 and Solean (Olean Redevelopment Parcel 3) Site No. C905033.* August 31, 2016.
11. Benchmark Environmental Engineering & Science, PLLC, in association with TurnKey Environmental Restoration, LLC. *Work Plan for Soil Cover Restoration Activities, Solean West (Olean Redevelopment Parcel 2) Site No. C905032, Solean (Olean Redevelopment Parcel 3) Site No. C905033.* July 19, 2017.
12. Benchmark Environmental Engineering & Science, PLLC. *Periodic Review Report, Olean Redevelopment Parcel 3, Olean New York, BCP Site No. C905033.* May 2017; revised July 2017.
13. Benchmark Environmental Engineering & Science, PLLC, in association with TurnKey Environmental Restoration, LLC. *Corrective Measures Work Plan for SVE Well Repair, Solean (Olean Redevelopment Parcel 3) Site No. C905033.* August 20, 2018.

TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1
LNAPL MONITORING AND COLLECTION LOG

OLEAN REDEVELOPMENT SITE 3 (BCP SITE NO. C905033)
OLEAN, NEW YORK

Date	Inspector's Initials	W22						W24					
		Product Present? (Y / N)	Product Depth (fbTOR)	Water Level (fbTOR)	Product Level (feet)	Product Recovered (gallons)	Change Absorbent Sock? (Y / N)	Product Present? (Y / N)	Product Depth (fbTOR)	Water Level (fbTOR)	Product Level (feet)	Product Recovered (gallons)	Change Absorbent Sock? (Y / N)
7/17/14	SF	Y	19.73	19.75	0.02	0	N	Y	23.3	23.68	0.38	0	N
10/29/14	JJR	Y	22.84	22.92	0.08	0	Removed	Y	25.31	25.75	0.44	0	Removed
11/5/14	JJR	Y	22.66	22.85	0.19	0	N	Y	24.99	25.06	0.07	0	N
11/23/14	JJR	Y	20.65	20.71	0.06	0	N	Y	24.84	25.11	0.27	0	N
12/15/14	JJR	Y	21.88	21.97	0.09	0	N	Y	25.11	25.34	0.23	0	N
1/15/15	JJR	Y	19.92	20.04	0.12	0	N	Y	23.19	23.39	0.2	0	N
2/27/15	BMG	Y	22.62	22.76	0.14	0	Y	Y	24.82	24.89	0.07	0	Y
4/6/15	BMG	Y	20.02	20.03	0.01	0	Y	Y	22.31	22.35	0.04	0	Y
7/2/15	BMG	N	NA	20.35	0	0	Y	Y	22.75	22.76	0.01	0	Y
9/2/15	PWW	Y	22.79	22.8	0.01	0	N	Y	24.98	25.05	0.07	0	N
9/29/15	PWW	Y	23.3	23.31	0.01	0	N	Y	25.35	25.41	0.06	0	N
10/14/15	PWW	Y	22.98	23.00	0.02	0	N	Y	24.91	25.00	0.09	0	N
10/28/15	ML	Y	23.00	23.02	0.02	0	N	Y	24.91	25.00	0.09	0	N
11/11/15	ML	Y	22.45	22.56	0.11	0	N	N	NA	24.41	0	0	N
11/24/15	ML	Y	22.06	22.16	0.10	0	N	Y	24.14	24.4	0.26	0	N
12/9/15	ML	N	NA	22.05	0.00	0	N	Y	23.84	23.86	0.02	0	N
12/22/15	ML	N	NA	21.87	0	0	N	Y	23.75	23.78	0.03	0	N
1/5/16	ML	N	NA	22.91	0	0	N	Y	22.39	22.41	0.02	0	N
2/2/16	ML	N	NA	20.86	0	0	N	Y	23.18	23.21	0.03	0	N
3/1/16	ML	Y	20.35	20.36	0.01	0	N	Y	22.33	22.37	0.04	0	N
4/12/16	BMG	Y	23.31	23.31	0	0	Y	Y	22.97	23.02	0.05	0	Y
5/4/16	ML	Y	20.55	20.76	0.21	0	N	Y	22.68	23.31	0.63	0	N
6/2/16	ML	Y	21.55	21.56	0.01	0	N	Y	23.86	23.87	0.01	0	N
7/6/16	BMG	Y	25.23	25.31	0.08	<0.1	Y	Y	25.18	25.23	0.05	<0.1	Y
8/1/16	BMG	Y	26.22	26.28	0.06	<0.1	Y	Y	26.08	26.13	0.05	<0.1	Y
9/9/16	BMG	Y	26.85	27.22	0.37	<0.1	Y	Y	26.14	26.15	0.01	<0.1	Y
10/27/16	BMG	Y	23.71	23.95	0.24	<0.1	Y	Y	23.71	23.72	0.01	<0.1	Y
11/22/16	BMG	Y	24.07	24.62	0.55	0.1	Y	N	NA	24.1	0	0	N
12/21/16	BMG	N	NA	23.82	0	0	N	N	NA	23.48	0	0	N
1/5/17	BMG	N	NA	22.72	0	0	N	N	NA	22.28	0	0	N
2/14/17	BMG	N	NA	21.11	0	0	N	N	NA	20.76	0	0	N
3/28/17	BMG	N	NA	22.21	0	0	N	N	NA	22.18	0	0	N
4/11/17	BMG	N	NA	21.61	0	0	N	N	NA	21.22	0	0	N
5/30/17	BMG	N	NA	22.26	0	0	N	N	NA	22.28	0	0	N
6/28/17	BMG	N	NA	23.33	0	0	N	N	NA	23.40	0	0	N
7/24/17	BMG	Y	24.2	24.21	0.01	0.05	Y	N	NA	24.12	0	0	N
8/9/17	CFD	N	NA	23.60	0	0	N	N	NA	24.76	0	0	N
9/26/17	CFD	N	NA	25.95	0	0	N	N	NA	25.46	0	0	N
10/26/17	CFD	Y	26.31	26.40	0.09	0.15	Y	N	NA	25.72	0	0	N
11/28/17	CFD	N	NA	26.53	0	0	N	N	NA	25.23	0	0	N
12/26/17	CFD	N	NA	25.23	0	0	N	N	NA	24.27	0	0	N
1/25/18	CFD	Y	24.7	24.74	0.04	0.1	Y	N	NA	23.89	0	0	N
2/15/18	CFD	Y	20.91	20.93	0.02	0.5	Y	Y	22.39	22.4	0.01	0.2	Y
3/12/18	CFD	N	NA	19.45	0	0	N	N	NA	20.72	0	0	N
4/27/18	CFD	Y	22.41	22.45	0	0.2	Y	N	NA	21.06	0	0	N
5/24/18	CFD	Y	21.57	21.62	0	0.2	Y	N	NA	21.34	0	0	N
6/28/18	CFD	N	NA	19.92	0	0	N	Y	22.18	22.20	0	<0.1	Y
7/17/18	CFD	N	NA	21.40	0	0	N	N	NA	24.48	0	0	N
8/11/18	CFD	N	NA	21.35	0	0	N	N	NA	24.24	0	0	N
9/24/18	CFD	Y	21.78	21.82	0.04	0.2	Y	N	NA	23.50	0	0	N
10/15/18	CFD	N	NA	21.14	0	0	N	N	NA	22.78	0	0	N
11/29/18	CFD	Y	21.46	21.50	0.04	0.1	Y	N	NA	23.14	0	0	N
12/20/18	CFD	N	NA	23.67	0	0	N	N	NA	22.84	0	0	N
1/21/19	CFD	Y	21.22	21.28	0.06	0.2	Y	N	NA	21.07	0	0	N
2/13/19	CFD	N	NA	20.88	0	0	N	N	NA	20.59	0	0	N
3/21/19	CFD	N	NA	21.15	0	0	N	Y	20.75	20.81	0.06	0.25	Y
4/24/19	CFD	N	NA	20.25	0	0	N	Y	22.49	22.53	0.04	0.30	Y
5/24/19	CFD	Y	20.60	20.64	0.04	0.2	Y	Y	21.26	21.27	0.01	0	Y
6/21/19	CFD	Y	20.48	20.50	0.02	0.1	Y	Y	21.15	21.18	0.03	0.10	Y
7/30/19	CFD	N	NA	21.67	0	0	N	N	NA	22.55	0	0	N
8/23/19	CFD	N	NA	21.84	0	0	N	N	NA	22.56	0	0	N
9/30/19	CWE	N	NA	22.65	0	0	N	N	NA	24.71	0	0	N
Total Quantity of LNAPL Recovered Since Startup						2.1 gallons						0.9 gallons	
Total Quantity of LNAPL Recovered (10/9/18-10/9/19)						0.6 gallons						0.7 gallons	

Notes:
Y = YES
N = NO
NA = NOT APPLICABLE

Data collected pre-remediation; all other data collected post-remediation.
PRR reporting period.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 2
GROUNDWATER MONITORING WELL WATER LEVELS

OLEAN REDEVELOPMENT PARCEL 3
OLEAN, NEW YORK

Well	Top of Casing (TOC) Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Liquid Elevation (ft)
		8/25/2012			7/17 & 18/2014			12/15 & 12/17 & 18/2014			4/14/2015			9/2 & 9/3/2015			8/9/2016			12/14/2016			5/16 to 5/18/17			12/20 to 12/22/17			6/13/2018			12/19 to 12/20/18			7/10/2019		
MW-4	1431.76	23.89	0	1407.87	21.00	0	1410.76	22.34	0	1409.42	19.23	0	1412.53	23.45	0	1408.31	24.80	0	1406.96	22.20	0	1409.56	20.18	0	1411.58	22.60	0	1409.16	21.64	0	1410.12	22.60	0	1409.16	20.72	0	1411.04
MW-5	1432.30	22.50	0	1409.80	--	--	--	--	--	--	18.30	0	1414.00	21.77	0	1410.53	23.48	0	1408.82	20.97	0	1411.33	17.78	0	1414.52	20.77	0	1411.53	19.05	0	1413.25	20.77	0	1411.53	18.21	0	1414.09
MWSW	1430.30	24.37	0	1407.76	21.44	0	1410.69	22.52	0	1409.61	20.20	0	1411.93	24.94	0	1407.19	Damaged	--	--	21.03	0	1409.27	18.96	0	1411.34	21.44	0	1408.86	22.46	0	1407.84	21.44	0	1408.86	19.54	0	1410.76
WCMW-9	1431.85	17.71	0	1414.14	14.35	0	1417.50	10.69	0	1421.16	11.94	0	1419.91	Dry	0		Dry	0	< 1412.74	11.82	0	1420.03	12.25	0	1419.60	10.99	0	1420.86	16.40	0	1415.45	--	--	--	12.12	0	1419.73
W18	1434.49	25.21	0	1407.87	--	--	--	--	--	--	20.97	0	1413.52	25.72	0	1407.36	Dry	0	< 1407.87	24.41	0	1410.08	22.25	0	1412.24	24.86	0	1409.63	23.93	0	1410.56	24.86	0	1409.63	22.99	0	1411.50
W22	1433.04	23.43	0.11	1408.31	19.75	0.02	1411.91	21.97	0.09	1409.75	--	--	--	23.80	0.01	1407.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.93	0	1411.11
W24	1433.09	24.52	0	1408.57	23.68	0.38	1409.74	25.34	0.23	1407.95	--	--	--	25.05	0.07	1408.10	--	--	--	--	--	--	--	--	--	--	--	--	23.00	0	1410.09	--	--	--	22.15	0.03	1410.97
W29	1429.91	24.37	0	1407.57	21.41	0	1410.53	22.91	0	1409.03	20.20	0	1411.74	23.91	0	1408.03	25.08	0	1406.86	20.62	0	1409.29	18.40	0	1413.54	21.04	0	1408.87	20.05	0	1409.86	21.04	0	1408.87	19.10	0	1410.81

Notes:

Depth to water from top of well riser.

1) Wells were inaccessible due to construction activities
2) W18 well riser was increased by 1.41 feet in May 2015. Revised well top of riser elevation is 1434.49'. Historic top of riser elevation was 1433.08'.
3) W22 well riser was increased by 1.40 feet (based on TOC delta) in October 2015. Revised well top of riser elevation is 1433.04'. Historic top of riser elevation was 1431.64'.
4) W14 well riser was increased by 3.47 feet (based on TOC delta) in November 2015. Revised well top of riser elevation is 1432.14'. Historic top of riser elevation was 1428.67'.
5) MWSW well riser was decreased by 1.83 feet (based on DTB delta) in October 2016. Revised well top of riser elevation is 1430.30'. Historic top of riser elevation was 1432.13'.
6) W29 well riser was decreased by 2.03 feet (based on DTB delta) in October 2016. Revised well top of riser elevation is 1429.91'. Historic top of riser elevation was 1431.94'.
7) W5 well riser was increased by 7.32 feet (based on TOC delta) in August 2016. Revised well top of riser elevation is 1432.25'. Historic top of riser elevation was 1424.93'.

Acronyms:

NA = Not available
-- = Not measured
Shaded cells are data collected pre-remediation; all other data collected post-remediation.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 3

2008-2019 GROUNDWATER ANALYTICAL SUMMARY - ORGANICS

OLEAN REDEVELOPMENT SITE 3
OLEAN, NEW YORK

Parameter[1]	GWQS/GV[2]	Sample Location																						
		MWSW									MW-4													
		07/18/14	12/18/14	04/14/15	09/02/15	12/15/16	05/18/17	12/21/17	06/11/18	07/09/19	08/28/08	11/06/09	08/11/10	11/11/10	02/15/11	05/17/11	08/16/11	11/15/11	02/22/12	07/18/14	12/18/14	04/14/15	09/02/15	08/10/16
Volatile Organic Compounds (ug/L)																								
1,2,4-Trimethylbenzene	**5**	**29.1**	**229**	**12.2**	**21**	**33.6**	**45.4**	**218**	**294**	ND	**671**	**635**	**614**	**577**	**313**	**113**	**361**	**498**	**248**	**257**	**398**	**226**	**377**	**210**
1,2-Dichlorobenzene	**3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**--**	NA	1.38	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA
1,3,5-Trimethylbenzene	**5**	ND	2.19	ND	ND	1.39	1.29	4.13	**17.2**	ND	**182**	**180**	**133**	**132**	**41.1**	**23**	**80.5**	**95.5**	**53.8**	**44**	**94.2**	**29.6**	**43.1**	**35.1**
Acetone	**50**	**72**	ND	ND	ND	**77.9**	ND	ND	ND	ND	ND	ND	ND	5.8	ND	13.8	ND	ND	9.8	44.1	ND	**52.4**	ND	ND
Benzene	**1**	**48.9**	**156**	**6.78**	**73.1**	**48.7**	**34.2**	**47.7**	**90.1**	ND	**47.8**	**35.3**	**56.7**	**32.8**	**48.5**	**16.3**	**47.1**	**44.9**	**31.4**	**28**	**45.7**	**37.5**	**38.3**	**40.2**
Chlorobenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.95	0.7	1.1	ND	ND	0.56	ND	0.27	ND	ND	ND	ND	ND
Chloroform	**7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**--**	38.7	NA	16.5	20.2	55.6	87.6	190	208	7.2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	177	NA	171	247	101
Ethylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.97	0.73	0.85	0.71	ND	ND	0.56	0.64	0.43	ND	ND	ND	ND	ND
Isopropylbenzene	**5**	**8.47**	**14**	1.01	4.74	**6.29**	**5.24**	**18.5**	**23.1**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10.8**	**18.3**	**12.1**	**17.3**	**13**
m&p-Xylene	**--**	ND	4.52	ND	ND	2.63	2.28	5.2	12.7	ND	33.9	21.5	20.8	14.5	8.3	4.8	9.4	9.4	ND	6.06	17.7	2.61	3.49	ND
Methylcyclohexane	**--**	44.4	NA	5.77	ND	25.9	43.1	104	180	5.5 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	253	NA	137	189	82
Methyl ethyl ketone	**50**	ND	ND	ND	ND	**126**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**5**	ND	ND	ND	ND	ND	ND	1.28	2.39	ND	ND	ND	ND	ND	ND	ND	0.91	0.7	0.58	ND	ND	1.69	ND	ND
n-Propylbenzene	**5**	ND	**5.34**	ND	2.06	4.84	4.44	**14.5**	**24.1**	ND	**10.3**	**7.6**	**10.1**	**7.8**	**6.9**	2.3	**6.5**	**6.1**	4.1	4.15	**6.28**	4.62	4.12	ND
p-Isopropyltoluene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	1.99	ND	ND
o-Xylene	**--**	2.71	3.46	ND	1.25	1.41	1.34	3.31	4.25	ND	4.8	4.1	4.7	4.4	2.6	1.3	3.3	3.3	ND	2.44	4.17	2.52	3.01	ND
sec-Butylbenzene	**5**	1.57	1.59	ND	ND	1.32	1.24	3.25	**6.27**	ND	**6**	4.7	**5.2**	**5.1**	3.7	1.3	3.6	3.2	2.1	2.77	3.39	3.39	4.29	ND
tert-Butylbenzene	**5**	1.37	1.86	ND	ND	ND	ND	1.52	2.2	ND	ND	1.9	2.1	2	1.3	ND	1.3	1.2	0.91	1.18	1.56	1.22	1.6	ND
Toluene	**5**	1.62	3.78	ND	ND	1.53	1.01	2.7	**5.75**	ND	**6.4**	5	**6.1**	4.4	2.8	3.3	**5.3**	5	4.3	3.59	**5.65**	2.3	2.68	ND
Total xylenes	**5**	2.71	**7.98**	ND	1.25	4.04	3.62	**8.51**	**17.0**	ND	**38.7**	**25.5**	**25.6**	**18.8**	**10.9**	**6.1**	**12.7**	**26.9**	**23.4**	**8.5**	**21.8**	**5.13**	**6.50**	ND
Total VOCs	**--**	*252*	*431*	*42*	*124*	*391*	*231*	*623*	*887*	*13*	*1,002*	*922*	*880*	*806*	*439*	*185*	*533*	*695*	*379*	*843*	*617*	*691*	*937*	*481*
Total TICs	**--**	*550*	*ND*	*62.1*	*111*	*251*	*238*	*381*	*696*	*ND*	*911*	*1,861*	*920*	*2,044*	*1,670*	*270*	*986*	*967*	*419*	*1,661*	*ND*	*312*	*479*	*231*
Semi-Volatile Organic Compounds (ug/L)																								
Benzyladehyde	**--**	24.5	NA	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND
Benzo(a)anthracene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Chrysene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Dibenzofuran	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Diethyl phthalate	**50**	ND	ND	ND	ND	34.1	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Fluorene	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
3 & 4 Methylphenol	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	**14.2**	ND	ND
1-Methylnaphthalene	**--**	NA	4.5	NA	NA	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	5.57	ND	NA	ND
Phenanthrene	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.96	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Phenol	**1**	ND	ND	ND	ND	**27.1**	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Pyrene	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Total SVOCs	**--**	*25*	*4.5*	*ND*	*ND*	*61*	*ND*	*ND*	*ND*	*ND*	*1.4*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*5.6*	*14*	*ND*	*ND*
Total TICs	**--**	*7.97*	*ND*	*468*	*458*	*53*	*41*	*384*	*66*	*308*	*1,343*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*241*	*ND*	*153*	*262*	*350*

Notes:

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3. Isopropyl alcohol detected in field blank; result not used in VOC TIC totals.
4. Well WCMW9 did not recharge; therefore, sample was not collected in June 2018.

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BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 3

2008-2019 GROUNDWATER ANALYTICAL SUMMARY - ORGANICS

OLEAN REDEVELOPMENT SITE 3
OLEAN, NEW YORK

Parameter[1]	GWQS/GV[2]	Sample Location																			
		MW-4					MW-5														
		12/14/16	05/18/17	12/21/17	06/11/18	07/09/19	08/27/08	11/09/09	08/12/10	11/11/10	02/15/11	05/17/11	08/16/11	11/14/11	02/21/12	08/11/16	12/15/16	05/17/17	12/21/17	06/11/18	07/09/19
Volatile Organic Compounds (ug/L)																					
1,2,4-Trimethylbenzene	**5**	**174**	**26.7**	**99.3**	**94.6**	ND	**404**	**224**	**548**	**77.8**	**353**	**413**	**412**	**370**	**580**	ND	**116**	**14.5**	**83.3**	**24.6**	ND
1,2-Dichlorobenzene	**3**	ND	ND	ND	ND	ND	ND	0.4	ND	ND	ND	0.79	0.63	ND	0.73	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**--**	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
1,3,5-Trimethylbenzene	**5**	**18.7**	ND	**6.74**	2.99	ND	1.7	ND	2	ND	2.2	**56.1**	**13.3**	2.6	**9**	ND	ND	ND	ND	1.94	ND
Acetone	**50**	ND	ND	ND	ND	42 J	ND	14.8	ND	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	**1**	**20.7**	**7.31**	**15.6**	**9.99**	**6.9 J**	**1.5**	0.55	ND	ND	ND	0.58	0.95	**1.4**	0.39	ND	**2.18**	ND	**1.34**	ND	ND
Chlorobenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**--**	91.9	18.4	72.2	60.1	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	144	13.7	55.5	16.5	3.7 J
Ethylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**5**	**12.2**	3.78	**9.11**	**6.82**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.06	3.48	ND	3.95	1.71	ND
m&p-Xylene	**--**	2.25	ND	ND	ND	ND	1.1	1.3	ND	ND	2.1	46.1	12.4	12.4	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	**--**	55.9	7.95	21.7	18.2	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	121	11	15.4	ND	2.1 J
Methyl ethyl ketone	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**84.6**	ND	ND	ND	ND
n-Butylbenzene	**5**	ND	ND	ND	ND	ND	ND	1.1	ND	ND	1.6	ND	0.68	0.92	0.64	ND	ND	ND	ND	ND	ND
n-Propylbenzene	**5**	3.92	1.05	2.19	1.93	ND	**15.4**	**9**	**19.4**	2.2	**14.2**	3.9	**9.6**	**12.7**	**16**	1.68	2.12	ND	2.58	1.39	ND
p-Isopropyltoluene	**5**	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	1.02	ND	ND	ND	ND
o-Xylene	**--**	2.57	ND	1.8	ND	ND	3.1	1.9	1.9	0.54	1.6	7.1	4.6	4.6	ND	ND	1.39	ND	1.71	ND	ND
sec-Butylbenzene	**5**	2.59	ND	2.29	2.47	ND	4.2	3.5	**7.1**	1.9	**5.4**	2.2	3.7	4.1	5	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	**5**	1.08	ND	ND	ND	ND	ND	0.75	ND	0.58	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**5**	1.37	ND	1.03	ND	ND	ND	ND	ND	ND	ND	0.42	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Total xylenes	**5**	4.82	ND	1.8	ND	ND	4.3	3.2	1.9	0.54	3.7	**53.2**	**17.1**	**7.70**	5	ND	1.39	ND	1.71	ND	ND
Total VOCs	**--**	*392*	*65*	*234*	*197*	*115*	*435*	*261*	*580*	*91*	*384*	*583*	*476*	*416*	*617*	*4*	*477*	*39*	*165*	*46*	*6*
Total TICs	**--**	*199*	*100*	*113*	*181*	*80*	*1,295*	*450*	*1,181*	*1,310*	*1,694*	*1,678*	*1,013*	*1,292*	*1,667*	*231*	*173*	*72*	*283*	*99*	*ND*
Semi-Volatile Organic Compounds (ug/L)																					
Benzyladehyde	**--**	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	**0.002**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**--**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Chrysene	**0.002**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Dibenzofuran	**--**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Diethyl phthalate	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Fluorene	**50**	ND	ND	ND	ND	ND	1.1	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
3 & 4 Methylphenol	**1**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	**47.4**	**65.5**	ND	ND	ND
1-Methylnaphthalene	**--**	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Phenanthrene	**50**	ND	ND	ND	ND	ND	1.1	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Phenol	**1**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	**10**	ND	ND	ND
Pyrene	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Total SVOCs	**--**	*ND*	*ND*	*ND*	*ND*	*ND*	*2.2*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*47*	*76*	*ND*	*ND*	*ND*
Total TICs	**--**	*100*	*109*	*115*	*104*	*656*	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*447*	*1,692*	*60*	*21*	*132*	*2,802*

Notes:

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BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 3

2008-2019 GROUNDWATER ANALYTICAL SUMMARY - ORGANICS

OLEAN REDEVELOPMENT SITE 3
OLEAN, NEW YORK

Parameter[1]	GWQS/GV[2]	Sample Location																					
		W-18											W-29										
		08/26/08	11/06/09	08/10/10	11/09/10	02/16/11	05/17/2011	12/14/16	05/17/17	12/21/17	06/11/18	07/10/19	08/30/12	07/18/14	12/18/14	04/13/15	09/02/15	08/10/16	12/15/16	05/17/17	12/21/17	06/11/18	07/09/19
Volatile Organic Compounds (ug/L)																							
1,2,4-Trimethylbenzene	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	**600**	**168**	**135**	**16.3**	**5.6**	**11.4**	1.1	ND	ND	ND	ND
1,2-Dichlorobenzene	**3**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**--**	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	ND
1,3,5-Trimethylbenzene	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	**84**	ND	**12.2**	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	**50**	8.6	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	**1**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	**4.8**	**5.16**	**1.72**	ND	**2.09**	**1.3**	ND	ND	ND	1.3	ND
Chlorobenzene	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**7**	0.48	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**--**	NA	NA	NA	NA	NA	NA	ND	**ND**	**ND**	ND	ND	ND	39.7	NA	7.96	ND	12.5	ND	ND	ND	ND	ND
Ethylbenzene	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**5**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	**14**	**5.49**	4.98	1.30	3.64	5.44	ND	ND	ND	ND	ND
m&p-Xylene	**--**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	4.34	3.13	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	**--**	NA	NA	NA	NA	NA	NA	ND	**ND**	**ND**	ND	ND	ND	49.5	NA	8.51	ND	21.5	ND	ND	ND	ND	ND
Methyl ethyl ketone	**50**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	1.13	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	**5**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	**--**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	4.38	2.6	ND	1.8	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	**5**	1.3	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	**10**	2.65	3.6	1.17	1.91	3.37	ND	ND	ND	ND	ND
tert-Butylbenzene	**5**	1.9	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	3.3	1.89	2.08	ND	1.11	1.64	ND	ND	ND	ND	ND
Toluene	**5**	0.53	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	2.19	1.99	ND	ND	ND	ND	ND	ND	ND	ND
Total xylenes	**5**	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	**8.72**	**5.73**	ND	1.8	ND	ND	ND	ND	ND	ND
Total VOCs	**--**	*13*	*NA*	*NA*	*NA*	*NA*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*718*	*292*	*174*	*35*	*18*	*57*	*1.1*	*ND*	*ND*	*1.3*	*ND*
Total TICs	**--**	*ND*	*NA*	*NA*	*NA*	*NA*	*NA*	*6*	*8*	*ND*	*ND*	*ND*	*1,625*	*624*	*ND*	*173*	*222*	*352*	*18*	*16*	*9*	*4*	*ND*
Semi-Volatile Organic Compounds (ug/L)																							
Benzyladehyde	**--**	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	**0.002**	**1.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**--**	0.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	**0.002**	**1.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	**--**	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	**50**	1.9	ND	0.45	0.59	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3 & 4 Methylphenol	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	**--**	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	NA	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND
Phenanthrene	**50**	4.4	ND	0.67	0.7	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	**50**	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total SVOCs	**--**	*14*	*ND*	*1.1*	*1.3*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Total TICs	**--**	*ND*	*156*	*40.0*	*219*	*74.2*	*234*	*ND*	*ND*	*39*	*ND*	*303*	*NA*	*62*	*ND*	*734*	*363*	*339*	*54*	*3*	*19*	*ND*	*333*

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BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 3

2008-2019 GROUNDWATER ANALYTICAL SUMMARY - ORGANICS

OLEAN REDEVELOPMENT SITE 3
OLEAN, NEW YORK

Parameter[1]	GWQS/GV[2]	Sample Location								
		WCMW-9 [3,4]							W24	W22
		07/18/14	12/18/14	04/14/15	12/14/16	05/17/17	12/21/17	07/10/19	06/12/18	07/10/19
Volatile Organic Compounds (ug/L)										
1,2,4-Trimethylbenzene	**5**	**12.2**	ND	ND	ND	ND	ND	ND	**10.5**	ND
1,2-Dichlorobenzene	**3**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**--**	NA	ND	NA	NA	NA	NA	ND	ND	ND
1,3,5-Trimethylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	**50**	**51.3**	ND	ND	ND	ND	ND	11	ND	**89 J**
Benzene	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**7**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**--**	ND	NA	ND	ND	ND	ND	ND	34.7	ND
Ethylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
m&p-Xylene	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	**--**	ND	NA	ND	ND	ND	ND	ND	11.1	93
Methyl ethyl ketone	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total xylenes	**5**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	**--**	*64*	*ND*	*ND*	*ND*	*ND*	*ND*	*11*	*56*	*182*
Total TICs	**--**	*34*	*ND*	*6*	*2*	*4*	*ND*	*ND*	*200*	*9,350*
Semi-Volatile Organic Compounds (ug/L)										
Benzyladehyde	**--**	ND	NA	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	**50**	ND	ND	ND	ND	ND	ND	0.37 J	ND	ND
Fluorene	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND
3 & 4 Methylphenol	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	**--**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	**50**	ND	ND	ND	ND	ND	ND	1.6 JB	ND	ND
Phenol	**1**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	**50**	ND	ND	ND	ND	ND	ND	ND	ND	7.3 J
Total SVOCs	**--**	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.37*	*ND*	*7.3*
Total TICs	**--**	*ND*	*ND*	*ND*	*7*	*18*	*79*	*216*	*42*	*3,064*

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TABLE 4

2008-2019 GROUNDWATER ANALYTICAL SUMMARY - METALS

OLEAN REDEVELOPMENT SITE 3
OLEAN, NEW YORK

Parameter[1]	GWQS/GV[2]	Sample Location																	
		MWSW					MW-4							MW-5					
		12/14/16	05/18/17	12/21/17	06/11/18	07/09/19	08/28/08	08/10/16	12/14/16	05/18/17	12/21/17	06/11/18	07/09/19	08/27/08	08/11/16	12/14/16	05/17/17	12/21/17	06/11/18	07/09/19
Metals (ug/L)																			
Arsenic	**25**	**36.9**	10.3	**35.3**	0.0147	ND	17.3	14.4	10.7	ND	ND	ND	6.9 J	ND	12.4	ND	17.1	14.1	ND	8.7 J
Chromium	**50**	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	**25**	19.9	6.6	19.2	ND	ND	ND	6.2	ND	ND	ND	ND	ND	ND	17.8	ND	ND	ND	ND	4.5 J

Notes:

1. Only compounds of concern (Arsenic, chromium, and lead) are presented in this table.
2. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV), 6 NYCRR Part 703.
3. Sample results not considered representative of actual groundwater concentrations since turbidity of sample was >1,000 NTU; no filtered sample was collected.

Definitions:

ND = Parameter not detected above laboratory detection limit.
NS = Not sampled since well went dry.

BOLD = Concentration exceeds GWQS/GV.
= Dates highlighted in blue indicate samples collected pre-remediation; all other samples collected post-remediation.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 4

2008-2019 GROUNDWATER ANALYTICAL SUMMARY - METALS

OLEAN REDEVELOPMENT SITE 3
OLEAN, NEW YORK

Parameter[1]	GWQS/GV[2]	Sample Location															
		W-18					W-29						WCMW-9			W24	W22
		12/14/16	05/17/17	12/21/17	06/11/18	07/09/19	08/10/16	12/14/16	05/17/17	12/21/17	06/11/18	07/09/19	05/17/17	12/21/17	7/10/2019 [3]	06/12/18	07/09/19
Metals (ug/L)																	
Arsenic	**25**	ND	ND	ND	ND	ND	ND	ND	ND	**27.5**	ND	ND	NS	ND	**910**	0.01	24
Chromium	**50**	ND	ND	ND	ND	2 J	ND	ND	ND	ND	0.0058	5.4	NS	ND	22	ND	11
Lead	**25**	ND	ND	ND	ND	ND	5	**30**	9	ND	ND	ND	NS	ND	**210**	0.0108	**61**

Notes:

1. Only compounds of concern (Arsenic, chromium, and lead) are presented in this table.
2. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV), 6 NYCRR Part 703.
3. Sample results not considered representative of actual groundwater concentrations since turbidity of sample was >1,000 NTU; no filtered sample was collected.

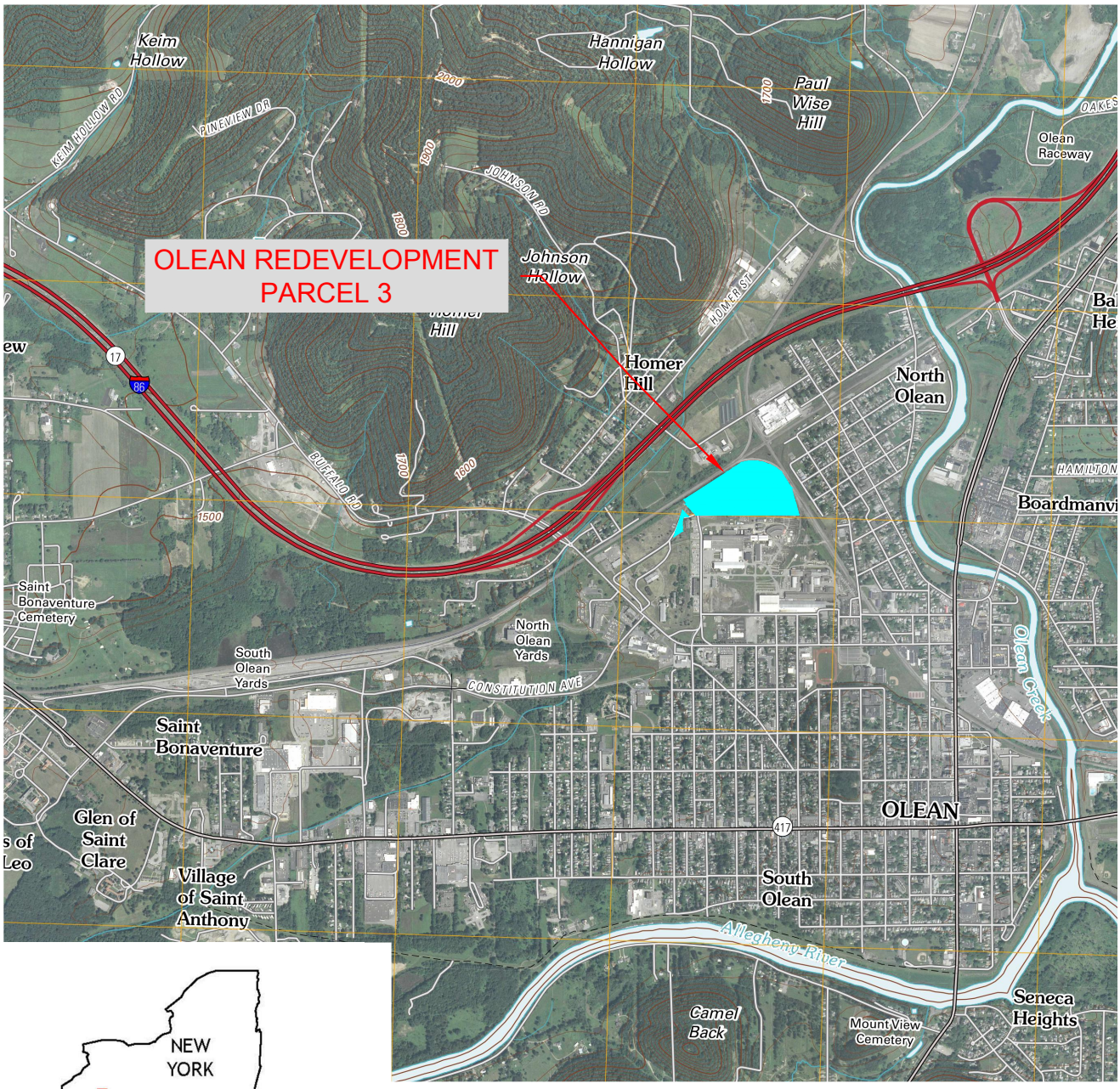
Definitions:

ND = Parameter not detected above laboratory detection limit.
NS = Not sampled since well went dry.

BOLD = Concentration exceeds GWQS/GV.
= Dates highlighted in blue indicate samples collected pre-remediation; all other samples collected post-remediation.

FIGURES

FIGURE 1



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0334-016-001

DATE: JULY 2019

DRAFTED BY: CMC

SITE LOCATION AND VICINITY MAP

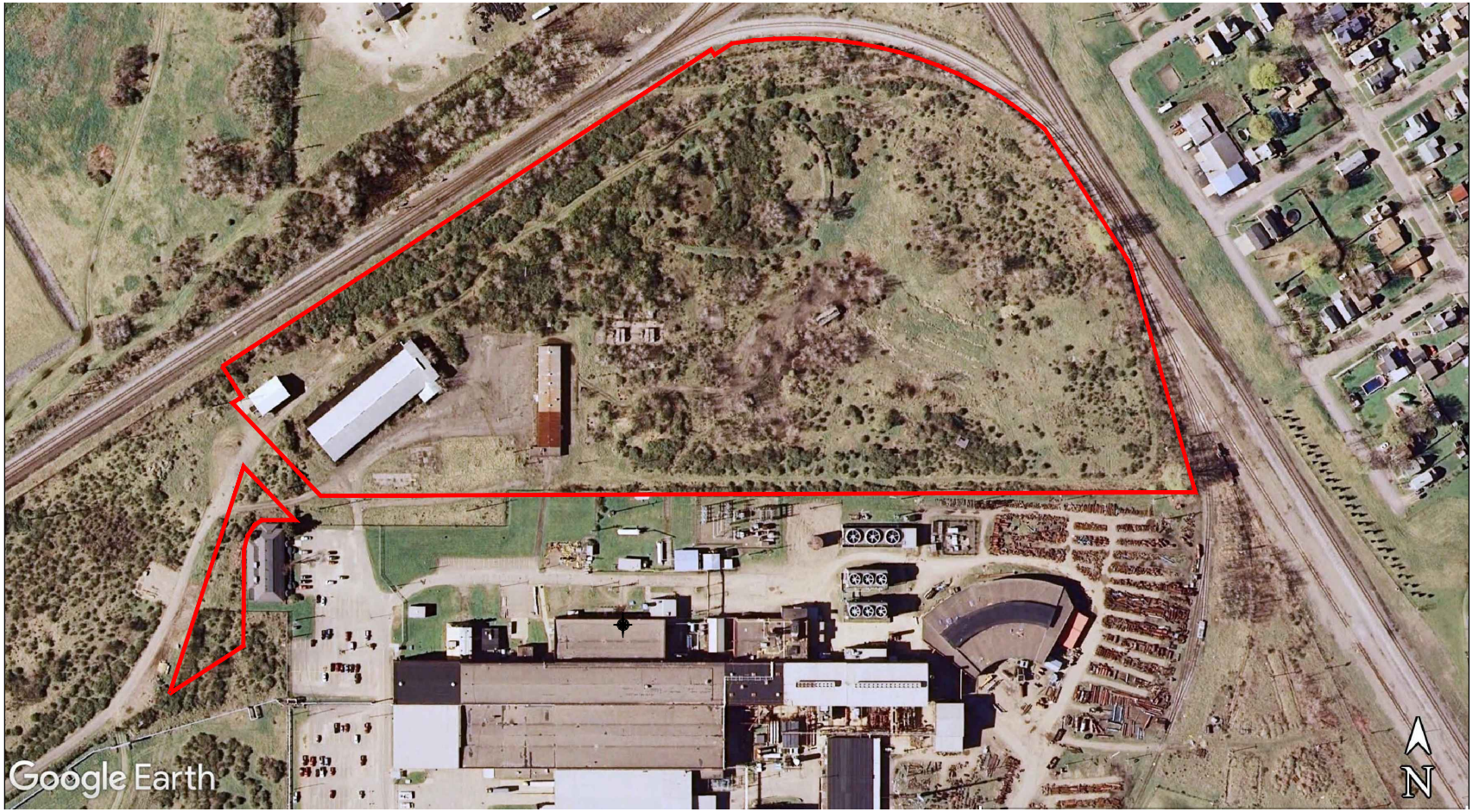
PERIODIC REVIEW REPORT

OLEAN REDEVELOPMENT SITE 3
NYSDEC BCP SITE NO. C905033
OLEAN, NEW YORK

PREPARED FOR

SOLEAN, LLC

F:\CAD\Benchmark\Solean\PRR\PRR 2019\Figure 1; Site Location and VicinityORP3.dwg, 6/11/2019 11:55:44 AM, DWG To PDF.pc3



APPROXIMATE SCALE 1" = 300'

Property Boundary (Approximate)

Base Image Google Earth April 2007

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

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

PROJECT NO.: 0334-016-001

DATE: JULY 2019

DRAFTED BY: CMC

SITE PLAN PRE-REMEDIATION

PERIODIC REVIEW REPORT

OLEAN REDEVELOPMENT PARCEL 3
NYSDEC BCP SITE NO. C905033
OLEAN, NEW YORK

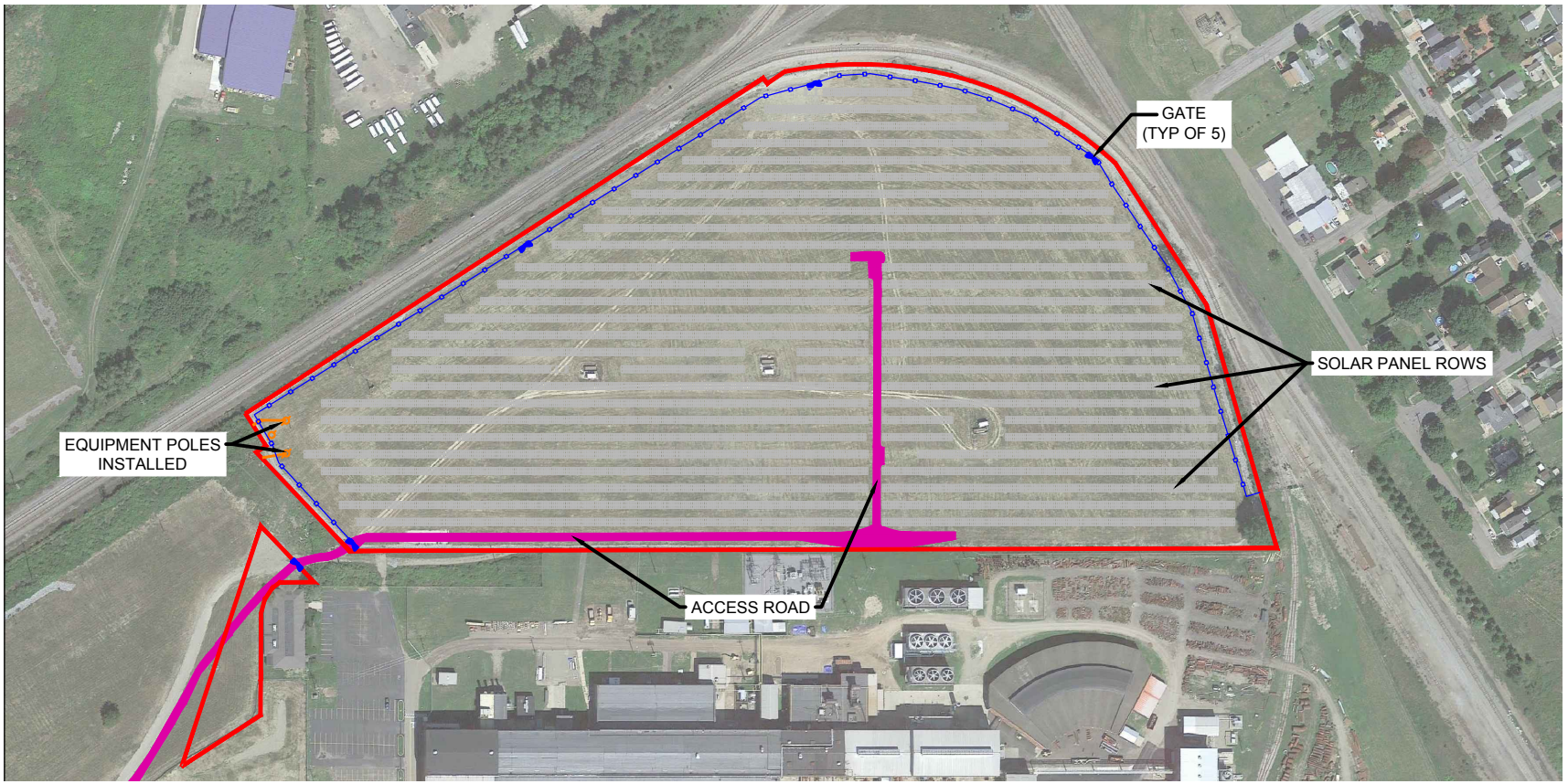
PREPARED FOR

SOLEAN LLC

FIGURE 2

F:\CAD\Benchmark\Solean\PRR\PRR 2018\Figure 2; Site Plan Pre-Remediation.dwg, 6/11/2019 11:46:16 AM, DWG To PDF.pc3

F:\CAD\Benchmark\Solean\PRR\PRR 2019\Figure 3; Site Plan Post Development Aerial.dwg, 8/23/2019 8:56:39 AM, DWG To PDF.pc3



N

Approximate Scale 1" = 300'

LEGEND

Property Boundary (Approximate)

Conduit penetrations of cover system during redevelopment

Power Pole installed during redevelopment

New Fence installed during redevelopment

Base Image Google Earth August 2016

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

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

PROJECT NO.: 0334-016-001

DATE: JULY 2019

DRAFTED BY: CMC

SITE PLAN POST-REMEDIATION

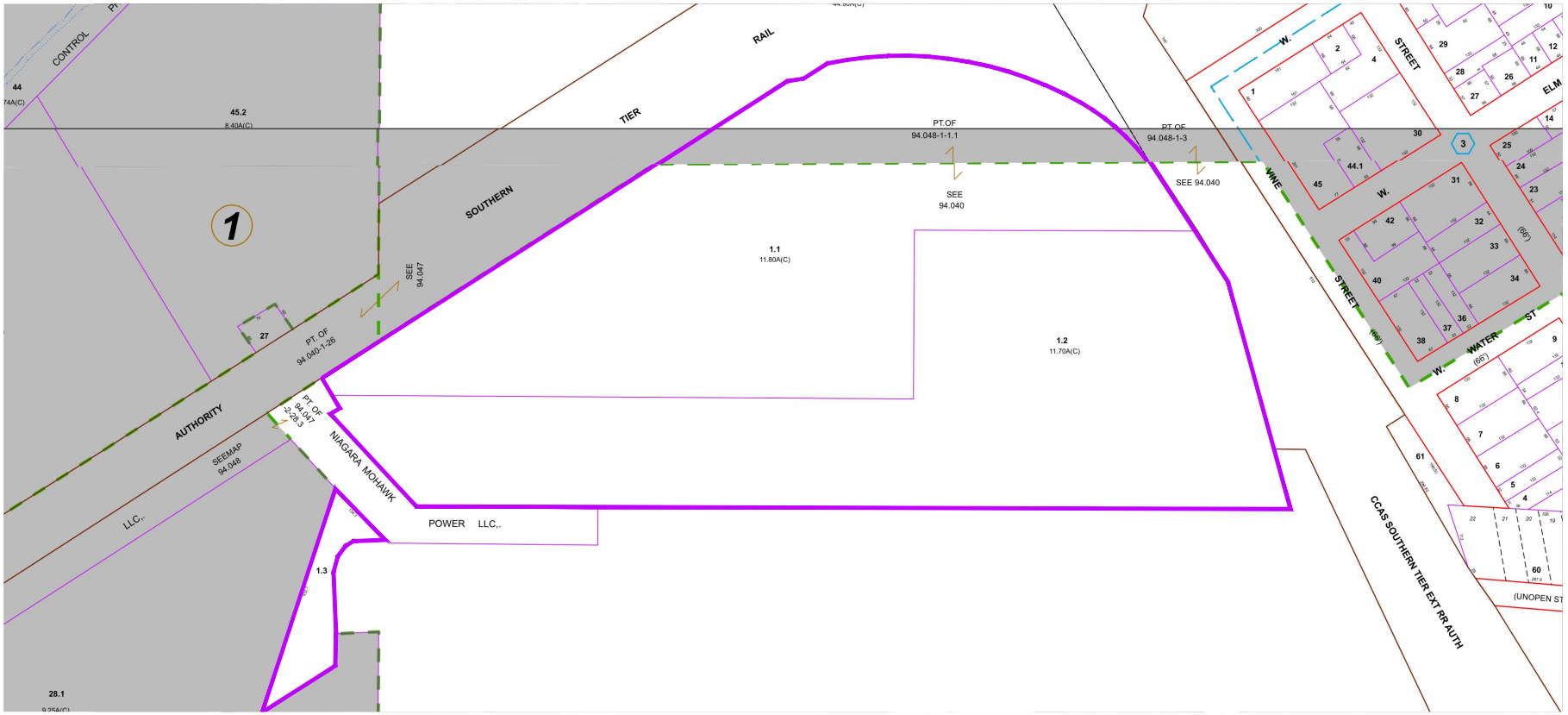
PERIODIC REVIEW REPORT

OLEAN REDEVELOPMENT PARCEL 3
NYSDEC BCP SITE NO. C905033
OLEAN, NEW YORK

PREPARED FOR

SOLEAN, LLC

FIGURE 3



N

LEGEND

Property Boundary (Approximate)

Approximate Scale 1" = 300'

Tax Map per City of Olean; sheets 94.040 & 94.048

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0334-016-001

DATE: JULY 2019

DRAFTED BY: CMC

SURVEY / TAX PARCEL MAP

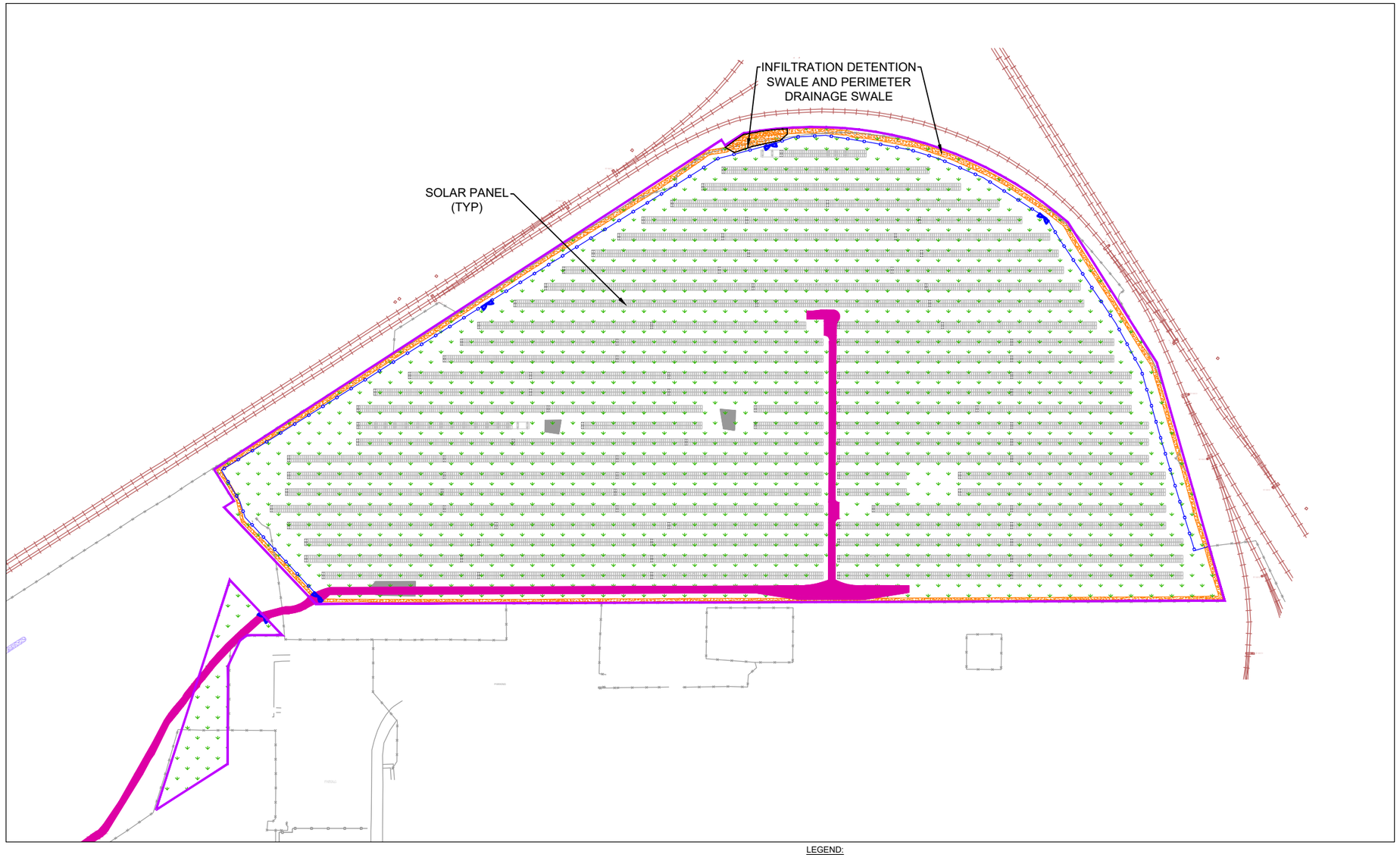
PERIODIC REVIEW REPORT

OLEAN REDEVELOPMENT PARCEL 3
NYSDEC BCP SITE NO. C905033
OLEAN, NEW YORK

PREPARED FOR

SOLEAN, LLC

FIGURE 4



N

200' 0' 200' 400'

SCALE: 1 INCH = 200 FEET
SCALE IN FEET
(approximate)

LEGEND:

- OLEAN REDEVELOPMENT BCP SITE 3
- APPROXIMATE LOCATION OF CONCRETE COVER SYSTEM
- APPROXIMATE LOCATION OF ACCESS ROAD (12' MIN. GRAVEL)
- FENCE
- VEGETATED SOIL COVER

DATE: JULY 2019
DRAFTED BY: CMC

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

JOB NO.: 0343-016-001

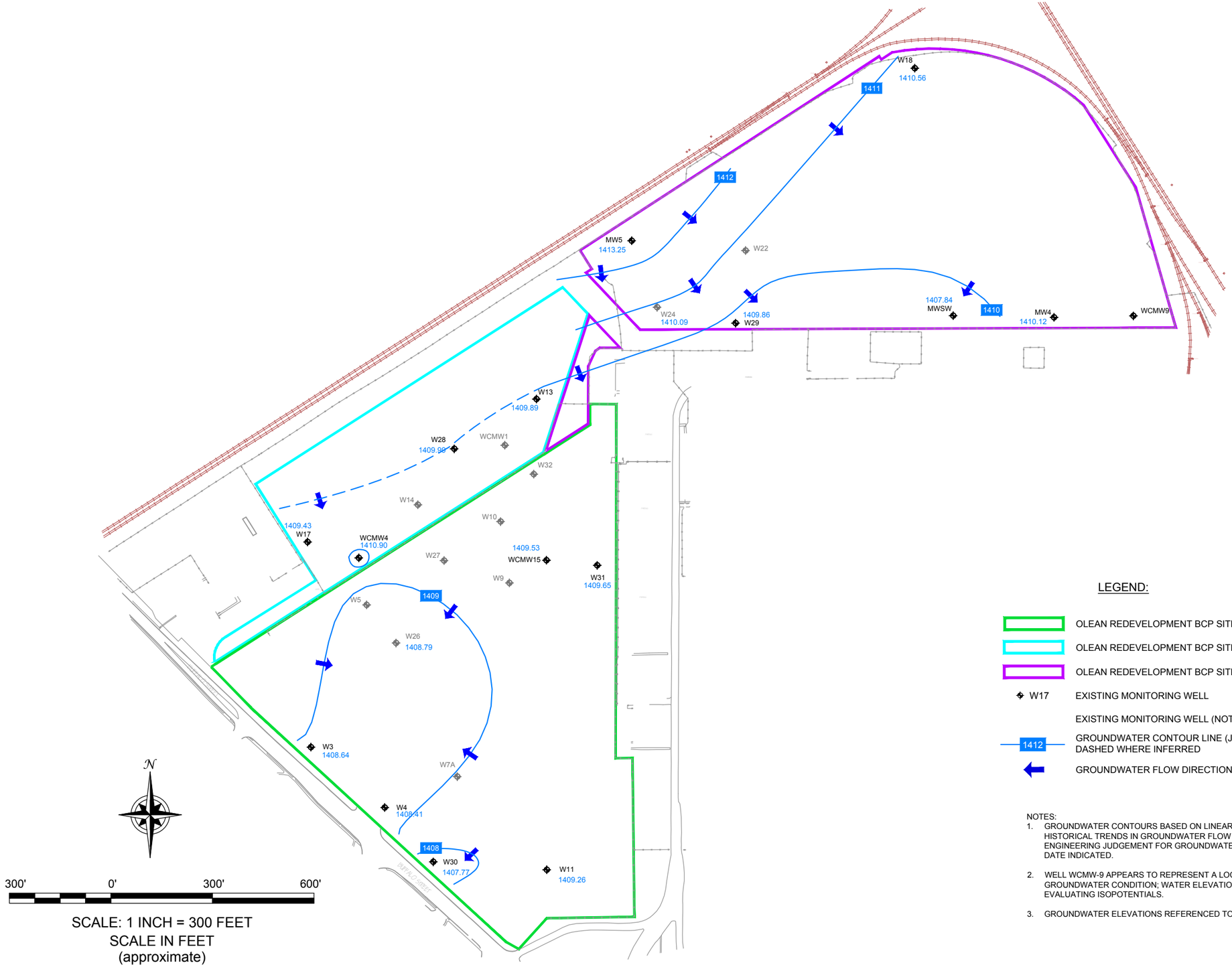
SITE COVER SYSTEM MAP

PERIODIC REVIEW REPORT

OLEAN REDEVELOPMENT SITE 3
BCP SITE NO. C905033
OLEAN, NEW YORK

PREPARED FOR
SOLEAN LLC

FIGURE 5



LEGEND:

- OLEAN REDEVELOPMENT BCP SITE 1
- OLEAN REDEVELOPMENT BCP SITE 2
- OLEAN REDEVELOPMENT BCP SITE 3
- W17 — EXISTING MONITORING WELL
- EXISTING MONITORING WELL (NOT MEASURED)
- 1412 — GROUNDWATER CONTOUR LINE (JUNE 2018); DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION

NOTES:

1. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION, HISTORICAL TRENDS IN GROUNDWATER FLOW DIRECTION AND ENGINEERING JUDGEMENT FOR GROUNDWATER LEVELS MEASURED ON DATE INDICATED.
2. WELL WCMW-9 APPEARS TO REPRESENT A LOCALIZED PERCHED GROUNDWATER CONDITION; WATER ELEVATION NOT USED FOR EVALUATING ISOPOTENTIALS.
3. GROUNDWATER ELEVATIONS REFERENCED TO NAVD 88.

DATE: MAY 2019
DRAFTED BY: CMC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0334-016-001

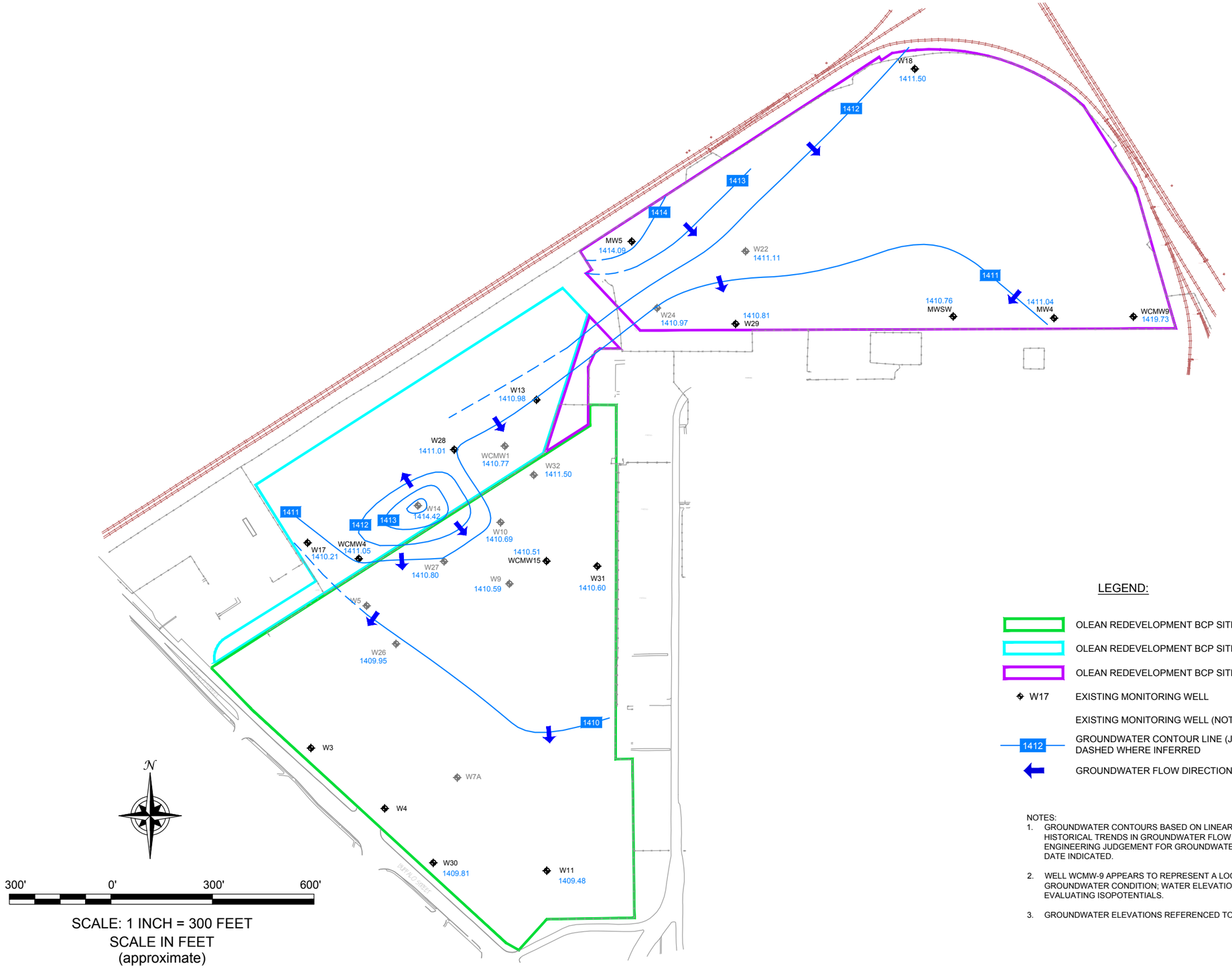
GROUNDWATER ISOPOTENTIAL MAP (JUNE 2018)

PERIODIC REVIEW REPORT
OLEAN REDEVELOPMENT PARCEL 3
NYSDEC BCP SITE NO. C905033
OLEAN, NEW YORK
PREPARED FOR
OLEAN GATEWAY LLC & HK HOTEL, LLC

FIGURE 6

F:\CAD\Benchmark\Solean\PRR\PRR 2019\Figure 6; Groundwater Cotour Map (June 2018)l.dwg, 6/18/2019 10:05:43 AM, DWG To PDF.pc3

F:\CAD\Benchmark\Solean\PRR\PRR 2019\Figure 7; Groundwater Cotour Map (July 2019)_surface model.dwg, 8/30/2019 4:48:17 PM, DWG To PDF.pc3



LEGEND:

- OLEAN REDEVELOPMENT BCP SITE 1
- OLEAN REDEVELOPMENT BCP SITE 2
- OLEAN REDEVELOPMENT BCP SITE 3
- W17 EXISTING MONITORING WELL
- EXISTING MONITORING WELL (NOT MEASURED)
- 1412 GROUNDWATER CONTOUR LINE (JUNE 2018); DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION

NOTES:

1. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION, HISTORICAL TRENDS IN GROUNDWATER FLOW DIRECTION AND ENGINEERING JUDGEMENT FOR GROUNDWATER LEVELS MEASURED ON DATE INDICATED.
2. WELL WCMW-9 APPEARS TO REPRESENT A LOCALIZED PERCHED GROUNDWATER CONDITION; WATER ELEVATION NOT USED FOR EVALUATING ISOPOTENTIALS.
3. GROUNDWATER ELEVATIONS REFERENCED TO NAVD 88.

DATE: MAY 2019
DRAFTED BY: CMC

GROUNDWATER ISOPOTENTIAL MAP (JULY 2019)

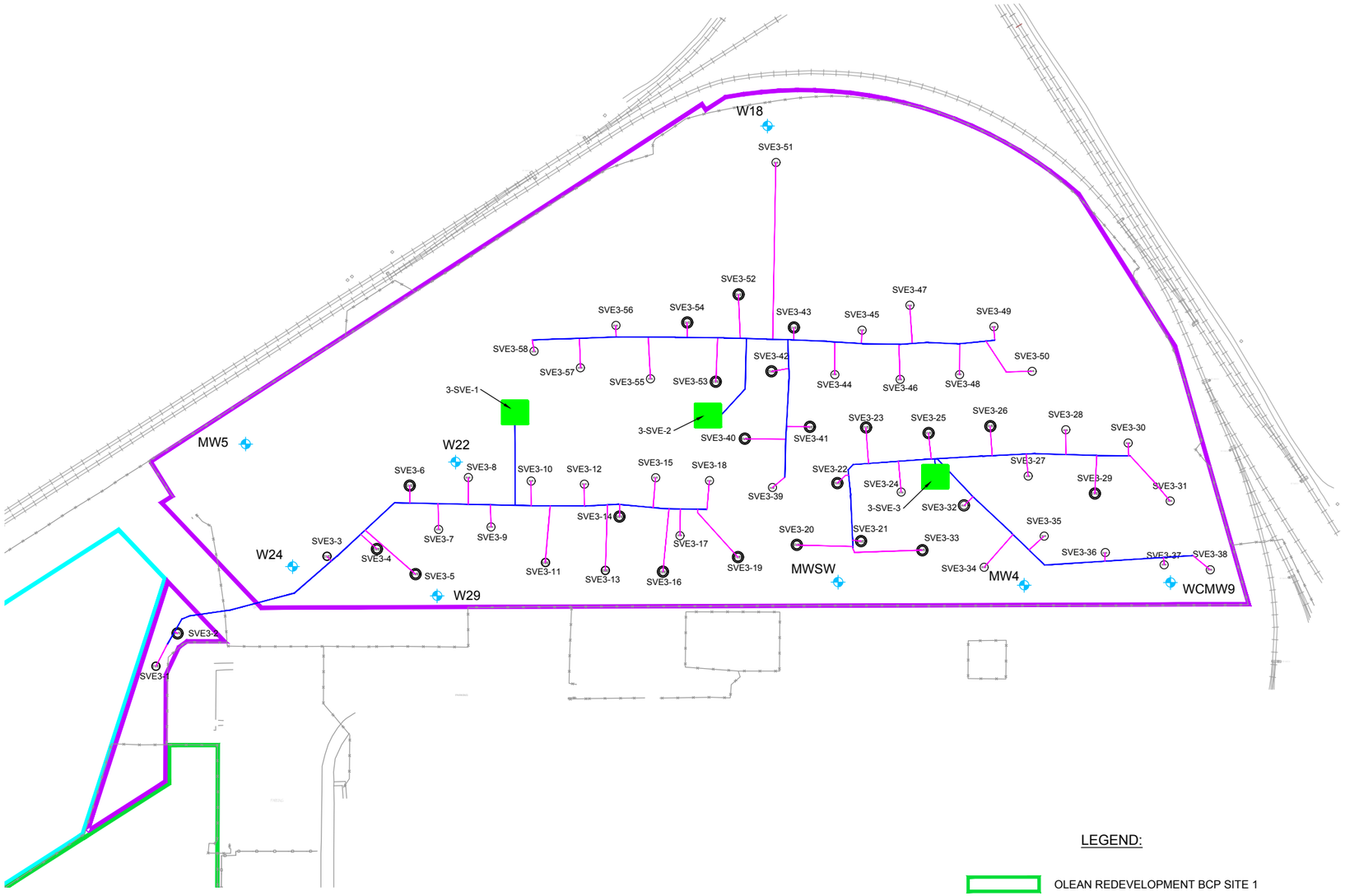
PERIODIC REVIEW REPORT
OLEAN REDEVELOPMENT PARCEL 3
NYSDEC BCP SITE NO. C905033
OLEAN, NEW YORK
PREPARED FOR
OLEAN GATEWAY LLC & HK HOTEL, LLC

FIGURE 7

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0334-016-001

F:\CAD\Benchmark\Solean\PRR\PRR 2019\Figure 8, Soil Vapor Extraction System Map.dwg, 8/23/2019 8:07:35 AM, DWG To PDF.pc3



DATE: JULY 2019
DRAFTED BY: CMC

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0334-016-001

SOIL VAPOR EXTRACTION SYSTEM MAP

PERIODIC REVIEW REPORT
OLEAN REDEVELOPMENT SITE 3
NYSDEC SITE NO. C905033
OLEAN, NEW YORK
PREPARED FOR
SOLEAN LLC

FIGURE 8

APPENDIX A

INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORM

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. C905033

Site Name Olean Redevelopment Parcel 3

Site Address: 1404-1406R, 1420 Buffalo Street Zip Code: 14760
City/Town: Olean
County: Cattaraugus
Site Acreage: 24.103

Reporting Period: October 09, 2018 to October 09, 2019

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☑
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.		
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☑	☐
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.		

SITE NO. C905033 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
94.048-1-1.1	Solean LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

-All engineering controls (ECs) must be operated and maintained as specified in the Site Management Plan (SMP);
-All ECs must be inspected at a frequency and in a manner defined in the SMP.
-The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Cattaraugus County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
-Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
-Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
-All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
-Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
-Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP; and
-Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

94.048-1-1.2	Solean LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

-All engineering controls (ECs) must be operated and maintained as specified in the Site Management Plan (SMP);
-All ECs must be inspected at a frequency and in a manner defined in the SMP.
-The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Cattaraugus County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
-Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
-Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
-All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
-Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
-Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP; and
-Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
94.048-1-1.1	Vapor Mitigation Cover System ~~Air Sparging~~/Soil Vapor Extraction

-a site cover that will allow for commercial use, that will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs;
-removal of LNAPL from monitoring wells using the methods outlined in the SMP and RAWP;
-a soil vapor extraction (SVE) system to mitigate residual contamination in subsurface soil; and
-a vapor mitigation system for any future building(s) developed on-site.

94.048-1-1.2	Vapor Mitigation Cover System ~~Air Sparging~~/Soil Vapor Extraction

-a site cover that will allow for commercial use, that will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs;
-removal of LNAPL from monitoring wells using the methods outlined in the SMP and RAWP;
-a soil vapor extraction (SVE) system to mitigate residual contamination in subsurface soil; and
-a vapor mitigation system for any future building(s) developed on-site.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C905033

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michael A. Lesakowski at 2558 Hamburg Turnpike, Suite 300 Buffalo, NY 14218.

print name — print business address

am certifying as Designated Representative of Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

11/7/2019
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Lori E. Riker (print name) at Benchmark Environmental Engineering & Science, PLLC 2558 Hamburg Turnpike, Buffalo, NY 14218 (print business address)

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)

STATE OF NEW YORK LORI E. RIKER 077625-1 LICENSED PROFESSIONAL ENGINEER

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

11/7/2019 Date

APPENDIX B

SITE INSPECTION PHOTOGRAPHIC LOG

SITE PHOTOGRAPHS

Photo 1: P1

Photo 2: P2

Photo 3: P6

Photo 4: P7

Photo 1: BCP Site 3, 1408 Buffalo Street parcel, April 2019 conditions (looking northeast).

Photo 2: BCP Site 3, 1408 Buffalo Street parcel, April 2019 roadway and greenspace conditions (looking south)

Photo 3: BCP Site 3, 1404-06R Buffalo Street parcel, April 2019 roadway conditions (looking north)

Photo 4: BCP Site 3, 1404-06R Buffalo Street parcel, April 2019 conditions (looking west)

SITE PHOTOGRAPHS

Photo 5: P11

Photo 6: P26

Photo 7: P15

Photo 8: P16

Photo 5: BCP Site 3, 1404-06R parcel, April 2019 greenspace between solar panel row conditions (looking east).

Photo 6: BCP Site 3, 1404-06R parcel, April 2019 greenspace along the eastern boundary conditions (looking south).

Photo 7: BCP Site 3, 1420 Buffalo Street parcel, April 2019 greenspace between solar panel row conditions (looking west).

Photo 8: BCP Site 3, 1420 Buffalo Street parcel, SVE trailer and biofilter (looking west)

SITE PHOTOGRAPHS

Photo 9: P13

Photo 10: P19

Photo 11: P20

Photo 12: P21

Photo 9: BCP Site 3, 1420 Buffalo Street parcel, April 2019 conditions (looking east)

Photo 10: BCP Site 3, 1420 Buffalo Street parcel, April 2019 greenspace along the northern boundary (looking southwest)

Photo 11: BCP Site 3, 1420 Buffalo Street parcel, April 2019 greenspace along the northern boundary (looking northwest)

Photo 12: BCP Site 3, northern portion of 1420 Buffalo Street parcel April 2019 conditions (looking east)

SITE PHOTOGRAPHS

Photo 13: P24

Photo 14: P25

Photo 15: P23

Photo 13: BCP Site 3, northern portion of 1420 Buffalo Street parcel April 2019 conditions (looking west)

Photo 14: BCP Site 3, boundary between 1404-06R and 1420 Buffalo Street parcels (looking west)

Photo 15: BCP Site 3, April 2019 monitoring well condition.

APPENDIX C

GROUNDWATER SAMPLING FIELD FORMS AND ANALYTICAL DATA (2018 AND 2019)

JUNE 2018 GROUNDWATER SAMPLING EVENT

GROUNDWATER FIELD FORM

Project Name: Solean (Parcel 3) June 2018 GWM Date: 6/11/18
Location: Olean NY. Project No.: T0334-016-001 Field Team: CCB

Well No. MW-29			Diameter (inches): 2"			Sample Date / Time: 6/11/18 1450			
Product Depth (fbTOR): —			Water Column (ft): 9.72			DTW when sampled: 20.10			
DTW (static) (fbTOR): 20.05			One Well Volume (gal): 1.58			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 29.77			Total Volume Purged (gal): 4.0			Purge Method: pump			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
~~1307~~	0 Initial	0	~~6.97~~	~~19.9~~	~~1326~~	~~46.8~~		~~-116~~	~~petro oder/black flocs~~
	1								
1441	2 Initial	0	6.90	20.6	2704	172	0.84	5	Clear / Slight oder.
1442	3 20.10	0.75	6.84	15.9	2399	44.3	0.54	15	" "
1444	4 20.10	1.50	6.81	16.1	2226	18.5	0.46	36	" "
1445	5 20.10	2.25	6.75	16.3	2148	6.26	0.38	41	" "
1446	6 20.10	3.0	6.71	16.9	2070	3.31	0.42	30	" "
	7								
	8								
	9								
	10								
Sample Information:									
1450	S1 20.10	4.0	6.70	17.0	2027	3.06	0.64	25	" "
1455	S2 20.1	4.5	6.69	16.1	1955	2.57	0.61	20	" "

Well No. MW-5			Diameter (inches): 2"			Sample Date / Time: 6/11/18 1320			
Product Depth (fbTOR): —			Water Column (ft): 7.82			DTW when sampled: TOP			
DTW (static) (fbTOR): 19.05			One Well Volume (gal): 1.27			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 26.87			Total Volume Purged (gal): 3.5			Purge Method: pump.			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1307	0 Initial	0	6.97	19.9	1326	46.8	1.31	-116	petro oder / black flocs.
1310	1 TOP	0.75	6.96	15.9	1390	30.6	1.44	-161	" "
1312	2 TOP	1.25	6.94	15.6	1409	15.4	1.62	-167	petro oder
1314	3 TOP	1.75	6.92	13.8	1405	11.4	1.26	-172	" "
1316	4 TOP	2.75	6.91	15.2	1412	13.4	1.72	-174	" "
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1320	S1 TOP	3.5	6.90	14.0	1428	11.6	1.71	-176	" "
1325	S2 TOP	4.0	6.86	14.7	1483	12.0	1.12	-165	" "

REMARKS:

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: Curt Bull

2558

GROUNDWATER FIELD FORM

Project Name: Solvay West (fall 13) June 2018 GWM Date: 6/11/18

Location: Olean NY Project No.: T0534-016-001 Field Team: CCB

Well No. W-24			Diameter (inches): 4"			Sample Date / Time: 6/11/18 820			
Product Depth (fbTOR): —			Water Column (ft): 10.77			DTW when sampled: 25.0			
DTW (static) (fbTOR): 23.0			One Well Volume (gal): 7.0			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 33.77			Total Volume Purged (gal): 8.5			Purge Method: pump			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1402	0 Initial	0	6.90	17.4	1507	129	0.84	-97	clear / petro odor
1407	1 23.5	0.75	6.93	18.0	1530	66.6	0.59	-97	" " sheen on tbg
811	2 25.0	2.25	6.86	14.2	1546	79.6	0.72	-105	slight black tint / petro odor
813	3 25.0	5.0	6.87	14.1	1550	346	0.51	-104	" "
817	4 25.0	7.5	6.87	14.3	1502	203	0.47	-100	" " minor sheen
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
820	S1 25.0	8.5	6.83	14.3	1493	154	0.44	-99	" "
825	S2 25.0	10.0	6.86	14.5	1478	79.6	0.51	-99	" "

Well No. WCMW-9			Diameter (inches): 2"			Sample Date / Time: — DRY			
Product Depth (fbTOR): —			Water Column (ft): 1.77			DTW when sampled: DRY			
DTW (static) (fbTOR): 16.4			One Well Volume (gal): 0.28			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 18.17			Total Volume Purged (gal): 0.28			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
1028	0 Initial	0	7.48	15.5	712	>1000	6.21	53	turbid / rust color
1140	1 17.25	0.20	7.58	16.5	607	>1000	0.02	-189	" " slight sulfur odor
1332	2 17.80	0.25	7.43	20.1	5969	>1000	out of range	-116	brown / turbid / petro odor
745 6/12/18 DRY	3 17.90	[illegible]	7.02	12.4	543	>1000		-88	brown / orange slight odor
	4	0.30							
	5			DRY					
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS: WCMW-9 did not recharge overnight

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: CCB

GROUNDWATER FIELD FORM

Project Name: Olean (Parcel 3) June 2018 GWM Date: 6/11/18
Location: Olean NY. Project No.: T0334-016-001 Field Team: CCB

Well No. MW-4			Diameter (inches): 2"			Sample Date / Time: 6/11/18 932			
Product Depth (fbTOR): —			Water Column (ft): 8.13			DTW when sampled: 22.0			
DTW (static) (fbTOR): 21.64			One Well Volume (gal): 1.33			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 29.77			Total Volume Purged (gal): 3.75			Purge Method: Pump			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
918	0 Initial	0	6.85	17.3	2488	51.3	2.97	-102	Clear slight petro odor
920	1 21.9	0.5	6.87	14.0	2423	31.1	1.74	-115	"
923	2 21.95	1.5	6.82	13.1	2354	24.7	1.42	-119	"
925	3 21.95	1.75	6.81	13.2	2331	19.9	1.41	-117	"
928	4 22.0	2.5	6.79	13.3	2195	6.12	1.37	-111	"
930	5 22.0	3.5	6.77	13.5	2194	7.25	1.34	-104	"
0	6 220								
	7								
	8								
	9								
	10								
Sample Information:									
932	S1 22.0	3.75	6.76	13.2	2078	6.61	1.59	-100	"
938	S2 22.0	4.0	6.72	14.5	2066	10.2	0.93	-84	"

Well No. MWSW			Diameter (inches): 2"			Sample Date / Time: 6/11/18 1120			
Product Depth (fbTOR): —			Water Column (ft): 2.76			DTW when sampled: 20.7			
DTW (static) (fbTOR): 22.46			One Well Volume (gal): 0.45			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 25.22			Total Volume Purged (gal): 1.75			Purge Method: pump.			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
11:10	0 Initial	0	6.81	17.6	1271	241	1.14	-106	turbid / sulfur / petro odor
11:13	1 20.60	0.5	6.72	17.4	1350	80.4	1.09	-95	odor.
11:15	2 20.67	1.0	6.70	16.6	1527	43.5	0.70	-77	" petro odor.
11:16	3 20.7	1.5	6.70	16.3	1585	19.1	0.74	-67	"
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
11:20	S1 20.7	1.75	6.69	15.8	1645	12.7	0.90	-59	"
1129	S2 20.65	2.0	6.76	15.7	1713	7.67	0.56	-53	"

REMARKS:
MWSW : MS/MSD

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:

Groundwater Field Form.xls
GWFF - TK

Trip Blank 8:00 6/11/18

GROUNDWATER FIELD FORM

Project Name: Solvay (Parcel 3) June 2018 GWM Date: 6/11/18
Location: Olean NY. Project No.: T0324-016-001 Field Team: CCB

Well No. W-18			Diameter (inches): 4"			Sample Date / Time: 6/11/18 12:35			
Product Depth (fbTOR): —			Water Column (ft): 2.72			DTW when sampled: 25.15			
DTW (static) (fbTOR): 23.93			One Well Volume (gal): 1.7			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 26.65			Total Volume Purged (gal): 4.0			Purge Method: pump			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1225	0 Initial	0	7.03	17.9	1661	25.9	1.31	118	Clear / slight odor
1227	1 24.7	0.5	6.83	14.7	1690	18.3	1.84	97	"
1229	2 24.9	1.25	6.81	14.0	1724	12.6	1.70	91	" " slight odor.
12:30	3 25.05	2.0	6.80	12.8	1726	7.91	1.17	53	" no odor.
12:31	4 25.10	3.0	6.80	13.6	1721	5.96	1.13	22	" "
	5 25.15	4.0		12.0					
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1235	S1 25.15	4.0	6.87	12.0	1718	5.16	1.05	5	" "
1241	S2 25.15	5.0	6.83	17.3	1685	5.51	1.21	-36	" "

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: W-18 Blind Dup 12:00

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: CCB

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-153987-1
TestAmerica Sample Delivery Group: New York
Client Project/Site: Solean East Event Desc:BCP 3
Sampling Event: BCP 3

For:
Turnkey Environmental Restoration, LLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Michael Lesakowski

Jennifer Huckaba

Authorized for release by:
7/14/2018 12:42:08 PM

Jennifer Huckaba, Project Manager II
(615)301-5042
jennifer.huckaba@testamericainc.com

Table of Contents

Sample Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-153987-1	W24	Ground Water	06/12/18 08:20	06/14/18 10:25
490-153987-2	MW4	Ground Water	06/11/18 09:32	06/14/18 10:25
490-153987-3	MWSW	Ground Water	06/11/18 11:20	06/14/18 10:25
490-153987-4	W29	Ground Water	06/11/18 14:50	06/14/18 10:25
490-153987-5	MW5	Ground Water	06/11/18 13:20	06/14/18 10:25
490-153987-6	W18	Ground Water	06/11/18 12:35	06/14/18 10:25
490-153987-7	Blind Dup	Water	06/11/18 12:00	06/14/18 10:25
490-153987-8	Trip Blank	Water	06/11/18 08:00	06/14/18 10:25

Job ID: 490-153987-1

Laboratory: TestAmerica Nashville

Narrative

CASE NARRATIVE

Client: Turnkey Environmental Restoration, LLC

Project: Solean East Event Desc:BCP 3

Report Number: 490-153987-1

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

TestAmerica Nashville attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

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

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

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/14/2018 10:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2º C, 3.1º C, 3.7º C and 4.9º C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples W24 (490-153987-1), MW4 (490-153987-2), MWSW (490-153987-3), W29 (490-153987-4), MW5 (490-153987-5), W18 (490-153987-6), Blind Dup (490-153987-7) and Trip Blank (490-153987-8) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 06/19/2018 and 06/20/2018.

1,2,3-Trichlorobenzene, Cyclohexane, Methylcyclohexane and Naphthalene failed the recovery criteria high for the MS of sample MWSWMS (490-153987-3) in batch 490-522979. 1,2,4-Trimethylbenzene failed the recovery criteria low for the MSD of sample MWSW (490-153987-3) in batch 490-522979. 1,2,3-Trichlorobenzene, 1,2-Dibromo-3-Chloropropane and Naphthalene failed the recovery criteria high. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-523312.

Sample MWSW (490-153987-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 490-153987-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)

Samples W24 (490-153987-1), MW4 (490-153987-2), MWSW (490-153987-3), W29 (490-153987-4), MW5 (490-153987-5), W18 (490-153987-6) and Blind Dup (490-153987-7) were analyzed for semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/18/2018 and analyzed on 06/28/2018.

Benzaldehyde failed the recovery criteria low for LCS 490-522781/2-A. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

3,3'-Dichlorobenzidine and 4-Nitroaniline failed the recovery criteria low for the MS and MSD of sample MWSW (490-153987-3) in batch 490-525313. 4-Nitrophenol failed the recovery criteria high. 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.

TOTAL METALS (ICP)

Samples W24 (490-153987-1), MW4 (490-153987-2), MWSW (490-153987-3), W29 (490-153987-4), MW5 (490-153987-5), W18 (490-153987-6) and Blind Dup (490-153987-7) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 06/20/2018, 06/28/2018, 06/29/2018 and 07/05/2018 and analyzed on 06/20/2018, 06/28/2018, 07/02/2018 and 07/05/2018.

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

The laboratory is only responsible for the certified testing and is not responsible for the sample integrity prior to laboratory receipt.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance 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.
E	Result exceeded calibration range.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
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 TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated 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)

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: W24
Date Collected: 06/12/18 08:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-1
Matrix: Ground 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		1.00		ug/L			06/19/18 23:08	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 23:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 23:08	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 23:08	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 23:08	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 23:08	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 23:08	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 23:08	1
1,2,4-Trimethylbenzene	**10.5**		1.00		ug/L			06/19/18 23:08	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 23:08	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 23:08	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 23:08	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 23:08	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 23:08	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/19/18 23:08	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 23:08	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 23:08	1
1,4-Dioxane	ND		200		ug/L			06/19/18 23:08	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 23:08	1
2-Hexanone	ND		10.0		ug/L			06/19/18 23:08	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 23:08	1
Acetone	ND		25.0		ug/L			06/19/18 23:08	1
Benzene	ND		1.00		ug/L			06/19/18 23:08	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 23:08	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 23:08	1
Bromoform	ND		1.00		ug/L			06/19/18 23:08	1
Bromomethane	ND		1.00		ug/L			06/19/18 23:08	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 23:08	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 23:08	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 23:08	1
Chloroethane	ND		1.00		ug/L			06/19/18 23:08	1
Chloroform	ND		1.00		ug/L			06/19/18 23:08	1
Chloromethane	ND		1.00		ug/L			06/19/18 23:08	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 23:08	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 23:08	1
Cyclohexane	**34.7**		5.00		ug/L			06/19/18 23:08	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 23:08	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 23:08	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 23:08	1
Isopropylbenzene	ND		1.00		ug/L			06/19/18 23:08	1
Methyl acetate	ND		10.0		ug/L			06/19/18 23:08	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 23:08	1
Methylcyclohexane	**11.1**		5.00		ug/L			06/19/18 23:08	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 23:08	1
Naphthalene	ND		5.00		ug/L			06/19/18 23:08	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 23:08	1
N-Propylbenzene	ND		1.00		ug/L			06/19/18 23:08	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 23:08	1
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 23:08	1

Client Sample ID: W24
Date Collected: 06/12/18 08:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-1
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 23:08	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 23:08	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 23:08	1
Toluene	ND		1.00		ug/L			06/19/18 23:08	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 23:08	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 23:08	1
Trichloroethene	ND		1.00		ug/L			06/19/18 23:08	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 23:08	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 23:08	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 23:08	1
o-Xylene	ND		1.00		ug/L			06/19/18 23:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2-methyl-	*83.2*	*T J N*	*ug/L*		*1.42*	*78-78-4*		*06/19/18 23:08*	*1*
Butane, 2,2-dimethyl-	*13.5*	*T J N*	*ug/L*		*1.77*	*75-83-2*		*06/19/18 23:08*	*1*
Pentane, 3-methyl-	*20.2*	*T J N*	*ug/L*		*2.15*	*96-14-0*		*06/19/18 23:08*	*1*
Cyclopentane, methyl-	*18.4*	*T J N*	*ug/L*		*2.64*	*96-37-7*		*06/19/18 23:08*	*1*
Cyclopentane, 1,1-dimethyl-	*13.5*	*T J N*	*ug/L*		*3.14*	*1638-26-2*		*06/19/18 23:08*	*1*
Cyclopentane, 1,2-dimethyl-, trans-	*11.4*	*T J N*	*ug/L*		*3.32*	*822-50-4*		*06/19/18 23:08*	*1*
Cyclohexane, 1,2-dimethyl-, trans-	*13.5*	*T J N*	*ug/L*		*4.75*	*6876-23-9*		*06/19/18 23:08*	*1*
Cyclohexane, 1,3-dimethyl-, trans-	*11.2*	*T J N*	*ug/L*		*4.84*	*2207-03-6*		*06/19/18 23:08*	*1*
Benzene, 1,2,3,5-tetramethyl-	*15.1*	*T J N*	*ug/L*		*8.93*	*527-53-7*		*06/19/18 23:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*06/19/18 23:08*	*1*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*		*06/19/18 23:08*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*06/19/18 23:08*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*06/19/18 23:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,4,5-Trichlorophenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,4,6-Trichlorophenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,4-Dichlorophenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,4-Dimethylphenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,4-Dinitrophenol	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
2-Chlorophenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2-Methylphenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2-Nitrophenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
3 & 4 Methylphenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
4,6-Dinitro-2-methylphenol	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
4-Chloro-3-methylphenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
4-Nitrophenol	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
Pentachlorophenol	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
Phenol	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
1,1'-Biphenyl	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
1,2,4,5-Tetrachlorobenzene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,2'-oxybis(1-chloropropane)	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2,4-Dinitrotoluene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: W24
Date Collected: 06/12/18 08:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-1
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2-Chloronaphthalene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
2-Methylnaphthalene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
2-Nitroaniline	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
3,3'-Dichlorobenzidine	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
3-Nitroaniline	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
4-Bromophenyl phenyl ether	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
4-Chloroaniline	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
4-Chlorophenyl phenyl ether	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
4-Nitroaniline	ND		27.2		ug/L		06/18/18 18:19	06/28/18 11:32	1
Acenaphthene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Acenaphthylene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Acetophenone	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Anthracene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Atrazine	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Benzaldehyde	ND	*	10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Benzo[a]anthracene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Benzo[a]pyrene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Benzo[b]fluoranthene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Benzo[g,h,i]perylene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Benzo[k]fluoranthene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Bis(2-chloroethoxy)methane	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Bis(2-chloroethyl)ether	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Bis(2-ethylhexyl) phthalate	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Butyl benzyl phthalate	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Caprolactam	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Carbazole	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Chrysene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Dibenz(a,h)anthracene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Dibenzofuran	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Diethyl phthalate	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Dimethyl phthalate	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Di-n-butyl phthalate	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Di-n-octyl phthalate	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Fluoranthene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Fluorene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Hexachlorobenzene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Hexachlorobutadiene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Hexachlorocyclopentadiene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Hexachloroethane	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Indeno[1,2,3-cd]pyrene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Isophorone	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Naphthalene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Nitrobenzene	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
N-Nitrosodi-n-propylamine	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		10.9		ug/L		06/18/18 18:19	06/28/18 11:32	1
Phenanthrene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1
Pyrene	ND		2.17		ug/L		06/18/18 18:19	06/28/18 11:32	1

Client Sample ID: W24

Date Collected: 06/12/18 08:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-1

Matrix: Ground Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
trans-3,4-Dimethylcyclopentanone	3.66	T J N	ug/L		3.63	19550-73-3	06/18/18 18:19	06/28/18 11:32	1
Cyclohexanol, 1,3-dimethyl-, cis-	12.2	T J N	ug/L		3.97	15466-94-1	06/18/18 18:19	06/28/18 11:32	1
Dibenzylidene 4,4'-biphenylenediamine	26.4	T J N	ug/L		12.00	6311-48-4	06/18/18 18:19	06/28/18 11:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	95		10 - 120	06/18/18 18:19	06/28/18 11:32	1
2-Fluorobiphenyl (Surr)	68		29 - 120	06/18/18 18:19	06/28/18 11:32	1
2-Fluorophenol (Surr)	63		10 - 120	06/18/18 18:19	06/28/18 11:32	1
Nitrobenzene-d5 (Surr)	63		27 - 120	06/18/18 18:19	06/28/18 11:32	1
Phenol-d5 (Surr)	53		10 - 120	06/18/18 18:19	06/28/18 11:32	1
Terphenyl-d14 (Surr)	80		13 - 120	06/18/18 18:19	06/28/18 11:32	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0100**		0.0100		mg/L		06/20/18 07:53	06/28/18 18:02	1
Chromium	ND		0.00500		mg/L		06/20/18 07:53	06/20/18 14:23	1
Lead	**0.0108**		0.00500		mg/L		06/20/18 07:53	06/20/18 14:23	1

Client Sample ID: MW4

Date Collected: 06/11/18 09:32
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-2

Matrix: Ground 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		1.00		ug/L			06/19/18 19:58	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 19:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 19:58	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 19:58	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 19:58	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 19:58	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 19:58	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 19:58	1
1,2,4-Trimethylbenzene	**94.6**		1.00		ug/L			06/19/18 19:58	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 19:58	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 19:58	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 19:58	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 19:58	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 19:58	1
1,3,5-Trimethylbenzene	**2.99**		1.00		ug/L			06/19/18 19:58	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 19:58	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 19:58	1
1,4-Dioxane	ND		200		ug/L			06/19/18 19:58	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 19:58	1
2-Hexanone	ND		10.0		ug/L			06/19/18 19:58	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 19:58	1
Acetone	ND		25.0		ug/L			06/19/18 19:58	1
Benzene	**9.99**		1.00		ug/L			06/19/18 19:58	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 19:58	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 19:58	1
Bromoform	ND		1.00		ug/L			06/19/18 19:58	1
Bromomethane	ND		1.00		ug/L			06/19/18 19:58	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 19:58	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 19:58	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 19:58	1
Chloroethane	ND		1.00		ug/L			06/19/18 19:58	1
Chloroform	ND		1.00		ug/L			06/19/18 19:58	1
Chloromethane	ND		1.00		ug/L			06/19/18 19:58	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 19:58	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 19:58	1
Cyclohexane	**60.1**		5.00		ug/L			06/19/18 19:58	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 19:58	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 19:58	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 19:58	1
Isopropylbenzene	**6.82**		1.00		ug/L			06/19/18 19:58	1
Methyl acetate	ND		10.0		ug/L			06/19/18 19:58	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 19:58	1
Methylcyclohexane	**18.2**		5.00		ug/L			06/19/18 19:58	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 19:58	1
Naphthalene	ND		5.00		ug/L			06/19/18 19:58	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 19:58	1
N-Propylbenzene	**1.93**		1.00		ug/L			06/19/18 19:58	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 19:58	1
sec-Butylbenzene	**2.47**		1.00		ug/L			06/19/18 19:58	1

Client Sample ID: MW4

Date Collected: 06/11/18 09:32
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-2

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 19:58	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 19:58	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 19:58	1
Toluene	ND		1.00		ug/L			06/19/18 19:58	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 19:58	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 19:58	1
Trichloroethene	ND		1.00		ug/L			06/19/18 19:58	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 19:58	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 19:58	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 19:58	1
o-Xylene	ND		1.00		ug/L			06/19/18 19:58	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Pentane, 3-methyl-	*30.0*	*T J N*	*ug/L*		*2.15*	*96-14-0*		*06/19/18 19:58*	*1*
Cyclopentane, methyl-	*19.4*	*T J N*	*ug/L*		*2.64*	*96-37-7*		*06/19/18 19:58*	*1*
Cyclopentane, 1,1-dimethyl-	*25.5*	*T J N*	*ug/L*		*3.14*	*1638-26-2*		*06/19/18 19:58*	*1*
Isopropylcyclobutane	*22.7*	*T J N*	*ug/L*		*3.32*	*872-56-0*		*06/19/18 19:58*	*1*
Cyclohexane, 1,3-dimethyl-, cis-	*16.1*	*T J N*	*ug/L*		*4.47*	*638-04-0*		*06/19/18 19:58*	*1*
Cyclohexane, 1,2-dimethyl-, trans-	*16.2*	*T J N*	*ug/L*		*4.75*	*6876-23-9*		*06/19/18 19:58*	*1*
Cyclohexane, 1,3-dimethyl-, trans-	*15.1*	*T J N*	*ug/L*		*4.84*	*2207-03-6*		*06/19/18 19:58*	*1*
Benzene, 1-ethyl-2-methyl-	*16.0*	*T J N*	*ug/L*		*7.30*	*611-14-3*		*06/19/18 19:58*	*1*
Benzene, 1,2,3,4-tetramethyl-	*20.1*	*T J N*	*ug/L*		*8.93*	*488-23-3*		*06/19/18 19:58*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*06/19/18 19:58*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*06/19/18 19:58*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*06/19/18 19:58*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*06/19/18 19:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,4,5-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,4,6-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,4-Dichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,4-Dimethylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,4-Dinitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
2-Chlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2-Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2-Nitrophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
3 & 4 Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
4,6-Dinitro-2-methylphenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
4-Chloro-3-methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
4-Nitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
Pentachlorophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
Phenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
1,1'-Biphenyl	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
1,2,4,5-Tetrachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,2'-oxybis(1-chloropropane)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2,4-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MW4
Date Collected: 06/11/18 09:32
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-2
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2-Chloronaphthalene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
2-Methylnaphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
2-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
3,3'-Dichlorobenzidine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
3-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
4-Bromophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
4-Chloroaniline	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
4-Chlorophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
4-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 11:53	1
Acenaphthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Acenaphthylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Acetophenone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Atrazine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Benzaldehyde	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Benzo[a]anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Benzo[a]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Benzo[b]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Benzo[g,h,i]perylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Benzo[k]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Bis(2-chloroethoxy)methane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Bis(2-chloroethyl)ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Bis(2-ethylhexyl) phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Butyl benzyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Caprolactam	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Carbazole	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Chrysene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Dibenz(a,h)anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Dibenzofuran	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Diethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Dimethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Di-n-butyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Di-n-octyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Fluorene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Hexachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Hexachlorobutadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Hexachlorocyclopentadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Hexachloroethane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Indeno[1,2,3-cd]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Isophorone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Naphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Nitrobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
N-Nitrosodi-n-propylamine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 11:53	1
Phenanthrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1
Pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 11:53	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MW4
Date Collected: 06/11/18 09:32
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-2
Matrix: Ground Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
trans-3,4-Dimethylcyclopentanone	11.4	T J N	ug/L		3.63	19550-73-3	06/18/18 18:19	06/28/18 11:53	1
3,4-Dimethylcyclopentanone	6.74	T J N	ug/L		3.81	58372-16-0	06/18/18 18:19	06/28/18 11:53	1
Benzene, 1,2,3,4-tetramethyl-	15.4	T J N	ug/L		4.72	488-23-3	06/18/18 18:19	06/28/18 11:53	1
Benzoic acid, 3,4-dimethyl-	62.2	T J N	ug/L		5.82	619-04-5	06/18/18 18:19	06/28/18 11:53	1
1-Naphthalenecarboxylic acid	8.22	T J N	ug/L		6.77	86-55-5	06/18/18 18:19	06/28/18 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	93		10 - 120	06/18/18 18:19	06/28/18 11:53	1
2-Fluorobiphenyl (Surr)	70		29 - 120	06/18/18 18:19	06/28/18 11:53	1
2-Fluorophenol (Surr)	66		10 - 120	06/18/18 18:19	06/28/18 11:53	1
Nitrobenzene-d5 (Surr)	67		27 - 120	06/18/18 18:19	06/28/18 11:53	1
Phenol-d5 (Surr)	52		10 - 120	06/18/18 18:19	06/28/18 11:53	1
Terphenyl-d14 (Surr)	79		13 - 120	06/18/18 18:19	06/28/18 11:53	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/28/18 17:25	07/02/18 13:03	1
Chromium	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 13:03	1
Lead	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 13:03	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MWSW
Date Collected: 06/11/18 11:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-3
Matrix: Ground 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		1.00		ug/L			06/19/18 20:25	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 20:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 20:25	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 20:25	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 20:25	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 20:25	1
1,2,3-Trichlorobenzene	ND	F1	1.00		ug/L			06/19/18 20:25	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 20:25	1
1,2,4-Trimethylbenzene	**294**		5.00		ug/L			06/20/18 22:17	5
1,2-Dibromo-3-Chloropropane	ND	F1	10.0		ug/L			06/19/18 20:25	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 20:25	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 20:25	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 20:25	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 20:25	1
1,3,5-Trimethylbenzene	**17.2**		1.00		ug/L			06/19/18 20:25	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 20:25	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 20:25	1
1,4-Dioxane	ND		200		ug/L			06/19/18 20:25	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 20:25	1
2-Hexanone	ND		10.0		ug/L			06/19/18 20:25	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 20:25	1
Acetone	ND		25.0		ug/L			06/19/18 20:25	1
Benzene	**90.1**		1.00		ug/L			06/19/18 20:25	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 20:25	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 20:25	1
Bromoform	ND		1.00		ug/L			06/19/18 20:25	1
Bromomethane	ND		1.00		ug/L			06/19/18 20:25	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 20:25	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 20:25	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 20:25	1
Chloroethane	ND		1.00		ug/L			06/19/18 20:25	1
Chloroform	ND		1.00		ug/L			06/19/18 20:25	1
Chloromethane	ND		1.00		ug/L			06/19/18 20:25	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 20:25	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 20:25	1
Cyclohexane	**208**		25.0		ug/L			06/20/18 22:17	5
Dibromochloromethane	ND		1.00		ug/L			06/19/18 20:25	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 20:25	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 20:25	1
Isopropylbenzene	**23.1**		1.00		ug/L			06/19/18 20:25	1
Methyl acetate	ND		10.0		ug/L			06/19/18 20:25	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 20:25	1
Methylcyclohexane	**180**		5.00		ug/L			06/19/18 20:25	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 20:25	1
Naphthalene	ND	F1	5.00		ug/L			06/19/18 20:25	1
n-Butylbenzene	**2.39**		1.00		ug/L			06/19/18 20:25	1
N-Propylbenzene	**24.1**		1.00		ug/L			06/19/18 20:25	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 20:25	1
sec-Butylbenzene	**6.27**		1.00		ug/L			06/19/18 20:25	1

Client Sample ID: MWSW

Date Collected: 06/11/18 11:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-3

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 20:25	1
tert-Butylbenzene	**2.20**		1.00		ug/L			06/19/18 20:25	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 20:25	1
Toluene	**5.75**		1.00		ug/L			06/19/18 20:25	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 20:25	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 20:25	1
Trichloroethene	ND		1.00		ug/L			06/19/18 20:25	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 20:25	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 20:25	1
m-Xylene & p-Xylene	**12.7**		2.00		ug/L			06/19/18 20:25	1
o-Xylene	**4.25**		1.00		ug/L			06/19/18 20:25	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Pentane, 3-methyl-	*68.6*	*T J N*	*ug/L*		*2.14*	*96-14-0*		*06/19/18 20:25*	*1*
Cyclopentane, methyl-	*172*	*T J N*	*ug/L*		*2.64*	*96-37-7*		*06/19/18 20:25*	*1*
Cyclohexene	*83.5*	*T J N*	*ug/L*		*3.29*	*110-83-8*		*06/19/18 20:25*	*1*
Cyclopentane, 1,2-dimethyl-, trans-	*57.6*	*T J N*	*ug/L*		*3.32*	*822-50-4*		*06/19/18 20:25*	*1*
Cyclohexane, 1,3-dimethyl-, cis-	*63.8*	*T J N*	*ug/L*		*4.47*	*638-04-0*		*06/19/18 20:25*	*1*
Indane	*56.8*	*T J N*	*ug/L*		*8.03*	*496-11-7*		*06/19/18 20:25*	*1*
Benzene, 4-ethyl-1,2-dimethyl-	*45.8*	*T J N*	*ug/L*		*8.49*	*934-80-5*		*06/19/18 20:25*	*1*
Benzene, 1-ethenyl-3-ethyl-	*45.6*	*T J N*	*ug/L*		*8.59*	*7525-62-4*		*06/19/18 20:25*	*1*
Benzene, 1,2,4,5-tetramethyl-	*47.1*	*T J N*	*ug/L*		*8.92*	*95-93-2*		*06/19/18 20:25*	*1*
2,4-Dimethylstyrene	*55.3*	*T J N*	*ug/L*		*9.33*	*2234-20-0*		*06/19/18 20:25*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*06/19/18 20:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*06/20/18 22:17*	*5*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*06/19/18 20:25*	*1*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*		*06/20/18 22:17*	*5*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*06/19/18 20:25*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*06/20/18 22:17*	*5*
Toluene-d8 (Surr)	*106*		*70 - 130*		*06/19/18 20:25*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*06/20/18 22:17*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,4,5-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,4,6-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,4-Dichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,4-Dimethylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,4-Dinitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1
2-Chlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2-Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2-Nitrophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
3 & 4 Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
4,6-Dinitro-2-methylphenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1
4-Chloro-3-methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
4-Nitrophenol	ND	F1	23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1
Pentachlorophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1

Client Sample ID: MWSW
Date Collected: 06/11/18 11:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-3
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
1,1'-Biphenyl	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
1,2,4,5-Tetrachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,2'-oxybis(1-chloropropane)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,4-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2,6-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2-Chloronaphthalene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
2-Methylnaphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
2-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1
3,3'-Dichlorobenzidine	ND	F1	9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
3-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1
4-Bromophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
4-Chloroaniline	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
4-Chlorophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
4-Nitroaniline	ND	F1	23.1		ug/L		06/18/18 18:19	06/28/18 12:14	1
Acenaphthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Acenaphthylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Acetophenone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Atrazine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Benzaldehyde	ND	*	9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Benzo[a]anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Benzo[a]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Benzo[b]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Benzo[g,h,i]perylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Benzo[k]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Bis(2-chloroethoxy)methane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Bis(2-chloroethyl)ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Bis(2-ethylhexyl) phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Butyl benzyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Caprolactam	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Carbazole	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Chrysene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Dibenz(a,h)anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Dibenzofuran	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Diethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Dimethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Di-n-butyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Di-n-octyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Fluorene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Hexachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Hexachlorobutadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Hexachlorocyclopentadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Hexachloroethane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Indeno[1,2,3-cd]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Isophorone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Naphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Nitrobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1

Client Sample ID: MWSW
Date Collected: 06/11/18 11:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-3
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 12:14	1
Phenanthrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1
Pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 12:14	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane, methyl-	*4.75*	*T J N*	*ug/L*		*2.29*	*108-87-2*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
Cyclohexene, 1-methyl-	*3.61*	*T J N*	*ug/L*		*2.63*	*591-49-1*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
1-Methylcyclohexanol	*4.91*	*T J N*	*ug/L*		*3.56*	*590-67-0*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
Benzene, 1,2,4-trimethyl-	*27.6*	*T J N*	*ug/L*		*4.12*	*95-63-6*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
2-Cyclopenten-1-one, 2,3-dimethyl-	*24.8*	*T J N*	*ug/L*		*4.33*	*1121-05-7*	*06/18/18 18:19*	*06/28/18 12:14*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*92*		*10 - 120*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
2-Fluorobiphenyl (Surr)	*61*		*29 - 120*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
2-Fluorophenol (Surr)	*65*		*10 - 120*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
Nitrobenzene-d5 (Surr)	*58*		*27 - 120*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
Phenol-d5 (Surr)	*49*		*10 - 120*	*06/18/18 18:19*	*06/28/18 12:14*	*1*
Terphenyl-d14 (Surr)	*78*		*13 - 120*	*06/18/18 18:19*	*06/28/18 12:14*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0147**		0.0100		mg/L		07/05/18 09:49	07/05/18 15:06	1
Chromium	ND		0.00500		mg/L		07/05/18 09:49	07/05/18 15:06	1
Lead	ND		0.00500		mg/L		07/05/18 09:49	07/05/18 15:06	1

Client Sample ID: W29

Date Collected: 06/11/18 14:50
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-4

Matrix: Ground 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		1.00		ug/L			06/19/18 21:19	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 21:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 21:19	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 21:19	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 21:19	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 21:19	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 21:19	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 21:19	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 21:19	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 21:19	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 21:19	1
1,4-Dioxane	ND		200		ug/L			06/19/18 21:19	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 21:19	1
2-Hexanone	ND		10.0		ug/L			06/19/18 21:19	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 21:19	1
Acetone	ND		25.0		ug/L			06/19/18 21:19	1
Benzene	**1.25**		1.00		ug/L			06/19/18 21:19	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 21:19	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 21:19	1
Bromoform	ND		1.00		ug/L			06/19/18 21:19	1
Bromomethane	ND		1.00		ug/L			06/19/18 21:19	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 21:19	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 21:19	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 21:19	1
Chloroethane	ND		1.00		ug/L			06/19/18 21:19	1
Chloroform	ND		1.00		ug/L			06/19/18 21:19	1
Chloromethane	ND		1.00		ug/L			06/19/18 21:19	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 21:19	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 21:19	1
Cyclohexane	ND		5.00		ug/L			06/19/18 21:19	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 21:19	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 21:19	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
Isopropylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
Methyl acetate	ND		10.0		ug/L			06/19/18 21:19	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 21:19	1
Methylcyclohexane	ND		5.00		ug/L			06/19/18 21:19	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 21:19	1
Naphthalene	ND		5.00		ug/L			06/19/18 21:19	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
N-Propylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 21:19	1
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 21:19	1

Client Sample ID: W29

Date Collected: 06/11/18 14:50
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-4

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 21:19	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 21:19	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 21:19	1
Toluene	ND		1.00		ug/L			06/19/18 21:19	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 21:19	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 21:19	1
Trichloroethene	ND		1.00		ug/L			06/19/18 21:19	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 21:19	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 21:19	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 21:19	1
o-Xylene	ND		1.00		ug/L			06/19/18 21:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Naphthalene, 1,3-dimethyl-	*4.20*	*T J N*	*ug/L*		*12.44*	*575-41-7*		*06/19/18 21:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*06/19/18 21:19*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*06/19/18 21:19*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*06/19/18 21:19*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*06/19/18 21:19*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,4,5-Trichlorophenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,4,6-Trichlorophenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,4-Dichlorophenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,4-Dimethylphenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,4-Dinitrophenol	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
2-Chlorophenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2-Methylphenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2-Nitrophenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
3 & 4 Methylphenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
4,6-Dinitro-2-methylphenol	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
4-Chloro-3-methylphenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
4-Nitrophenol	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
Pentachlorophenol	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
Phenol	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
1,1'-Biphenyl	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
1,2,4,5-Tetrachlorobenzene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,2'-oxybis(1-chloropropane)	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,4-Dinitrotoluene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2,6-Dinitrotoluene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2-Chloronaphthalene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
2-Methylnaphthalene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
2-Nitroaniline	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
3,3'-Dichlorobenzidine	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
3-Nitroaniline	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
4-Bromophenyl phenyl ether	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
4-Chloroaniline	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1

Client Sample ID: W29
Date Collected: 06/11/18 14:50
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-4
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
4-Nitroaniline	ND		22.7		ug/L		06/18/18 18:19	06/28/18 13:15	1
Acenaphthene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Acenaphthylene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Acetophenone	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Anthracene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Atrazine	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Benzaldehyde	ND	*	9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Benzo[a]anthracene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Benzo[a]pyrene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Benzo[b]fluoranthene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Benzo[g,h,i]perylene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Benzo[k]fluoranthene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Bis(2-chloroethoxy)methane	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Bis(2-chloroethyl)ether	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Bis(2-ethylhexyl) phthalate	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Butyl benzyl phthalate	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Caprolactam	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Carbazole	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Chrysene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Dibenz(a,h)anthracene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Dibenzofuran	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Diethyl phthalate	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Dimethyl phthalate	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Di-n-butyl phthalate	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Di-n-octyl phthalate	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Fluoranthene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Fluorene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Hexachlorobenzene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Hexachlorobutadiene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Hexachlorocyclopentadiene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Hexachloroethane	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Indeno[1,2,3-cd]pyrene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Isophorone	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Naphthalene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Nitrobenzene	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
N-Nitrosodi-n-propylamine	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.09		ug/L		06/18/18 18:19	06/28/18 13:15	1
Phenanthrene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1
Pyrene	ND		1.82		ug/L		06/18/18 18:19	06/28/18 13:15	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*06/18/18 18:19*	*06/28/18 13:15*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*92*		*10 - 120*	*06/18/18 18:19*	*06/28/18 13:15*	*1*
2-Fluorobiphenyl (Surr)	*68*		*29 - 120*	*06/18/18 18:19*	*06/28/18 13:15*	*1*
2-Fluorophenol (Surr)	*59*		*10 - 120*	*06/18/18 18:19*	*06/28/18 13:15*	*1*
Nitrobenzene-d5 (Surr)	*61*		*27 - 120*	*06/18/18 18:19*	*06/28/18 13:15*	*1*

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: W29
Date Collected: 06/11/18 14:50
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-4
Matrix: Ground Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*49*		*10 - 120*	*06/18/18 18:19*	*06/28/18 13:15*	*1*
Terphenyl-d14 (Surr)	*75*		*13 - 120*	*06/18/18 18:19*	*06/28/18 13:15*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/28/18 17:25	07/02/18 13:13	1
Chromium	**0.00580**		0.00500		mg/L		06/28/18 17:25	07/02/18 13:13	1
Lead	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 13:13	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MW5
Date Collected: 06/11/18 13:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-5
Matrix: Ground 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		1.00		ug/L			06/19/18 21:46	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 21:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 21:46	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 21:46	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 21:46	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 21:46	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 21:46	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 21:46	1
1,2,4-Trimethylbenzene	**24.6**		1.00		ug/L			06/19/18 21:46	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 21:46	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 21:46	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 21:46	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 21:46	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 21:46	1
1,3,5-Trimethylbenzene	**1.94**		1.00		ug/L			06/19/18 21:46	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 21:46	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 21:46	1
1,4-Dioxane	ND		200		ug/L			06/19/18 21:46	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 21:46	1
2-Hexanone	ND		10.0		ug/L			06/19/18 21:46	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 21:46	1
Acetone	ND		25.0		ug/L			06/19/18 21:46	1
Benzene	ND		1.00		ug/L			06/19/18 21:46	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 21:46	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 21:46	1
Bromoform	ND		1.00		ug/L			06/19/18 21:46	1
Bromomethane	ND		1.00		ug/L			06/19/18 21:46	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 21:46	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 21:46	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 21:46	1
Chloroethane	ND		1.00		ug/L			06/19/18 21:46	1
Chloroform	ND		1.00		ug/L			06/19/18 21:46	1
Chloromethane	ND		1.00		ug/L			06/19/18 21:46	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 21:46	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 21:46	1
Cyclohexane	**16.5**		5.00		ug/L			06/19/18 21:46	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 21:46	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 21:46	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 21:46	1
Isopropylbenzene	**1.71**		1.00		ug/L			06/19/18 21:46	1
Methyl acetate	ND		10.0		ug/L			06/19/18 21:46	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 21:46	1
Methylcyclohexane	ND		5.00		ug/L			06/19/18 21:46	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 21:46	1
Naphthalene	ND		5.00		ug/L			06/19/18 21:46	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 21:46	1
N-Propylbenzene	**1.39**		1.00		ug/L			06/19/18 21:46	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 21:46	1
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 21:46	1

Client Sample ID: MW5

Date Collected: 06/11/18 13:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-5

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 21:46	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 21:46	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 21:46	1
Toluene	ND		1.00		ug/L			06/19/18 21:46	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 21:46	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 21:46	1
Trichloroethene	ND		1.00		ug/L			06/19/18 21:46	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 21:46	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 21:46	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 21:46	1
o-Xylene	ND		1.00		ug/L			06/19/18 21:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
2-Methyl-2-propanol	*14.2*		*ug/L*		*2.07*	*75-65-0*		*06/19/18 21:46*	*1*
trans-3,4-Dimethylcyclopentanone	*9.07*	*T J N*	*ug/L*		*6.81*	*19550-73-3*		*06/19/18 21:46*	*1*
Benzene, 1-ethyl-2-methyl-	*7.57*	*T J N*	*ug/L*		*7.30*	*611-14-3*		*06/19/18 21:46*	*1*
Benzene, 1-methyl-2-(1-methylethyl)-	*8.68*	*T J N*	*ug/L*		*7.72*	*527-84-4*		*06/19/18 21:46*	*1*
1,2,3-Trimethylbenzene	*14.0*		*ug/L*		*7.85*	*526-73-8*		*06/19/18 21:46*	*1*
Benzene, 1-methyl-3-(1-methylethyl)-	*7.21*	*T J N*	*ug/L*		*8.50*	*535-77-3*		*06/19/18 21:46*	*1*
Indan, 1-methyl-	*7.19*	*T J N*	*ug/L*		*8.59*	*767-58-8*		*06/19/18 21:46*	*1*
Benzene, 1,2,3,5-tetramethyl-	*8.34*	*T J N*	*ug/L*		*8.88*	*527-53-7*		*06/19/18 21:46*	*1*
Benzene, 1,2,3,4-tetramethyl-	*22.3*	*T J N*	*ug/L*		*8.92*	*488-23-3*		*06/19/18 21:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*06/19/18 21:46*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*06/19/18 21:46*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*06/19/18 21:46*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*06/19/18 21:46*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,4,5-Trichlorophenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,4,6-Trichlorophenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,4-Dichlorophenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,4-Dimethylphenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,4-Dinitrophenol	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
2-Chlorophenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2-Methylphenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2-Nitrophenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
3 & 4 Methylphenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
4,6-Dinitro-2-methylphenol	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
4-Chloro-3-methylphenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
4-Nitrophenol	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
Pentachlorophenol	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
Phenol	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
1,1'-Biphenyl	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
1,2,4,5-Tetrachlorobenzene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,2'-oxybis(1-chloropropane)	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2,4-Dinitrotoluene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MW5
Date Collected: 06/11/18 13:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-5
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2-Chloronaphthalene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
2-Methylnaphthalene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
2-Nitroaniline	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
3,3'-Dichlorobenzidine	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
3-Nitroaniline	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
4-Bromophenyl phenyl ether	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
4-Chloroaniline	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
4-Chlorophenyl phenyl ether	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
4-Nitroaniline	ND		24.0		ug/L		06/18/18 18:19	06/28/18 13:36	1
Acenaphthene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Acenaphthylene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Acetophenone	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Anthracene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Atrazine	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Benzaldehyde	ND	*	9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Benzo[a]anthracene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Benzo[a]pyrene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Benzo[b]fluoranthene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Benzo[g,h,i]perylene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Benzo[k]fluoranthene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Bis(2-chloroethoxy)methane	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Bis(2-chloroethyl)ether	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Bis(2-ethylhexyl) phthalate	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Butyl benzyl phthalate	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Caprolactam	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Carbazole	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Chrysene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Dibenz(a,h)anthracene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Dibenzofuran	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Diethyl phthalate	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Dimethyl phthalate	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Di-n-butyl phthalate	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Di-n-octyl phthalate	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Fluoranthene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Fluorene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Hexachlorobenzene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Hexachlorobutadiene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Hexachlorocyclopentadiene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Hexachloroethane	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Indeno[1,2,3-cd]pyrene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Isophorone	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Naphthalene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Nitrobenzene	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
N-Nitrosodi-n-propylamine	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.62		ug/L		06/18/18 18:19	06/28/18 13:36	1
Phenanthrene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1
Pyrene	ND		1.92		ug/L		06/18/18 18:19	06/28/18 13:36	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MW5
Date Collected: 06/11/18 13:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-5
Matrix: Ground Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
1-Methylcyclohexanol	5.20	T J N	ug/L		3.56	590-67-0	06/18/18 18:19	06/28/18 13:36	1
2-Cyclopenten-1-one, 2,3-dimethyl-	15.9	T J N	ug/L		4.33	1121-05-7	06/18/18 18:19	06/28/18 13:36	1
Benzoic acid, 3,4-dimethyl-	89.9	T J N	ug/L		5.89	619-04-5	06/18/18 18:19	06/28/18 13:36	1
1,2,3,4-Tetrahydro-2-naphthoic acid	21.0	T J N	ug/L		6.55	53440-12-3	06/18/18 18:19	06/28/18 13:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	93		10 - 120	06/18/18 18:19	06/28/18 13:36	1
2-Fluorobiphenyl (Surr)	56		29 - 120	06/18/18 18:19	06/28/18 13:36	1
2-Fluorophenol (Surr)	58		10 - 120	06/18/18 18:19	06/28/18 13:36	1
Nitrobenzene-d5 (Surr)	61		27 - 120	06/18/18 18:19	06/28/18 13:36	1
Phenol-d5 (Surr)	47		10 - 120	06/18/18 18:19	06/28/18 13:36	1
Terphenyl-d14 (Surr)	77		13 - 120	06/18/18 18:19	06/28/18 13:36	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/29/18 10:16	07/02/18 23:19	1
Chromium	ND		0.00500		mg/L		06/29/18 10:16	07/02/18 23:19	1
Lead	ND		0.00500		mg/L		06/29/18 10:16	07/02/18 23:19	1

Client Sample ID: W18

Date Collected: 06/11/18 12:35
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-6

Matrix: Ground 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		1.00		ug/L			06/19/18 22:13	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 22:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 22:13	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 22:13	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 22:13	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 22:13	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 22:13	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 22:13	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 22:13	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 22:13	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 22:13	1
1,4-Dioxane	ND		200		ug/L			06/19/18 22:13	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 22:13	1
2-Hexanone	ND		10.0		ug/L			06/19/18 22:13	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 22:13	1
Acetone	ND		25.0		ug/L			06/19/18 22:13	1
Benzene	ND		1.00		ug/L			06/19/18 22:13	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 22:13	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 22:13	1
Bromoform	ND		1.00		ug/L			06/19/18 22:13	1
Bromomethane	ND		1.00		ug/L			06/19/18 22:13	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 22:13	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 22:13	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 22:13	1
Chloroethane	ND		1.00		ug/L			06/19/18 22:13	1
Chloroform	ND		1.00		ug/L			06/19/18 22:13	1
Chloromethane	ND		1.00		ug/L			06/19/18 22:13	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 22:13	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 22:13	1
Cyclohexane	ND		5.00		ug/L			06/19/18 22:13	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 22:13	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 22:13	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
Isopropylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
Methyl acetate	ND		10.0		ug/L			06/19/18 22:13	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 22:13	1
Methylcyclohexane	ND		5.00		ug/L			06/19/18 22:13	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 22:13	1
Naphthalene	ND		5.00		ug/L			06/19/18 22:13	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
N-Propylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 22:13	1
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 22:13	1

Client Sample ID: W18

Date Collected: 06/11/18 12:35
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-6

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 22:13	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 22:13	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 22:13	1
Toluene	ND		1.00		ug/L			06/19/18 22:13	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 22:13	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 22:13	1
Trichloroethene	ND		1.00		ug/L			06/19/18 22:13	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 22:13	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 22:13	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 22:13	1
o-Xylene	ND		1.00		ug/L			06/19/18 22:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/18 22:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*06/19/18 22:13*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*06/19/18 22:13*	*1*
Dibromofluoromethane (Surr)	*88*		*70 - 130*		*06/19/18 22:13*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*06/19/18 22:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,4,5-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,4,6-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,4-Dichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,4-Dimethylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,4-Dinitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
2-Chlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2-Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2-Nitrophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
3 & 4 Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
4,6-Dinitro-2-methylphenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
4-Chloro-3-methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
4-Nitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
Pentachlorophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
Phenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
1,1'-Biphenyl	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
1,2,4,5-Tetrachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,2'-oxybis(1-chloropropane)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,4-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2,6-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2-Chloronaphthalene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
2-Methylnaphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
2-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
3,3'-Dichlorobenzidine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
3-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
4-Bromophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
4-Chloroaniline	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1

Client Sample ID: W18
Date Collected: 06/11/18 12:35
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-6
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
4-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 13:57	1
Acenaphthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Acenaphthylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Acetophenone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Atrazine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Benzaldehyde	ND	*	9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Benzo[a]anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Benzo[a]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Benzo[b]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Benzo[g,h,i]perylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Benzo[k]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Bis(2-chloroethoxy)methane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Bis(2-chloroethyl)ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Bis(2-ethylhexyl) phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Butyl benzyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Caprolactam	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Carbazole	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Chrysene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Dibenz(a,h)anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Dibenzofuran	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Diethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Dimethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Di-n-butyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Di-n-octyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Fluorene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Hexachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Hexachlorobutadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Hexachlorocyclopentadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Hexachloroethane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Indeno[1,2,3-cd]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Isophorone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Naphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Nitrobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
N-Nitrosodi-n-propylamine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 13:57	1
Phenanthrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1
Pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 13:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*06/18/18 18:19*	*06/28/18 13:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*95*		*10 - 120*	*06/18/18 18:19*	*06/28/18 13:57*	*1*
2-Fluorobiphenyl (Surr)	*70*		*29 - 120*	*06/18/18 18:19*	*06/28/18 13:57*	*1*
2-Fluorophenol (Surr)	*64*		*10 - 120*	*06/18/18 18:19*	*06/28/18 13:57*	*1*
Nitrobenzene-d5 (Surr)	*62*		*27 - 120*	*06/18/18 18:19*	*06/28/18 13:57*	*1*

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: W18
Date Collected: 06/11/18 12:35
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-6
Matrix: Ground Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*50*		*10 - 120*	*06/18/18 18:19*	*06/28/18 13:57*	*1*
Terphenyl-d14 (Surr)	*79*		*13 - 120*	*06/18/18 18:19*	*06/28/18 13:57*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/28/18 17:25	07/02/18 13:19	1
Chromium	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 13:19	1
Lead	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 13:19	1

Client Sample ID: Blind Dup

Date Collected: 06/11/18 12:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.00		ug/L			06/19/18 22:41	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 22:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 22:41	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 22:41	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 22:41	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 22:41	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 22:41	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 22:41	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 22:41	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 22:41	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 22:41	1
1,4-Dioxane	ND		200		ug/L			06/19/18 22:41	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 22:41	1
2-Hexanone	ND		10.0		ug/L			06/19/18 22:41	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 22:41	1
Acetone	ND		25.0		ug/L			06/19/18 22:41	1
Benzene	ND		1.00		ug/L			06/19/18 22:41	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 22:41	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 22:41	1
Bromoform	ND		1.00		ug/L			06/19/18 22:41	1
Bromomethane	ND		1.00		ug/L			06/19/18 22:41	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 22:41	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 22:41	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 22:41	1
Chloroethane	ND		1.00		ug/L			06/19/18 22:41	1
Chloroform	ND		1.00		ug/L			06/19/18 22:41	1
Chloromethane	ND		1.00		ug/L			06/19/18 22:41	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 22:41	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 22:41	1
Cyclohexane	ND		5.00		ug/L			06/19/18 22:41	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 22:41	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 22:41	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
Isopropylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
Methyl acetate	ND		10.0		ug/L			06/19/18 22:41	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 22:41	1
Methylcyclohexane	ND		5.00		ug/L			06/19/18 22:41	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 22:41	1
Naphthalene	ND		5.00		ug/L			06/19/18 22:41	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
N-Propylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 22:41	1
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 22:41	1

Client Sample ID: Blind Dup

Date Collected: 06/11/18 12:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 22:41	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 22:41	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 22:41	1
Toluene	ND		1.00		ug/L			06/19/18 22:41	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 22:41	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 22:41	1
Trichloroethene	ND		1.00		ug/L			06/19/18 22:41	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 22:41	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 22:41	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 22:41	1
o-Xylene	ND		1.00		ug/L			06/19/18 22:41	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/18 22:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*06/19/18 22:41*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*06/19/18 22:41*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*06/19/18 22:41*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*06/19/18 22:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,4,5-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,4,6-Trichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,4-Dichlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,4-Dimethylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,4-Dinitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
2-Chlorophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2-Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2-Nitrophenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
3 & 4 Methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
4,6-Dinitro-2-methylphenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
4-Chloro-3-methylphenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
4-Nitrophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
Pentachlorophenol	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
Phenol	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
1,1'-Biphenyl	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
1,2,4,5-Tetrachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,2'-oxybis(1-chloropropane)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,4-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2,6-Dinitrotoluene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2-Chloronaphthalene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
2-Methylnaphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
2-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
3,3'-Dichlorobenzidine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
3-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
4-Bromophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
4-Chloroaniline	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1

Client Sample ID: Blind Dup

Date Collected: 06/11/18 12:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
4-Nitroaniline	ND		23.1		ug/L		06/18/18 18:19	06/28/18 14:17	1
Acenaphthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Acenaphthylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Acetophenone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Atrazine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Benzaldehyde	ND	*	9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Benzo[a]anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Benzo[a]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Benzo[b]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Benzo[g,h,i]perylene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Benzo[k]fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Bis(2-chloroethoxy)methane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Bis(2-chloroethyl)ether	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Bis(2-ethylhexyl) phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Butyl benzyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Caprolactam	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Carbazole	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Chrysene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Dibenz(a,h)anthracene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Dibenzofuran	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Diethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Dimethyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Di-n-butyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Di-n-octyl phthalate	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Fluoranthene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Fluorene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Hexachlorobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Hexachlorobutadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Hexachlorocyclopentadiene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Hexachloroethane	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Indeno[1,2,3-cd]pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Isophorone	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Naphthalene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Nitrobenzene	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
N-Nitrosodi-n-propylamine	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.26		ug/L		06/18/18 18:19	06/28/18 14:17	1
Phenanthrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1
Pyrene	ND		1.85		ug/L		06/18/18 18:19	06/28/18 14:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*06/18/18 18:19*	*06/28/18 14:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*10 - 120*	*06/18/18 18:19*	*06/28/18 14:17*	*1*
2-Fluorobiphenyl (Surr)	*58*		*29 - 120*	*06/18/18 18:19*	*06/28/18 14:17*	*1*
2-Fluorophenol (Surr)	*50*		*10 - 120*	*06/18/18 18:19*	*06/28/18 14:17*	*1*
Nitrobenzene-d5 (Surr)	*50*		*27 - 120*	*06/18/18 18:19*	*06/28/18 14:17*	*1*

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: Blind Dup
Date Collected: 06/11/18 12:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-7
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*40*		*10 - 120*	*06/18/18 18:19*	*06/28/18 14:17*	*1*
Terphenyl-d14 (Surr)	*61*		*13 - 120*	*06/18/18 18:19*	*06/28/18 14:17*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0434**		0.0100		mg/L		06/28/18 17:25	07/02/18 13:24	1
Chromium	**0.00790**		0.00500		mg/L		06/28/18 17:25	07/02/18 13:24	1
Lead	**0.0118**		0.00500		mg/L		06/28/18 17:25	07/02/18 13:24	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: Trip Blank
Date Collected: 06/11/18 08:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-8
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		1.00		ug/L			06/19/18 19:02	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 19:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 19:02	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 19:02	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 19:02	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 19:02	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 19:02	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 19:02	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 19:02	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 19:02	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 19:02	1
1,4-Dioxane	ND		200		ug/L			06/19/18 19:02	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 19:02	1
2-Hexanone	ND		10.0		ug/L			06/19/18 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 19:02	1
Acetone	ND		25.0		ug/L			06/19/18 19:02	1
Benzene	ND		1.00		ug/L			06/19/18 19:02	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 19:02	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 19:02	1
Bromoform	ND		1.00		ug/L			06/19/18 19:02	1
Bromomethane	ND		1.00		ug/L			06/19/18 19:02	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 19:02	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 19:02	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 19:02	1
Chloroethane	ND		1.00		ug/L			06/19/18 19:02	1
Chloroform	ND		1.00		ug/L			06/19/18 19:02	1
Chloromethane	ND		1.00		ug/L			06/19/18 19:02	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 19:02	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 19:02	1
Cyclohexane	ND		5.00		ug/L			06/19/18 19:02	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 19:02	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 19:02	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
Isopropylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
Methyl acetate	ND		10.0		ug/L			06/19/18 19:02	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 19:02	1
Methylcyclohexane	ND		5.00		ug/L			06/19/18 19:02	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 19:02	1
Naphthalene	ND		5.00		ug/L			06/19/18 19:02	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
N-Propylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 19:02	1
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 19:02	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: Trip Blank
Date Collected: 06/11/18 08:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.00		ug/L			06/19/18 19:02	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 19:02	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 19:02	1
Toluene	ND		1.00		ug/L			06/19/18 19:02	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 19:02	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 19:02	1
Trichloroethene	ND		1.00		ug/L			06/19/18 19:02	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 19:02	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 19:02	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 19:02	1
o-Xylene	ND		1.00		ug/L			06/19/18 19:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl alcohol	*56.2*		*ug/L*		*1.88*	*67-63-0*		*06/19/18 19:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*06/19/18 19:02*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*06/19/18 19:02*	*1*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*06/19/18 19:02*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*06/19/18 19:02*	*1*

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

Lab Sample ID: MB 490-522979/5
Matrix: Water
Analysis Batch: 522979

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		1.00		ug/L			06/19/18 14:24	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/19/18 14:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/19/18 14:24	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/19/18 14:24	1
1,1-Dichloroethane	ND		1.00		ug/L			06/19/18 14:24	1
1,1-Dichloroethene	ND		1.00		ug/L			06/19/18 14:24	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/19/18 14:24	1
1,2-Dibromoethane	ND		1.00		ug/L			06/19/18 14:24	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,2-Dichloroethane	ND		1.00		ug/L			06/19/18 14:24	1
1,2-Dichloropropane	ND		1.00		ug/L			06/19/18 14:24	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/19/18 14:24	1
1,4-Dioxane	ND		200		ug/L			06/19/18 14:24	1
2-Butanone (MEK)	ND		50.0		ug/L			06/19/18 14:24	1
2-Hexanone	ND		10.0		ug/L			06/19/18 14:24	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/19/18 14:24	1
Acetone	ND		25.0		ug/L			06/19/18 14:24	1
Benzene	ND		1.00		ug/L			06/19/18 14:24	1
Bromochloromethane	ND		1.00		ug/L			06/19/18 14:24	1
Bromodichloromethane	ND		1.00		ug/L			06/19/18 14:24	1
Bromoform	ND		1.00		ug/L			06/19/18 14:24	1
Bromomethane	ND		1.00		ug/L			06/19/18 14:24	1
Carbon disulfide	ND		1.00		ug/L			06/19/18 14:24	1
Carbon tetrachloride	ND		1.00		ug/L			06/19/18 14:24	1
Chlorobenzene	ND		1.00		ug/L			06/19/18 14:24	1
Chloroethane	ND		1.00		ug/L			06/19/18 14:24	1
Chloroform	ND		1.00		ug/L			06/19/18 14:24	1
Chloromethane	ND		1.00		ug/L			06/19/18 14:24	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 14:24	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 14:24	1
Cyclohexane	ND		5.00		ug/L			06/19/18 14:24	1
Dibromochloromethane	ND		1.00		ug/L			06/19/18 14:24	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/19/18 14:24	1
Ethylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
Isopropylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
Methyl acetate	ND		10.0		ug/L			06/19/18 14:24	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/19/18 14:24	1
Methylcyclohexane	ND		5.00		ug/L			06/19/18 14:24	1
Methylene Chloride	ND		5.00		ug/L			06/19/18 14:24	1
Naphthalene	ND		5.00		ug/L			06/19/18 14:24	1
n-Butylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
N-Propylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
p-Isopropyltoluene	ND		1.00		ug/L			06/19/18 14:24	1

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

Lab Sample ID: MB 490-522979/5
Matrix: Water
Analysis Batch: 522979

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
Styrene	ND		1.00		ug/L			06/19/18 14:24	1
tert-Butylbenzene	ND		1.00		ug/L			06/19/18 14:24	1
Tetrachloroethene	ND		1.00		ug/L			06/19/18 14:24	1
Toluene	ND		1.00		ug/L			06/19/18 14:24	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/19/18 14:24	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/19/18 14:24	1
Trichloroethene	ND		1.00		ug/L			06/19/18 14:24	1
Trichlorofluoromethane	ND		1.00		ug/L			06/19/18 14:24	1
Vinyl chloride	ND		1.00		ug/L			06/19/18 14:24	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/19/18 14:24	1
o-Xylene	ND		1.00		ug/L			06/19/18 14:24	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/18 14:24*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*06/19/18 14:24*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*06/19/18 14:24*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*06/19/18 14:24*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*06/19/18 14:24*	*1*

Lab Sample ID: LCS 490-522979/3
Matrix: Water
Analysis Batch: 522979

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	20.0	16.01		ug/L		80	78 - 135
1,1,2,2-Tetrachloroethane	20.0	23.25		ug/L		116	69 - 131
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	18.59		ug/L		93	77 - 129
1,1,2-Trichloroethane	20.0	18.74		ug/L		94	80 - 124
1,1-Dichloroethane	20.0	18.25		ug/L		91	78 - 125
1,1-Dichloroethene	20.0	18.22		ug/L		91	79 - 124
1,2,3-Trichlorobenzene	20.0	23.26		ug/L		116	62 - 133
1,2,4-Trichlorobenzene	20.0	21.71		ug/L		109	63 - 133
1,2,4-Trimethylbenzene	20.0	22.42		ug/L		112	77 - 126
1,2-Dibromo-3-Chloropropane	20.0	22.03		ug/L		110	54 - 125
1,2-Dibromoethane	20.0	19.68		ug/L		98	80 - 129
1,2-Dichlorobenzene	20.0	21.72		ug/L		109	80 - 121
1,2-Dichloroethane	20.0	15.39		ug/L		77	77 - 121
1,2-Dichloropropane	20.0	18.92		ug/L		95	75 - 120
1,3,5-Trimethylbenzene	20.0	20.35		ug/L		102	77 - 127
1,3-Dichlorobenzene	20.0	21.88		ug/L		109	80 - 122
1,4-Dichlorobenzene	20.0	20.04		ug/L		100	80 - 120
1,4-Dioxane	400	405.6		ug/L		101	39 - 150
2-Butanone (MEK)	100	96.52		ug/L		97	62 - 133
2-Hexanone	100	116.8		ug/L		117	60 - 142

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

Lab Sample ID: LCS 490-522979/3
Matrix: Water
Analysis Batch: 522979

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	100	115.1		ug/L		115	60 - 137
Acetone	100	94.54		ug/L		95	54 - 145
Benzene	20.0	19.45		ug/L		97	80 - 121
Bromochloromethane	20.0	15.79		ug/L		79	78 - 129
Bromodichloromethane	20.0	16.97		ug/L		85	75 - 129
Bromoform	20.0	17.16		ug/L		86	46 - 145
Bromomethane	20.0	24.28		ug/L		121	41 - 150
Carbon disulfide	20.0	21.74		ug/L		109	77 - 126
Carbon tetrachloride	20.0	15.66		ug/L		78	64 - 147
Chlorobenzene	20.0	19.88		ug/L		99	80 - 120
Chloroethane	20.0	22.27		ug/L		111	72 - 120
Chloroform	20.0	16.99		ug/L		85	73 - 129
Chloromethane	20.0	22.90		ug/L		114	12 - 150
cis-1,2-Dichloroethene	20.0	17.85		ug/L		89	76 - 125
cis-1,3-Dichloropropene	20.0	19.68		ug/L		98	74 - 140
Cyclohexane	20.0	20.67		ug/L		103	73 - 122
Dibromochloromethane	20.0	18.32		ug/L		92	69 - 133
Dichlorodifluoromethane	20.0	20.79		ug/L		104	37 - 127
Ethylbenzene	20.0	21.24		ug/L		106	80 - 130
Isopropylbenzene	20.0	20.03		ug/L		100	80 - 141
Methyl acetate	40.0	40.25		ug/L		101	64 - 150
Methyl tert-butyl ether	20.0	16.03		ug/L		80	72 - 133
Methylcyclohexane	20.0	20.28		ug/L		101	71 - 129
Methylene Chloride	20.0	18.68		ug/L		93	79 - 123
Naphthalene	20.0	23.44		ug/L		117	62 - 138
n-Butylbenzene	20.0	24.79		ug/L		124	68 - 132
N-Propylbenzene	20.0	24.88		ug/L		124	75 - 129
p-Isopropyltoluene	20.0	22.48		ug/L		112	75 - 128
sec-Butylbenzene	20.0	23.25		ug/L		116	76 - 128
Styrene	20.0	20.44		ug/L		102	80 - 127
tert-Butylbenzene	20.0	21.74		ug/L		109	76 - 126
Tetrachloroethene	20.0	17.52		ug/L		88	80 - 126
Toluene	20.0	20.58		ug/L		103	80 - 126
trans-1,2-Dichloroethene	20.0	18.51		ug/L		93	79 - 126
trans-1,3-Dichloropropene	20.0	18.47		ug/L		92	63 - 134
Trichloroethene	20.0	16.36		ug/L		82	80 - 123
Trichlorofluoromethane	20.0	18.19		ug/L		91	65 - 124
Vinyl chloride	20.0	22.38		ug/L		112	68 - 120
m-Xylene & p-Xylene	20.0	20.87		ug/L		104	80 - 141
o-Xylene	20.0	19.99		ug/L		100	80 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
Dibromofluoromethane (Surr)	*89*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

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

Lab Sample ID: 490-153987-3 MS
Matrix: Ground Water
Analysis Batch: 522979

Client Sample ID: MWSW
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		20.0	18.06		ug/L		90	68 - 144
1,1,2,2-Tetrachloroethane	ND		20.0	27.29		ug/L		136	56 - 145
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20.0	20.46		ug/L		102	63 - 150
1,1,2-Trichloroethane	ND		20.0	22.37		ug/L		112	70 - 130
1,1-Dichloroethane	ND		20.0	20.41		ug/L		102	61 - 139
1,1-Dichloroethene	ND		20.0	20.34		ug/L		102	54 - 150
1,2,3-Trichlorobenzene	ND	F1	20.0	30.99	F1	ug/L		155	36 - 150
1,2,4-Trichlorobenzene	ND		20.0	26.45		ug/L		132	47 - 147
1,2,4-Trimethylbenzene	307	E	20.0	322.8	E 4	ug/L		77	64 - 136
1,2-Dibromo-3-Chloropropane	ND	F1	20.0	26.44		ug/L		132	38 - 138
1,2-Dibromoethane	ND		20.0	20.11		ug/L		101	65 - 137
1,2-Dichlorobenzene	ND		20.0	23.59		ug/L		118	70 - 130
1,2-Dichloroethane	ND		20.0	19.95		ug/L		100	64 - 136
1,2-Dichloropropane	ND		20.0	24.74		ug/L		124	67 - 130
1,3,5-Trimethylbenzene	17.2		20.0	40.43		ug/L		116	69 - 139
1,3-Dichlorobenzene	ND		20.0	23.68		ug/L		118	68 - 131
1,4-Dichlorobenzene	ND		20.0	20.90		ug/L		105	70 - 130
1,4-Dioxane	ND		400	370.4		ug/L		93	11 - 150
2-Butanone (MEK)	ND		100	94.98		ug/L		95	50 - 143
2-Hexanone	ND		100	122.9		ug/L		123	44 - 150
4-Methyl-2-pentanone (MIBK)	ND		100	132.3		ug/L		132	50 - 140
Acetone	ND		100	97.71		ug/L		86	39 - 150
Benzene	90.1		20.0	112.3	4	ug/L		111	55 - 147
Bromochloromethane	ND		20.0	16.98		ug/L		85	59 - 132
Bromodichloromethane	ND		20.0	18.45		ug/L		92	70 - 140
Bromoform	ND		20.0	17.77		ug/L		89	53 - 150
Bromomethane	ND		20.0	11.20		ug/L		56	30 - 150
Carbon disulfide	ND		20.0	23.11		ug/L		116	35 - 150
Carbon tetrachloride	ND		20.0	17.76		ug/L		89	56 - 150
Chlorobenzene	ND		20.0	20.98		ug/L		105	70 - 130
Chloroethane	ND		20.0	23.24		ug/L		116	58 - 141
Chloroform	ND		20.0	18.71		ug/L		94	66 - 138
Chloromethane	ND		20.0	21.80		ug/L		109	10 - 150
cis-1,2-Dichloroethene	ND		20.0	19.25		ug/L		96	68 - 131
cis-1,3-Dichloropropene	ND		20.0	20.85		ug/L		104	70 - 133
Cyclohexane	260	E	20.0	292.5	E 4	ug/L		161	48 - 150
Dibromochloromethane	ND		20.0	18.18		ug/L		91	66 - 140
Dichlorodifluoromethane	ND		20.0	17.56		ug/L		88	10 - 150
Ethylbenzene	ND		20.0	23.76		ug/L		115	65 - 139
Isopropylbenzene	23.1		20.0	45.34		ug/L		111	70 - 137
Methyl acetate	ND		40.0	38.14		ug/L		95	42 - 136
Methyl tert-butyl ether	ND		20.0	16.83		ug/L		84	55 - 141
Methylcyclohexane	180		20.0	211.4	E 4	ug/L		157	59 - 150
Methylene Chloride	ND		20.0	20.71		ug/L		104	64 - 130
Naphthalene	ND	F1	20.0	37.25	F1	ug/L		186	32 - 150
n-Butylbenzene	2.39		20.0	28.21		ug/L		129	61 - 141
N-Propylbenzene	24.1		20.0	52.47		ug/L		142	53 - 150

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

Lab Sample ID: 490-153987-3 MS
Matrix: Ground Water
Analysis Batch: 522979

Client Sample ID: MWSW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
p-Isopropyltoluene	ND		20.0	23.55		ug/L		118	66 - 137
sec-Butylbenzene	6.27		20.0	30.92		ug/L		123	55 - 136
Styrene	ND		20.0	22.07		ug/L		110	70 - 130
tert-Butylbenzene	2.20		20.0	25.75		ug/L		118	70 - 138
Tetrachloroethene	ND		20.0	18.67		ug/L		93	57 - 138
Toluene	5.75		20.0	28.40		ug/L		113	64 - 136
trans-1,2-Dichloroethene	ND		20.0	20.76		ug/L		104	59 - 143
trans-1,3-Dichloropropene	ND		20.0	19.73		ug/L		99	63 - 142
Trichloroethene	ND		20.0	18.31		ug/L		92	63 - 135
Trichlorofluoromethane	ND		20.0	19.02		ug/L		95	44 - 150
Vinyl chloride	ND		20.0	23.17		ug/L		116	57 - 150
m-Xylene & p-Xylene	12.7		20.0	35.54		ug/L		114	70 - 130
o-Xylene	4.25		20.0	26.37		ug/L		111	70 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
Dibromofluoromethane (Surr)	*91*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: 490-153987-3 MSD
Matrix: Ground Water
Analysis Batch: 522979

Client Sample ID: MWSW
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		20.0	18.10		ug/L		91	68 - 144	0	17
1,1,2,2-Tetrachloroethane	ND		20.0	27.10		ug/L		135	56 - 145	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20.0	20.32		ug/L		102	63 - 150	1	18
1,1,2-Trichloroethane	ND		20.0	22.65		ug/L		113	70 - 130	1	15
1,1-Dichloroethane	ND		20.0	20.55		ug/L		103	61 - 139	1	17
1,1-Dichloroethene	ND		20.0	20.10		ug/L		101	54 - 150	1	17
1,2,3-Trichlorobenzene	ND	F1	20.0	32.44	F1	ug/L		162	36 - 150	5	25
1,2,4-Trichlorobenzene	ND		20.0	26.99		ug/L		135	47 - 147	2	19
1,2,4-Trimethylbenzene	307	E	20.0	311.1	E 4	ug/L		19	64 - 136	4	16
1,2-Dibromo-3-Chloropropane	ND	F1	20.0	28.95	F1	ug/L		145	38 - 138	9	24
1,2-Dibromoethane	ND		20.0	20.34		ug/L		102	65 - 137	1	15
1,2-Dichlorobenzene	ND		20.0	23.74		ug/L		119	70 - 130	1	15
1,2-Dichloroethane	ND		20.0	18.99		ug/L		95	64 - 136	5	17
1,2-Dichloropropane	ND		20.0	24.61		ug/L		123	67 - 130	1	17
1,3,5-Trimethylbenzene	17.2		20.0	39.14		ug/L		110	69 - 139	3	17
1,3-Dichlorobenzene	ND		20.0	24.16		ug/L		121	68 - 131	2	15
1,4-Dichlorobenzene	ND		20.0	21.68		ug/L		108	70 - 130	4	15
1,4-Dioxane	ND		400	534.6		ug/L		134	11 - 150	36	48
2-Butanone (MEK)	ND		100	96.95		ug/L		97	50 - 143	2	19
2-Hexanone	ND		100	126.7		ug/L		127	44 - 150	3	15
4-Methyl-2-pentanone (MIBK)	ND		100	135.0		ug/L		135	50 - 140	2	17
Acetone	ND		100	95.30		ug/L		84	39 - 150	2	21

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

Lab Sample ID: 490-153987-3 MSD
Matrix: Ground Water
Analysis Batch: 522979

Client Sample ID: MWSW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	90.1		20.0	108.0	4	ug/L		89	55 - 147	4	17
Bromochloromethane	ND		20.0	16.99		ug/L		85	59 - 132	0	17
Bromodichloromethane	ND		20.0	18.46		ug/L		92	70 - 140	0	18
Bromoform	ND		20.0	17.65		ug/L		88	53 - 150	1	16
Bromomethane	ND		20.0	16.46		ug/L		82	30 - 150	38	50
Carbon disulfide	ND		20.0	23.21		ug/L		116	35 - 150	0	21
Carbon tetrachloride	ND		20.0	17.79		ug/L		89	56 - 150	0	19
Chlorobenzene	ND		20.0	21.14		ug/L		106	70 - 130	1	14
Chloroethane	ND		20.0	23.16		ug/L		116	58 - 141	0	20
Chloroform	ND		20.0	18.60		ug/L		93	66 - 138	1	18
Chloromethane	ND		20.0	21.89		ug/L		109	10 - 150	0	31
cis-1,2-Dichloroethene	ND		20.0	19.06		ug/L		95	68 - 131	1	17
cis-1,3-Dichloropropene	ND		20.0	21.38		ug/L		107	70 - 133	3	15
Cyclohexane	260	E	20.0	277.5	E 4	ug/L		86	48 - 150	5	16
Dibromochloromethane	ND		20.0	18.86		ug/L		94	66 - 140	4	15
Dichlorodifluoromethane	ND		20.0	17.76		ug/L		89	10 - 150	1	18
Ethylbenzene	ND		20.0	23.97		ug/L		116	65 - 139	1	15
Isopropylbenzene	23.1		20.0	44.19		ug/L		106	70 - 137	3	16
Methyl acetate	ND		40.0	39.44		ug/L		99	42 - 136	3	31
Methyl tert-butyl ether	ND		20.0	17.16		ug/L		86	55 - 141	2	16
Methylcyclohexane	180		20.0	199.3	4	ug/L		96	59 - 150	6	19
Methylene Chloride	ND		20.0	20.65		ug/L		103	64 - 130	0	17
Naphthalene	ND	F1	20.0	39.39	F1	ug/L		197	32 - 150	6	26
n-Butylbenzene	2.39		20.0	28.94		ug/L		133	61 - 141	3	18
N-Propylbenzene	24.1		20.0	51.85		ug/L		139	53 - 150	1	17
p-Isopropyltoluene	ND		20.0	23.96		ug/L		120	66 - 137	2	16
sec-Butylbenzene	6.27		20.0	31.26		ug/L		125	55 - 136	1	16
Styrene	ND		20.0	22.21		ug/L		111	70 - 130	1	24
tert-Butylbenzene	2.20		20.0	26.82		ug/L		123	70 - 138	4	16
Tetrachloroethene	ND		20.0	18.90		ug/L		95	57 - 138	1	16
Toluene	5.75		20.0	27.99		ug/L		111	64 - 136	1	15
trans-1,2-Dichloroethene	ND		20.0	20.96		ug/L		105	59 - 143	1	16
trans-1,3-Dichloropropene	ND		20.0	20.14		ug/L		101	63 - 142	2	14
Trichloroethene	ND		20.0	18.21		ug/L		91	63 - 135	1	17
Trichlorofluoromethane	ND		20.0	19.06		ug/L		95	44 - 150	0	18
Vinyl chloride	ND		20.0	22.95		ug/L		115	57 - 150	1	17
m-Xylene & p-Xylene	12.7		20.0	35.19		ug/L		112	70 - 130	1	16
o-Xylene	4.25		20.0	26.29		ug/L		110	70 - 131	0	14

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
Dibromofluoromethane (Surr)	*88*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 490-523312/6
Matrix: Water
Analysis Batch: 523312

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		1.00		ug/L			06/20/18 13:51	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			06/20/18 13:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00		ug/L			06/20/18 13:51	1
1,1,2-Trichloroethane	ND		1.00		ug/L			06/20/18 13:51	1
1,1-Dichloroethane	ND		1.00		ug/L			06/20/18 13:51	1
1,1-Dichloroethene	ND		1.00		ug/L			06/20/18 13:51	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			06/20/18 13:51	1
1,2-Dibromoethane	ND		1.00		ug/L			06/20/18 13:51	1
1,2-Dichlorobenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,2-Dichloroethane	ND		1.00		ug/L			06/20/18 13:51	1
1,2-Dichloropropane	ND		1.00		ug/L			06/20/18 13:51	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,3-Dichlorobenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,4-Dichlorobenzene	ND		1.00		ug/L			06/20/18 13:51	1
1,4-Dioxane	ND		200		ug/L			06/20/18 13:51	1
2-Butanone (MEK)	ND		50.0		ug/L			06/20/18 13:51	1
2-Hexanone	ND		10.0		ug/L			06/20/18 13:51	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			06/20/18 13:51	1
Acetone	ND		25.0		ug/L			06/20/18 13:51	1
Benzene	ND		1.00		ug/L			06/20/18 13:51	1
Bromochloromethane	ND		1.00		ug/L			06/20/18 13:51	1
Bromodichloromethane	ND		1.00		ug/L			06/20/18 13:51	1
Bromoform	ND		1.00		ug/L			06/20/18 13:51	1
Bromomethane	ND		1.00		ug/L			06/20/18 13:51	1
Carbon disulfide	ND		1.00		ug/L			06/20/18 13:51	1
Carbon tetrachloride	ND		1.00		ug/L			06/20/18 13:51	1
Chlorobenzene	ND		1.00		ug/L			06/20/18 13:51	1
Chloroethane	ND		1.00		ug/L			06/20/18 13:51	1
Chloroform	ND		1.00		ug/L			06/20/18 13:51	1
Chloromethane	ND		1.00		ug/L			06/20/18 13:51	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			06/20/18 13:51	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			06/20/18 13:51	1
Cyclohexane	ND		5.00		ug/L			06/20/18 13:51	1
Dibromochloromethane	ND		1.00		ug/L			06/20/18 13:51	1
Dichlorodifluoromethane	ND		1.00		ug/L			06/20/18 13:51	1
Ethylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
Isopropylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
Methyl acetate	ND		10.0		ug/L			06/20/18 13:51	1
Methyl tert-butyl ether	ND		1.00		ug/L			06/20/18 13:51	1
Methylcyclohexane	ND		5.00		ug/L			06/20/18 13:51	1
Methylene Chloride	ND		5.00		ug/L			06/20/18 13:51	1
Naphthalene	ND		5.00		ug/L			06/20/18 13:51	1
n-Butylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
N-Propylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
p-Isopropyltoluene	ND		1.00		ug/L			06/20/18 13:51	1

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

Lab Sample ID: MB 490-523312/6
Matrix: Water
Analysis Batch: 523312

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
Styrene	ND		1.00		ug/L			06/20/18 13:51	1
tert-Butylbenzene	ND		1.00		ug/L			06/20/18 13:51	1
Tetrachloroethene	ND		1.00		ug/L			06/20/18 13:51	1
Toluene	ND		1.00		ug/L			06/20/18 13:51	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			06/20/18 13:51	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			06/20/18 13:51	1
Trichloroethene	ND		1.00		ug/L			06/20/18 13:51	1
Trichlorofluoromethane	ND		1.00		ug/L			06/20/18 13:51	1
Vinyl chloride	ND		1.00		ug/L			06/20/18 13:51	1
m-Xylene & p-Xylene	ND		2.00		ug/L			06/20/18 13:51	1
o-Xylene	ND		1.00		ug/L			06/20/18 13:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*06/20/18 13:51*	*1*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*		*06/20/18 13:51*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*06/20/18 13:51*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*06/20/18 13:51*	*1*

Lab Sample ID: LCS 490-523312/3
Matrix: Water
Analysis Batch: 523312

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	20.0	15.87		ug/L		79	78 - 135
1,1,2,2-Tetrachloroethane	20.0	16.94		ug/L		85	69 - 131
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.32		ug/L		82	77 - 129
1,1,2-Trichloroethane	20.0	16.87		ug/L		84	80 - 124
1,1-Dichloroethane	20.0	16.45		ug/L		82	78 - 125
1,1-Dichloroethene	20.0	16.86		ug/L		84	79 - 124
1,2,3-Trichlorobenzene	20.0	19.93		ug/L		100	62 - 133
1,2,4-Trichlorobenzene	20.0	17.97		ug/L		90	63 - 133
1,2,4-Trimethylbenzene	20.0	17.78		ug/L		89	77 - 126
1,2-Dibromo-3-Chloropropane	20.0	17.91		ug/L		90	54 - 125
1,2-Dibromoethane	20.0	17.68		ug/L		88	80 - 129
1,2-Dichlorobenzene	20.0	16.83		ug/L		84	80 - 121
1,2-Dichloroethane	20.0	18.29		ug/L		91	77 - 121
1,2-Dichloropropane	20.0	17.96		ug/L		90	75 - 120
1,3,5-Trimethylbenzene	20.0	17.73		ug/L		89	77 - 127
1,3-Dichlorobenzene	20.0	17.83		ug/L		89	80 - 122
1,4-Dichlorobenzene	20.0	16.80		ug/L		84	80 - 120
1,4-Dioxane	400	353.0		ug/L		88	39 - 150
2-Butanone (MEK)	100	109.4		ug/L		109	62 - 133
2-Hexanone	100	97.29		ug/L		97	60 - 142
4-Methyl-2-pentanone (MIBK)	100	95.43		ug/L		95	60 - 137
Acetone	100	110.0		ug/L		110	54 - 145
Benzene	20.0	17.02		ug/L		85	80 - 121

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

Lab Sample ID: LCS 490-523312/3
Matrix: Water
Analysis Batch: 523312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromochloromethane	20.0	19.13		ug/L		96	78 - 129
Bromodichloromethane	20.0	17.54		ug/L		88	75 - 129
Bromoform	20.0	18.62		ug/L		93	46 - 145
Bromomethane	20.0	15.06		ug/L		75	41 - 150
Carbon disulfide	20.0	18.02		ug/L		90	77 - 126
Carbon tetrachloride	20.0	16.65		ug/L		83	64 - 147
Chlorobenzene	20.0	18.40		ug/L		92	80 - 120
Chloroethane	20.0	15.01		ug/L		75	72 - 120
Chloroform	20.0	16.62		ug/L		83	73 - 129
Chloromethane	20.0	20.16		ug/L		101	12 - 150
cis-1,2-Dichloroethene	20.0	16.73		ug/L		84	76 - 125
cis-1,3-Dichloropropene	20.0	16.08		ug/L		80	74 - 140
Cyclohexane	20.0	18.94		ug/L		95	73 - 122
Dibromochloromethane	20.0	16.99		ug/L		85	69 - 133
Dichlorodifluoromethane	20.0	17.37		ug/L		87	37 - 127
Ethylbenzene	20.0	18.47		ug/L		92	80 - 130
Isopropylbenzene	20.0	22.05		ug/L		110	80 - 141
Methyl acetate	40.0	38.91		ug/L		97	64 - 150
Methyl tert-butyl ether	20.0	18.39		ug/L		92	72 - 133
Methylcyclohexane	20.0	20.95		ug/L		105	71 - 129
Methylene Chloride	20.0	18.22		ug/L		91	79 - 123
Naphthalene	20.0	20.53		ug/L		103	62 - 138
n-Butylbenzene	20.0	19.58		ug/L		98	68 - 132
N-Propylbenzene	20.0	17.58		ug/L		88	75 - 129
p-Isopropyltoluene	20.0	19.47		ug/L		97	75 - 128
sec-Butylbenzene	20.0	19.49		ug/L		97	76 - 128
Styrene	20.0	19.95		ug/L		100	80 - 127
tert-Butylbenzene	20.0	18.55		ug/L		93	76 - 126
Tetrachloroethene	20.0	17.97		ug/L		90	80 - 126
Toluene	20.0	16.03		ug/L		80	80 - 126
trans-1,2-Dichloroethene	20.0	16.59		ug/L		83	79 - 126
trans-1,3-Dichloropropene	20.0	16.48		ug/L		82	63 - 134
Trichloroethene	20.0	18.01		ug/L		90	80 - 123
Trichlorofluoromethane	20.0	17.40		ug/L		87	65 - 124
Vinyl chloride	20.0	17.41		ug/L		87	68 - 120
m-Xylene & p-Xylene	20.0	19.33		ug/L		97	80 - 141
o-Xylene	20.0	19.74		ug/L		99	80 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*

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

Lab Sample ID: LCSD 490-523312/4
Matrix: Water
Analysis Batch: 523312

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	16.03		ug/L		80	78 - 135	1	15
1,1,2,2-Tetrachloroethane	20.0	16.62		ug/L		83	69 - 131	2	15
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	16.81		ug/L		84	77 - 129	3	16
1,1,2-Trichloroethane	20.0	16.93		ug/L		85	80 - 124	0	13
1,1-Dichloroethane	20.0	16.55		ug/L		83	78 - 125	1	17
1,1-Dichloroethene	20.0	17.83		ug/L		89	79 - 124	6	20
1,2,3-Trichlorobenzene	20.0	20.01		ug/L		100	62 - 133	0	16
1,2,4-Trichlorobenzene	20.0	17.89		ug/L		89	63 - 133	0	15
1,2,4-Trimethylbenzene	20.0	17.80		ug/L		89	77 - 126	0	13
1,2-Dibromo-3-Chloropropane	20.0	17.78		ug/L		89	54 - 125	1	19
1,2-Dibromoethane	20.0	17.61		ug/L		88	80 - 129	0	13
1,2-Dichlorobenzene	20.0	16.75		ug/L		84	80 - 121	1	12
1,2-Dichloroethane	20.0	18.09		ug/L		90	77 - 121	1	13
1,2-Dichloropropane	20.0	18.50		ug/L		92	75 - 120	3	15
1,3,5-Trimethylbenzene	20.0	17.66		ug/L		88	77 - 127	0	14
1,3-Dichlorobenzene	20.0	17.51		ug/L		88	80 - 122	2	13
1,4-Dichlorobenzene	20.0	17.31		ug/L		87	80 - 120	3	12
1,4-Dioxane	400	386.3		ug/L		97	39 - 150	9	34
2-Butanone (MEK)	100	108.2		ug/L		108	62 - 133	1	19
2-Hexanone	100	100.5		ug/L		101	60 - 142	3	17
4-Methyl-2-pentanone (MIBK)	100	96.49		ug/L		96	60 - 137	1	21
Acetone	100	111.0		ug/L		111	54 - 145	1	23
Benzene	20.0	17.16		ug/L		86	80 - 121	1	12
Bromochloromethane	20.0	19.46		ug/L		97	78 - 129	2	16
Bromodichloromethane	20.0	17.61		ug/L		88	75 - 129	0	14
Bromoform	20.0	18.59		ug/L		93	46 - 145	0	14
Bromomethane	20.0	15.05		ug/L		75	41 - 150	0	19
Carbon disulfide	20.0	18.48		ug/L		92	77 - 126	3	16
Carbon tetrachloride	20.0	15.94		ug/L		80	64 - 147	4	16
Chlorobenzene	20.0	18.83		ug/L		94	80 - 120	2	12
Chloroethane	20.0	15.33		ug/L		77	72 - 120	2	15
Chloroform	20.0	16.83		ug/L		84	73 - 129	1	14
Chloromethane	20.0	20.11		ug/L		101	12 - 150	0	20
cis-1,2-Dichloroethene	20.0	17.05		ug/L		85	76 - 125	2	15
cis-1,3-Dichloropropene	20.0	16.06		ug/L		80	74 - 140	0	15
Cyclohexane	20.0	19.20		ug/L		96	73 - 122	1	16
Dibromochloromethane	20.0	16.93		ug/L		85	69 - 133	0	13
Dichlorodifluoromethane	20.0	17.23		ug/L		86	37 - 127	1	16
Ethylbenzene	20.0	18.91		ug/L		95	80 - 130	2	12
Isopropylbenzene	20.0	22.91		ug/L		115	80 - 141	4	13
Methyl acetate	40.0	38.73		ug/L		97	64 - 150	0	18
Methyl tert-butyl ether	20.0	18.28		ug/L		91	72 - 133	1	16
Methylcyclohexane	20.0	21.84		ug/L		109	71 - 129	4	17
Methylene Chloride	20.0	18.31		ug/L		92	79 - 123	0	15
Naphthalene	20.0	20.37		ug/L		102	62 - 138	1	15
n-Butylbenzene	20.0	20.26		ug/L		101	68 - 132	3	14
N-Propylbenzene	20.0	17.84		ug/L		89	75 - 129	1	14

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

Lab Sample ID: LCSD 490-523312/4
Matrix: Water
Analysis Batch: 523312

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
p-Isopropyltoluene			20.0	20.05		ug/L		100	75 - 128	3	13
sec-Butylbenzene			20.0	19.81		ug/L		99	76 - 128	2	14
Styrene			20.0	20.50		ug/L		103	80 - 127	3	12
tert-Butylbenzene			20.0	18.83		ug/L		94	76 - 126	1	14
Tetrachloroethene			20.0	18.47		ug/L		92	80 - 126	3	17
Toluene			20.0	16.36		ug/L		82	80 - 126	2	13
trans-1,2-Dichloroethene			20.0	16.91		ug/L		85	79 - 126	2	15
trans-1,3-Dichloropropene			20.0	17.05		ug/L		85	63 - 134	3	13
Trichloroethene			20.0	17.68		ug/L		88	80 - 123	2	14
Trichlorofluoromethane			20.0	17.99		ug/L		90	65 - 124	3	22
Vinyl chloride			20.0	17.92		ug/L		90	68 - 120	3	15
m-Xylene & p-Xylene			20.0	19.05		ug/L		95	80 - 141	1	12
o-Xylene			20.0	20.34		ug/L		102	80 - 127	3	11

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

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

Lab Sample ID: MB 490-522781/1-A
Matrix: Water
Analysis Batch: 525313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522781

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,4,5-Trichlorophenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,4,6-Trichlorophenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,4-Dichlorophenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,4-Dimethylphenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,4-Dinitrophenol	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2-Chlorophenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2-Methylphenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2-Nitrophenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
3 & 4 Methylphenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4,6-Dinitro-2-methylphenol	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4-Chloro-3-methylphenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4-Nitrophenol	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Pentachlorophenol	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Phenol	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
1,1'-Biphenyl	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
1,2,4,5-Tetrachlorobenzene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,2'-oxybis(1-chloropropane)	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,4-Dinitrotoluene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2,6-Dinitrotoluene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
2-Chloronaphthalene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1

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

Lab Sample ID: MB 490-522781/1-A
Matrix: Water
Analysis Batch: 525313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522781

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
2-Nitroaniline	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
3,3'-Dichlorobenzidine	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
3-Nitroaniline	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4-Bromophenyl phenyl ether	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4-Chloroaniline	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4-Chlorophenyl phenyl ether	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
4-Nitroaniline	ND		25.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Acenaphthene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Acenaphthylene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Acetophenone	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Anthracene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Atrazine	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Benzaldehyde	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Benzo[a]anthracene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Benzo[a]pyrene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Benzo[b]fluoranthene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Benzo[g,h,i]perylene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Benzo[k]fluoranthene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Bis(2-chloroethoxy)methane	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Bis(2-chloroethyl)ether	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Bis(2-ethylhexyl) phthalate	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Butyl benzyl phthalate	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Caprolactam	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Carbazole	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Chrysene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Dibenz(a,h)anthracene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Dibenzofuran	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Diethyl phthalate	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Dimethyl phthalate	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Di-n-butyl phthalate	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Di-n-octyl phthalate	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Fluoranthene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Fluorene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Hexachlorobenzene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Hexachlorobutadiene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Hexachlorocyclopentadiene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Hexachloroethane	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Indeno[1,2,3-cd]pyrene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Isophorone	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Naphthalene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Nitrobenzene	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
N-Nitrosodi-n-propylamine	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		10.0		ug/L		06/18/18 18:19	06/28/18 10:51	1
Phenanthrene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1
Pyrene	ND		2.00		ug/L		06/18/18 18:19	06/28/18 10:51	1

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

Lab Sample ID: MB 490-522781/1-A
Matrix: Water
Analysis Batch: 525313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522781

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				06/18/18 18:19	06/28/18 10:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		10 - 120	06/18/18 18:19	06/28/18 10:51	1
2-Fluorobiphenyl (Surr)	64		29 - 120	06/18/18 18:19	06/28/18 10:51	1
2-Fluorophenol (Surr)	63		10 - 120	06/18/18 18:19	06/28/18 10:51	1
Nitrobenzene-d5 (Surr)	60		27 - 120	06/18/18 18:19	06/28/18 10:51	1
Phenol-d5 (Surr)	50		10 - 120	06/18/18 18:19	06/28/18 10:51	1
Terphenyl-d14 (Surr)	78		13 - 120	06/18/18 18:19	06/28/18 10:51	1

Lab Sample ID: LCS 490-522781/2-A
Matrix: Water
Analysis Batch: 525313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,4,6-Tetrachlorophenol	40.0	40.60		ug/L		102	10 - 150
2,4,5-Trichlorophenol	40.0	36.36		ug/L		91	10 - 150
2,4,6-Trichlorophenol	40.0	36.38		ug/L		91	10 - 150
2,4-Dichlorophenol	40.0	33.48		ug/L		84	10 - 150
2,4-Dimethylphenol	40.0	28.64		ug/L		72	10 - 150
2,4-Dinitrophenol	80.0	32.89		ug/L		41	10 - 150
2-Chlorophenol	40.0	28.84		ug/L		72	10 - 150
2-Methylphenol	40.0	28.60		ug/L		72	10 - 133
2-Nitrophenol	40.0	27.80		ug/L		69	10 - 150
3 & 4 Methylphenol	40.0	28.31		ug/L		71	10 - 135
4,6-Dinitro-2-methylphenol	80.0	64.16		ug/L		80	10 - 150
4-Chloro-3-methylphenol	40.0	34.58		ug/L		86	10 - 150
4-Nitrophenol	80.0	51.53		ug/L		64	10 - 110
Pentachlorophenol	80.0	71.46		ug/L		89	10 - 150
Phenol	40.0	21.90		ug/L		55	10 - 110
1,1'-Biphenyl	40.0	26.88		ug/L		67	33 - 127
1,2,4,5-Tetrachlorobenzene	40.0	29.17		ug/L		73	25 - 135
2,2'-oxybis(1-chloropropane)	40.0	21.50		ug/L		54	24 - 136
2,4-Dinitrotoluene	40.0	31.14		ug/L		78	36 - 138
2,6-Dinitrotoluene	40.0	28.99		ug/L		72	41 - 137
2-Chloronaphthalene	40.0	26.82		ug/L		67	32 - 127
2-Methylnaphthalene	40.0	27.09		ug/L		68	31 - 120
2-Nitroaniline	40.0	33.16		ug/L		83	35 - 147
3,3'-Dichlorobenzidine	40.0	27.74		ug/L		69	46 - 143
3-Nitroaniline	40.0	31.69		ug/L		79	36 - 128
4-Bromophenyl phenyl ether	40.0	29.14		ug/L		73	36 - 135
4-Chloroaniline	40.0	30.79		ug/L		77	27 - 131
4-Chlorophenyl phenyl ether	40.0	28.70		ug/L		72	36 - 131
4-Nitroaniline	40.0	31.53		ug/L		79	38 - 139
Acenaphthene	40.0	27.65		ug/L		69	36 - 129
Acenaphthylene	40.0	30.29		ug/L		76	36 - 120
Acetophenone	40.0	22.74		ug/L		57	38 - 123

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

Lab Sample ID: LCS 490-522781/2-A
Matrix: Water
Analysis Batch: 525313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	40.0	29.96		ug/L		75	42 - 130
Atrazine	40.0	24.59		ug/L		61	10 - 144
Benzaldehyde	40.0	8.613	J *	ug/L		22	34 - 150
Benzo[a]anthracene	40.0	29.06		ug/L		73	41 - 131
Benzo[a]pyrene	40.0	30.00		ug/L		75	45 - 131
Benzo[b]fluoranthene	40.0	30.01		ug/L		75	43 - 132
Benzo[g,h,i]perylene	40.0	28.92		ug/L		72	38 - 138
Benzo[k]fluoranthene	40.0	30.32		ug/L		76	44 - 129
Bis(2-chloroethoxy)methane	40.0	25.19		ug/L		63	35 - 127
Bis(2-chloroethyl)ether	40.0	22.51		ug/L		56	27 - 132
Bis(2-ethylhexyl) phthalate	40.0	25.99		ug/L		65	41 - 147
Butyl benzyl phthalate	40.0	28.42		ug/L		71	34 - 146
Caprolactam	40.0	9.427	J	ug/L		24	10 - 110
Carbazole	40.0	32.84		ug/L		82	42 - 130
Chrysene	40.0	29.72		ug/L		74	39 - 130
Dibenz(a,h)anthracene	40.0	29.48		ug/L		74	43 - 140
Dibenzofuran	40.0	29.09		ug/L		73	35 - 127
Diethyl phthalate	40.0	28.11		ug/L		70	31 - 136
Dimethyl phthalate	40.0	28.20		ug/L		70	34 - 134
Di-n-butyl phthalate	40.0	28.84		ug/L		72	42 - 140
Di-n-octyl phthalate	40.0	28.57		ug/L		71	42 - 142
Fluoranthene	40.0	31.05		ug/L		78	31 - 132
Fluorene	40.0	29.73		ug/L		74	37 - 130
Hexachlorobenzene	40.0	30.10		ug/L		75	36 - 140
Hexachlorobutadiene	40.0	27.66		ug/L		69	18 - 136
Hexachlorocyclopentadiene	40.0	25.10		ug/L		63	17 - 128
Hexachloroethane	40.0	24.84		ug/L		62	23 - 120
Indeno[1,2,3-cd]pyrene	40.0	29.53		ug/L		74	40 - 136
Isophorone	40.0	24.42		ug/L		61	39 - 120
Naphthalene	40.0	27.03		ug/L		68	32 - 120
Nitrobenzene	40.0	24.57		ug/L		61	10 - 150
N-Nitrosodi-n-propylamine	40.0	24.49		ug/L		61	32 - 136
n-Nitrosodiphenylamine(as diphenylamine)	34.0	28.91		ug/L		85	44 - 123
Phenanthrene	40.0	29.60		ug/L		74	39 - 126
Pyrene	40.0	30.91		ug/L		77	37 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 120*
2-Fluorobiphenyl (Surr)	*62*		*29 - 120*
2-Fluorophenol (Surr)	*61*		*10 - 120*
Nitrobenzene-d5 (Surr)	*60*		*27 - 120*
Phenol-d5 (Surr)	*48*		*10 - 120*
Terphenyl-d14 (Surr)	*72*		*13 - 120*

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

Lab Sample ID: 490-153987-3 MS
Matrix: Ground Water
Analysis Batch: 525313

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,4,6-Tetrachlorophenol	ND		35.7	33.62		ug/L		94	10 - 150
2,4,5-Trichlorophenol	ND		35.7	30.00		ug/L		84	10 - 150
2,4,6-Trichlorophenol	ND		35.7	29.67		ug/L		83	10 - 150
2,4-Dichlorophenol	ND		35.7	30.92		ug/L		87	10 - 150
2,4-Dimethylphenol	ND		35.7	28.40		ug/L		80	10 - 150
2,4-Dinitrophenol	ND		71.4	57.93		ug/L		81	10 - 150
2-Chlorophenol	ND		35.7	27.92		ug/L		78	10 - 150
2-Methylphenol	ND		35.7	29.11		ug/L		82	10 - 133
2-Nitrophenol	ND		35.7	25.27		ug/L		71	10 - 150
3 & 4 Methylphenol	ND		35.7	27.89		ug/L		78	10 - 135
4,6-Dinitro-2-methylphenol	ND		71.4	55.94		ug/L		78	10 - 150
4-Chloro-3-methylphenol	ND		35.7	33.48		ug/L		94	10 - 150
4-Nitrophenol	ND	F1	71.4	123.8	F1	ug/L		173	10 - 110
Pentachlorophenol	ND		71.4	73.47		ug/L		103	10 - 150
Phenol	ND		35.7	20.59		ug/L		58	10 - 110
1,1'-Biphenyl	ND		35.7	22.34		ug/L		63	28 - 127
1,2,4,5-Tetrachlorobenzene	ND		35.7	26.80		ug/L		75	25 - 135
2,2'-oxybis(1-chloropropane)	ND		35.7	19.85		ug/L		56	15 - 136
2,4-Dinitrotoluene	ND		35.7	27.07		ug/L		76	36 - 138
2,6-Dinitrotoluene	ND		35.7	23.81		ug/L		67	41 - 137
2-Chloronaphthalene	ND		35.7	23.08		ug/L		65	28 - 127
2-Methylnaphthalene	ND		35.7	26.17		ug/L		73	31 - 120
2-Nitroaniline	ND		35.7	28.37		ug/L		79	34 - 147
3,3'-Dichlorobenzidine	ND	F1	35.7	ND	F1	ug/L		0	10 - 150
3-Nitroaniline	ND		35.7	ND		ug/L		33	31 - 128
4-Bromophenyl phenyl ether	ND		35.7	27.71		ug/L		78	35 - 135
4-Chloroaniline	ND		35.7	13.25		ug/L		37	19 - 131
4-Chlorophenyl phenyl ether	ND		35.7	23.78		ug/L		67	36 - 131
4-Nitroaniline	ND	F1	35.7	ND	F1	ug/L		15	33 - 139
Acenaphthene	ND		35.7	24.02		ug/L		67	36 - 129
Acenaphthylene	ND		35.7	26.18		ug/L		73	36 - 120
Acetophenone	ND		35.7	24.83		ug/L		70	26 - 128
Anthracene	ND		35.7	27.12		ug/L		76	42 - 130
Atrazine	ND		35.7	13.70		ug/L		38	10 - 150
Benzaldehyde	ND	*	35.7	35.31		ug/L		99	10 - 150
Benzo[a]anthracene	ND		35.7	26.26		ug/L		74	14 - 144
Benzo[a]pyrene	ND		35.7	27.46		ug/L		77	10 - 150
Benzo[b]fluoranthene	ND		35.7	27.60		ug/L		77	10 - 150
Benzo[g,h,i]perylene	ND		35.7	26.15		ug/L		73	10 - 150
Benzo[k]fluoranthene	ND		35.7	28.21		ug/L		79	10 - 138
Bis(2-chloroethoxy)methane	ND		35.7	23.68		ug/L		66	28 - 127
Bis(2-chloroethyl)ether	ND		35.7	22.51		ug/L		63	27 - 132
Bis(2-ethylhexyl) phthalate	ND		35.7	23.54		ug/L		66	10 - 150
Butyl benzyl phthalate	ND		35.7	26.55		ug/L		74	10 - 150
Caprolactam	ND		35.7	ND		ug/L		20	10 - 110
Carbazole	ND		35.7	28.46		ug/L		80	42 - 130
Chrysene	ND		35.7	26.88		ug/L		75	14 - 143
Dibenz(a,h)anthracene	ND		35.7	26.70		ug/L		75	10 - 150

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

Lab Sample ID: 490-153987-3 MS
Matrix: Ground Water
Analysis Batch: 525313

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenzofuran	ND		35.7	24.81		ug/L		69	28 - 129
Diethyl phthalate	ND		35.7	28.65		ug/L		80	11 - 143
Dimethyl phthalate	ND		35.7	24.44		ug/L		68	10 - 140
Di-n-butyl phthalate	ND		35.7	26.77		ug/L		75	30 - 140
Di-n-octyl phthalate	ND		35.7	26.84		ug/L		75	10 - 150
Fluoranthene	ND		35.7	27.06		ug/L		76	31 - 132
Fluorene	ND		35.7	25.81		ug/L		72	37 - 130
Hexachlorobenzene	ND		35.7	27.85		ug/L		78	23 - 140
Hexachlorobutadiene	ND		35.7	25.79		ug/L		72	18 - 136
Hexachlorocyclopentadiene	ND		35.7	23.18		ug/L		65	10 - 128
Hexachloroethane	ND		35.7	37.21		ug/L		104	13 - 125
Indeno[1,2,3-cd]pyrene	ND		35.7	26.68		ug/L		75	10 - 150
Isophorone	ND		35.7	29.30		ug/L		82	29 - 150
Naphthalene	ND		35.7	23.71		ug/L		66	26 - 120
Nitrobenzene	ND		35.7	22.30		ug/L		62	10 - 150
N-Nitrosodi-n-propylamine	ND		35.7	28.16		ug/L		79	25 - 136
n-Nitrosodiphenylamine(as diphenylamine)	ND		30.4	26.81		ug/L		88	31 - 150
Phenanthrene	ND		35.7	27.35		ug/L		77	39 - 126
Pyrene	ND		35.7	29.17		ug/L		82	24 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*92*		*10 - 120*
2-Fluorobiphenyl (Surr)	*60*		*29 - 120*
2-Fluorophenol (Surr)	*62*		*10 - 120*
Nitrobenzene-d5 (Surr)	*60*		*27 - 120*
Phenol-d5 (Surr)	*52*		*10 - 120*
Terphenyl-d14 (Surr)	*77*		*13 - 120*

Lab Sample ID: 490-153987-3 MSD
Matrix: Ground Water
Analysis Batch: 525313

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,4,6-Tetrachlorophenol	ND		36.4	36.39		ug/L		100	10 - 150	8	50
2,4,5-Trichlorophenol	ND		36.4	33.14		ug/L		91	10 - 150	10	50
2,4,6-Trichlorophenol	ND		36.4	32.52		ug/L		89	10 - 150	9	50
2,4-Dichlorophenol	ND		36.4	30.60		ug/L		84	10 - 150	1	50
2,4-Dimethylphenol	ND		36.4	27.28		ug/L		75	10 - 150	4	50
2,4-Dinitrophenol	ND		72.7	55.60		ug/L		76	10 - 150	4	50
2-Chlorophenol	ND		36.4	25.47		ug/L		70	10 - 150	9	49
2-Methylphenol	ND		36.4	18.63		ug/L		51	10 - 133	44	45
2-Nitrophenol	ND		36.4	24.94		ug/L		69	10 - 150	1	50
3 & 4 Methylphenol	ND		36.4	23.88		ug/L		66	10 - 135	15	46
4,6-Dinitro-2-methylphenol	ND		72.7	52.94		ug/L		73	10 - 150	6	50
4-Chloro-3-methylphenol	ND		36.4	34.45		ug/L		95	10 - 150	3	50
4-Nitrophenol	ND	F1	72.7	125.9	F1	ug/L		173	10 - 110	2	40
Pentachlorophenol	ND		72.7	72.45		ug/L		100	10 - 150	1	50

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

Lab Sample ID: 490-153987-3 MSD
Matrix: Ground Water
Analysis Batch: 525313

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	ND		36.4	20.41		ug/L		56	10 - 110	1	36
1,1'-Biphenyl	ND		36.4	24.02		ug/L		66	28 - 127	7	50
1,2,4,5-Tetrachlorobenzene	ND		36.4	26.61		ug/L		73	25 - 135	1	50
2,2'-oxybis(1-chloropropane)	ND		36.4	19.07		ug/L		52	15 - 136	4	50
2,4-Dinitrotoluene	ND		36.4	30.35		ug/L		83	36 - 138	11	50
2,6-Dinitrotoluene	ND		36.4	26.64		ug/L		73	41 - 137	11	50
2-Chloronaphthalene	ND		36.4	24.89		ug/L		68	28 - 127	8	50
2-Methylnaphthalene	ND		36.4	24.82		ug/L		68	31 - 120	5	50
2-Nitroaniline	ND		36.4	29.62		ug/L		81	34 - 147	4	50
3,3'-Dichlorobenzidine	ND	F1	36.4	ND	F1	ug/L		0	10 - 150	NC	50
3-Nitroaniline	ND		36.4	ND		ug/L		40	31 - 128	23	27
4-Bromophenyl phenyl ether	ND		36.4	26.59		ug/L		73	35 - 135	4	50
4-Chloroaniline	ND		36.4	12.79		ug/L		35	19 - 131	4	34
4-Chlorophenyl phenyl ether	ND		36.4	26.33		ug/L		72	36 - 131	10	50
4-Nitroaniline	ND	F1	36.4	ND	F1	ug/L		23	33 - 139	42	42
Acenaphthene	ND		36.4	25.42		ug/L		70	36 - 129	6	50
Acenaphthylene	ND		36.4	27.96		ug/L		77	36 - 120	7	50
Acetophenone	ND		36.4	23.14		ug/L		64	26 - 128	7	50
Anthracene	ND		36.4	26.92		ug/L		74	42 - 130	1	50
Atrazine	ND		36.4	13.37		ug/L		37	10 - 150	2	50
Benzaldehyde	ND	*	36.4	29.63		ug/L		81	10 - 150	17	50
Benzo[a]anthracene	ND		36.4	26.97		ug/L		74	14 - 144	3	50
Benzo[a]pyrene	ND		36.4	27.26		ug/L		75	10 - 150	1	50
Benzo[b]fluoranthene	ND		36.4	27.15		ug/L		75	10 - 150	2	50
Benzo[g,h,i]perylene	ND		36.4	26.08		ug/L		72	10 - 150	0	50
Benzo[k]fluoranthene	ND		36.4	28.25		ug/L		78	10 - 138	0	50
Bis(2-chloroethoxy)methane	ND		36.4	23.59		ug/L		65	28 - 127	0	50
Bis(2-chloroethyl)ether	ND		36.4	21.19		ug/L		58	27 - 132	6	50
Bis(2-ethylhexyl) phthalate	ND		36.4	23.68		ug/L		65	10 - 150	1	47
Butyl benzyl phthalate	ND		36.4	26.28		ug/L		72	10 - 150	1	50
Caprolactam	ND		36.4	10.35		ug/L		28	10 - 110	35	50
Carbazole	ND		36.4	28.63		ug/L		79	42 - 130	1	50
Chrysene	ND		36.4	26.61		ug/L		73	14 - 143	1	50
Dibenz(a,h)anthracene	ND		36.4	26.52		ug/L		73	10 - 150	1	50
Dibenzofuran	ND		36.4	26.40		ug/L		73	28 - 129	6	50
Diethyl phthalate	ND		36.4	31.46		ug/L		87	11 - 143	9	50
Dimethyl phthalate	ND		36.4	26.51		ug/L		73	10 - 140	8	50
Di-n-butyl phthalate	ND		36.4	26.83		ug/L		74	30 - 140	0	50
Di-n-octyl phthalate	ND		36.4	25.94		ug/L		71	10 - 150	3	49
Fluoranthene	ND		36.4	27.45		ug/L		75	31 - 132	1	50
Fluorene	ND		36.4	27.26		ug/L		75	37 - 130	5	50
Hexachlorobenzene	ND		36.4	25.91		ug/L		71	23 - 140	7	50
Hexachlorobutadiene	ND		36.4	24.55		ug/L		68	18 - 136	5	50
Hexachlorocyclopentadiene	ND		36.4	23.74		ug/L		65	10 - 128	2	50
Hexachloroethane	ND		36.4	32.45		ug/L		89	13 - 125	14	50
Indeno[1,2,3-cd]pyrene	ND		36.4	26.84		ug/L		74	10 - 150	1	50
Isophorone	ND		36.4	27.70		ug/L		76	29 - 150	6	50
Naphthalene	ND		36.4	24.34		ug/L		67	26 - 120	3	50

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

Lab Sample ID: 490-153987-3 MSD
Matrix: Ground Water
Analysis Batch: 525313

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 522781

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrobenzene	ND		36.4	22.37		ug/L		62	10 - 150	0	50
N-Nitrosodi-n-propylamine	ND		36.4	25.92		ug/L		71	25 - 136	8	50
n-Nitrosodiphenylamine(as diphenylamine)	ND		30.9	25.49		ug/L		82	31 - 150	5	50
Phenanthrene	ND		36.4	27.08		ug/L		74	39 - 126	1	50
Pyrene	ND		36.4	28.25		ug/L		78	24 - 142	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*10 - 120*
2-Fluorobiphenyl (Surr)	*63*		*29 - 120*
2-Fluorophenol (Surr)	*56*		*10 - 120*
Nitrobenzene-d5 (Surr)	*56*		*27 - 120*
Phenol-d5 (Surr)	*46*		*10 - 120*
Terphenyl-d14 (Surr)	*72*		*13 - 120*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 490-523156/1-A
Matrix: Water
Analysis Batch: 523362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523156

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.00500		mg/L		06/20/18 07:53	06/20/18 14:00	1
Lead	ND		0.00500		mg/L		06/20/18 07:53	06/20/18 14:00	1

Lab Sample ID: MB 490-523156/1-A
Matrix: Water
Analysis Batch: 525601

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523156

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/20/18 07:53	06/28/18 17:51	1

Lab Sample ID: LCS 490-523156/2-A
Matrix: Water
Analysis Batch: 523362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523156

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.100	0.09720		mg/L		97	80 - 120
Lead	0.100	0.09730		mg/L		97	80 - 120

Lab Sample ID: LCS 490-523156/2-A
Matrix: Water
Analysis Batch: 525601

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523156

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.1008		mg/L		101	80 - 120

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

Lab Sample ID: 490-153987-1 MS
Matrix: Ground Water
Analysis Batch: 523362

Client Sample ID: W24
Prep Type: Total/NA
Prep Batch: 523156

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	ND		0.100	0.09820		mg/L		95	75 - 125
Lead	0.0108		0.100	0.1006		mg/L		90	75 - 125

Lab Sample ID: 490-153987-1 MS
Matrix: Ground Water
Analysis Batch: 525601

Client Sample ID: W24
Prep Type: Total/NA
Prep Batch: 523156

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0100		0.100	0.1088		mg/L		99	75 - 125

Lab Sample ID: 490-153987-1 MSD
Matrix: Ground Water
Analysis Batch: 523362

Client Sample ID: W24
Prep Type: Total/NA
Prep Batch: 523156

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	ND		0.100	0.1028		mg/L		100	75 - 125	5	20
Lead	0.0108		0.100	0.1064		mg/L		96	75 - 125	6	20

Lab Sample ID: 490-153987-1 MSD
Matrix: Ground Water
Analysis Batch: 525601

Client Sample ID: W24
Prep Type: Total/NA
Prep Batch: 523156

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0100		0.100	0.1131		mg/L		103	75 - 125	4	20

Lab Sample ID: MB 490-525536/1-A
Matrix: Water
Analysis Batch: 526323

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525536

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/28/18 17:25	07/02/18 11:48	1
Chromium	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 11:48	1
Lead	ND		0.00500		mg/L		06/28/18 17:25	07/02/18 11:48	1

Lab Sample ID: LCS 490-525536/2-A
Matrix: Water
Analysis Batch: 526323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525536

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.08430		mg/L		84	80 - 120
Chromium	0.100	0.09270		mg/L		93	80 - 120
Lead	0.100	0.09900		mg/L		99	80 - 120

Lab Sample ID: 490-153807-G-23-D MS
Matrix: Water
Analysis Batch: 526323

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 525536

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.100	0.1000		mg/L		100	75 - 125

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

Lab Sample ID: 490-153807-G-23-D MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 526323 — **Prep Batch: 525536**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	ND		0.100	0.09480		mg/L		95	75 - 125
Lead	ND		0.100	0.09750		mg/L		98	75 - 125

Lab Sample ID: 490-153807-G-23-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 526323 — **Prep Batch: 525536**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.100	0.09420		mg/L		94	75 - 125	6	20
Chromium	ND		0.100	0.09340		mg/L		93	75 - 125	1	20
Lead	ND		0.100	0.09580		mg/L		96	75 - 125	2	20

Lab Sample ID: MB 490-525657/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 526380 — **Prep Batch: 525657**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		06/29/18 10:16	07/02/18 22:21	1
Chromium	ND		0.00500		mg/L		06/29/18 10:16	07/02/18 22:21	1
Lead	ND		0.00500		mg/L		06/29/18 10:16	07/02/18 22:21	1

Lab Sample ID: LCS 490-525657/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 526380 — **Prep Batch: 525657**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.08190		mg/L		82	80 - 120
Chromium	0.100	0.08410		mg/L		84	80 - 120
Lead	0.100	0.08440		mg/L		84	80 - 120

Lab Sample ID: 490-154616-J-7-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 526380 — **Prep Batch: 525657**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.100	0.08300		mg/L		83	75 - 125
Chromium	ND		0.100	0.07940		mg/L		79	75 - 125
Lead	ND		0.100	0.07860		mg/L		76	75 - 125

Lab Sample ID: 490-154616-J-7-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 526380 — **Prep Batch: 525657**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.100	0.08870		mg/L		89	75 - 125	7	20
Chromium	ND		0.100	0.08650		mg/L		87	75 - 125	9	20
Lead	ND		0.100	0.08300		mg/L		81	75 - 125	5	20

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

Lab Sample ID: MB 490-526831/1-A
Matrix: Water
Analysis Batch: 526956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526831

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100		mg/L		07/05/18 09:49	07/05/18 14:56	1
Chromium	ND		0.00500		mg/L		07/05/18 09:49	07/05/18 14:56	1
Lead	ND		0.00500		mg/L		07/05/18 09:49	07/05/18 14:56	1

Lab Sample ID: LCS 490-526831/2-A
Matrix: Water
Analysis Batch: 526956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.09280		mg/L		93	80 - 120
Chromium	0.100	0.09410		mg/L		94	80 - 120
Lead	0.100	0.09920		mg/L		99	80 - 120

Lab Sample ID: 490-153987-3 MS
Matrix: Ground Water
Analysis Batch: 526956

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 526831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0147		0.100	0.1250		mg/L		110	75 - 125
Chromium	ND		0.100	0.1035		mg/L		99	75 - 125
Lead	ND		0.100	0.1021		mg/L		99	75 - 125

Lab Sample ID: 490-153987-3 MSD
Matrix: Ground Water
Analysis Batch: 526956

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 526831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0147		0.100	0.1154		mg/L		101	75 - 125	8	20
Chromium	ND		0.100	0.1006		mg/L		96	75 - 125	3	20
Lead	ND		0.100	0.09930		mg/L		96	75 - 125	3	20

GC/MS VOA

Analysis Batch: 522979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-1	W24	Total/NA	Ground Water	8260C	
490-153987-2	MW4	Total/NA	Ground Water	8260C	
490-153987-3	MWSW	Total/NA	Ground Water	8260C	
490-153987-4	W29	Total/NA	Ground Water	8260C	
490-153987-5	MW5	Total/NA	Ground Water	8260C	
490-153987-6	W18	Total/NA	Ground Water	8260C	
490-153987-7	Blind Dup	Total/NA	Water	8260C	
490-153987-8	Trip Blank	Total/NA	Water	8260C	
MB 490-522979/5	Method Blank	Total/NA	Water	8260C	
LCS 490-522979/3	Lab Control Sample	Total/NA	Water	8260C	
490-153987-3 MS	MWSW	Total/NA	Ground Water	8260C	
490-153987-3 MSD	MWSW	Total/NA	Ground Water	8260C	

Analysis Batch: 523312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-3	MWSW	Total/NA	Ground Water	8260C	
MB 490-523312/6	Method Blank	Total/NA	Water	8260C	
LCS 490-523312/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-523312/4	Lab Control Sample Dup	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 522781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-1	W24	Total/NA	Ground Water	3510C	
490-153987-2	MW4	Total/NA	Ground Water	3510C	
490-153987-3	MWSW	Total/NA	Ground Water	3510C	
490-153987-4	W29	Total/NA	Ground Water	3510C	
490-153987-5	MW5	Total/NA	Ground Water	3510C	
490-153987-6	W18	Total/NA	Ground Water	3510C	
490-153987-7	Blind Dup	Total/NA	Water	3510C	
MB 490-522781/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-522781/2-A	Lab Control Sample	Total/NA	Water	3510C	
490-153987-3 MS	MWSW	Total/NA	Ground Water	3510C	
490-153987-3 MSD	MWSW	Total/NA	Ground Water	3510C	

Analysis Batch: 525313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-1	W24	Total/NA	Ground Water	8270D	522781
490-153987-2	MW4	Total/NA	Ground Water	8270D	522781
490-153987-3	MWSW	Total/NA	Ground Water	8270D	522781
490-153987-4	W29	Total/NA	Ground Water	8270D	522781
490-153987-5	MW5	Total/NA	Ground Water	8270D	522781
490-153987-6	W18	Total/NA	Ground Water	8270D	522781
490-153987-7	Blind Dup	Total/NA	Water	8270D	522781
MB 490-522781/1-A	Method Blank	Total/NA	Water	8270D	522781
LCS 490-522781/2-A	Lab Control Sample	Total/NA	Water	8270D	522781
490-153987-3 MS	MWSW	Total/NA	Ground Water	8270D	522781
490-153987-3 MSD	MWSW	Total/NA	Ground Water	8270D	522781

Metals

Prep Batch: 523156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-1	W24	Total/NA	Ground Water	3010A	
MB 490-523156/1-A	Method Blank	Total/NA	Water	3010A	
LCS 490-523156/2-A	Lab Control Sample	Total/NA	Water	3010A	
490-153987-1 MS	W24	Total/NA	Ground Water	3010A	
490-153987-1 MSD	W24	Total/NA	Ground Water	3010A	

Analysis Batch: 523362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-1	W24	Total/NA	Ground Water	6010C	523156
MB 490-523156/1-A	Method Blank	Total/NA	Water	6010C	523156
LCS 490-523156/2-A	Lab Control Sample	Total/NA	Water	6010C	523156
490-153987-1 MS	W24	Total/NA	Ground Water	6010C	523156
490-153987-1 MSD	W24	Total/NA	Ground Water	6010C	523156

Prep Batch: 525536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-2	MW4	Total/NA	Ground Water	3010A	
490-153987-4	W29	Total/NA	Ground Water	3010A	
490-153987-6	W18	Total/NA	Ground Water	3010A	
490-153987-7	Blind Dup	Total/NA	Water	3010A	
MB 490-525536/1-A	Method Blank	Total/NA	Water	3010A	
LCS 490-525536/2-A	Lab Control Sample	Total/NA	Water	3010A	
490-153807-G-23-D MS	Matrix Spike	Total/NA	Water	3010A	
490-153807-G-23-E MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 525601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-1	W24	Total/NA	Ground Water	6010C	523156
MB 490-523156/1-A	Method Blank	Total/NA	Water	6010C	523156
LCS 490-523156/2-A	Lab Control Sample	Total/NA	Water	6010C	523156
490-153987-1 MS	W24	Total/NA	Ground Water	6010C	523156
490-153987-1 MSD	W24	Total/NA	Ground Water	6010C	523156

Prep Batch: 525657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-5	MW5	Total/NA	Ground Water	3010A	
MB 490-525657/1-A	Method Blank	Total/NA	Water	3010A	
LCS 490-525657/2-A	Lab Control Sample	Total/NA	Water	3010A	
490-154616-J-7-B MS	Matrix Spike	Total/NA	Water	3010A	
490-154616-J-7-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 526323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-2	MW4	Total/NA	Ground Water	6010C	525536
490-153987-4	W29	Total/NA	Ground Water	6010C	525536
490-153987-6	W18	Total/NA	Ground Water	6010C	525536
490-153987-7	Blind Dup	Total/NA	Water	6010C	525536
MB 490-525536/1-A	Method Blank	Total/NA	Water	6010C	525536
LCS 490-525536/2-A	Lab Control Sample	Total/NA	Water	6010C	525536
490-153807-G-23-D MS	Matrix Spike	Total/NA	Water	6010C	525536
490-153807-G-23-E MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	525536

QC Association Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Analysis Batch: 526380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-5	MW5	Total/NA	Ground Water	6010C	525657
MB 490-525657/1-A	Method Blank	Total/NA	Water	6010C	525657
LCS 490-525657/2-A	Lab Control Sample	Total/NA	Water	6010C	525657
490-154616-J-7-B MS	Matrix Spike	Total/NA	Water	6010C	525657
490-154616-J-7-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	525657

Prep Batch: 526831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-3	MWSW	Total/NA	Ground Water	3010A	
MB 490-526831/1-A	Method Blank	Total/NA	Water	3010A	
LCS 490-526831/2-A	Lab Control Sample	Total/NA	Water	3010A	
490-153987-3 MS	MWSW	Total/NA	Ground Water	3010A	
490-153987-3 MSD	MWSW	Total/NA	Ground Water	3010A	

Analysis Batch: 526956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-153987-3	MWSW	Total/NA	Ground Water	6010C	526831
MB 490-526831/1-A	Method Blank	Total/NA	Water	6010C	526831
LCS 490-526831/2-A	Lab Control Sample	Total/NA	Water	6010C	526831
490-153987-3 MS	MWSW	Total/NA	Ground Water	6010C	526831
490-153987-3 MSD	MWSW	Total/NA	Ground Water	6010C	526831

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: W24

Date Collected: 06/12/18 08:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 23:08	S1S	TAL NSH
Total/NA	Prep	3510C			230 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 11:32	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	523156	06/20/18 07:53	LCS	TAL NSH
Total/NA	Analysis	6010C		1			523362	06/20/18 14:23	LCS	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	523156	06/20/18 07:53	LCS	TAL NSH
Total/NA	Analysis	6010C		1			525601	06/28/18 18:02	LCS	TAL NSH

Client Sample ID: MW4

Date Collected: 06/11/18 09:32
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 19:58	S1S	TAL NSH
Total/NA	Prep	3510C			270 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 11:53	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	525536	06/28/18 17:25	CAP	TAL NSH
Total/NA	Analysis	6010C		1			526323	07/02/18 13:03	LCS	TAL NSH

Client Sample ID: MWSW

Date Collected: 06/11/18 11:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 20:25	S1S	TAL NSH
Total/NA	Analysis	8260C		5	5 mL	5 mL	523312	06/20/18 22:17	SW1	TAL NSH
Total/NA	Prep	3510C			270 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 12:14	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	526831	07/05/18 09:49	LCS	TAL NSH
Total/NA	Analysis	6010C		1			526956	07/05/18 15:06	LCS	TAL NSH

Client Sample ID: W29

Date Collected: 06/11/18 14:50
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 21:19	S1S	TAL NSH
Total/NA	Prep	3510C			275 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 13:15	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	525536	06/28/18 17:25	CAP	TAL NSH
Total/NA	Analysis	6010C		1			526323	07/02/18 13:13	LCS	TAL NSH

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Client Sample ID: MW5

Date Collected: 06/11/18 13:20
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 21:46	S1S	TAL NSH
Total/NA	Prep	3510C			260 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 13:36	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	525657	06/29/18 10:16	LCS	TAL NSH
Total/NA	Analysis	6010C		1			526380	07/02/18 23:19	LCS	TAL NSH

Client Sample ID: W18

Date Collected: 06/11/18 12:35
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 22:13	S1S	TAL NSH
Total/NA	Prep	3510C			270 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 13:57	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	525536	06/28/18 17:25	CAP	TAL NSH
Total/NA	Analysis	6010C		1			526323	07/02/18 13:19	LCS	TAL NSH

Client Sample ID: Blind Dup

Date Collected: 06/11/18 12:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 22:41	S1S	TAL NSH
Total/NA	Prep	3510C			270 mL	1 mL	522781	06/18/18 18:19	KB	TAL NSH
Total/NA	Analysis	8270D		1	500 uL	1.0 mL	525313	06/28/18 14:17	NMB	TAL NSH
Total/NA	Prep	3010A			50 mL	50 mL	525536	06/28/18 17:25	CAP	TAL NSH
Total/NA	Analysis	6010C		1			526323	07/02/18 13:24	LCS	TAL NSH

Client Sample ID: Trip Blank

Date Collected: 06/11/18 08:00
Date Received: 06/14/18 10:25

Lab Sample ID: 490-153987-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	522979	06/19/18 19:02	S1S	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
6010C	Metals (ICP)	SW846	TAL NSH
3010A	Preparation, Total Metals	SW846	TAL NSH
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL NSH
5030C	Purge and Trap	SW846	TAL NSH

Protocol References:

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Solean East Event Desc:BCP 3

TestAmerica Job ID: 490-153987-1
SDG: New York

Laboratory: TestAmerica Nashville

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	11342	03-31-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Ground Water	1,2,3-Trimethylbenzene

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-153987 Chain of Custody

Cooler Received/Opened On 6/14/2018 @ 1025

Time Samples Removed From Cooler 1500 Time Samples Placed In Storage 1520 (2 Hour Window)

1. Tracking # 1162 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 3.7 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) GH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 6/14/18

I certify that I unloaded the cooler and answered questions 7-14 (intial)

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial)

I certify that I attached a label with the unique LIMS number to each container (intial)

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#

BIS = Broken in shipment

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Loc: 490
153987
#4
C

Cooler Received/Opened On 6/14/2018 @1025

Time Samples Removed From Cooler 1506 Time Samples Placed In Storage 1526 (2 Hour Window)

1. Tracking # 1129 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 160656838 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 3.1 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JJ

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) CM

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) CM

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) CM

I certify that I attached a label with the unique LIMS number to each container (intial) CM

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

7/14/2018

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Loc: 490
153987
#4
B

Cooler Received/Opened On 6/14/2018 @ 1025

Time Samples Removed From Cooler 1505 Time Samples Placed In Storage 1520 (2 Hour Window)

1. Tracking # 1130 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 1.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) GH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

● Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO #_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Loc: 490
153987
#4
A

Cooler Received/Opened On 6/14/2018 @ 1025

Time Samples Removed From Cooler 1500 Time Samples Placed In Storage 1520 (2 Hour Window)

1. Tracking # 1151 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960357 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 4.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) AM

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #

I certify that I unloaded the cooler and answered questions 7-14 (intial)

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial)

I certify that I attached a label with the unique LIMS number to each container (intial)

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-3404

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Caroline Bukulski	Lab PM: Huckaba, Jennifer	Carrier Tracking No(s):	COC No: 490-75458-17401.1
Client Contact: Mr. Michael Lesakowski	Phone: 716-856-0599	E-Mail: jennifer.huckaba@testamericainc.com		Page: Page 1 of 1
Company: Turnkey Environmental Restoration, LLC				Job #:
Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:			
City: Lackawanna	TAT Requested (days):			
State, Zip: NY, 14218				
Phone: 716-856-0599(Tel)	PO #: T0334-016-001 / Phase 002 / Task 004			
Email: mlesakowski@benchmarkturnkey.com	WO #: Solean			
Project Name: Solean East Event Desc: BCP 3	Project #: 49005408			
Site: New York	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:

CAT B

	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)	8270D - TCL + TICS	6010C - Arsenic, Chromium and Lead	8260C - TCL + TICS	Total Number of containers	Special Instructions/Note:
				Preservation Code:				N	D	A		
1	W24	6/12/18	8:20	G	Water			X	X	X		
	~~W2MW0~~			G	Water			X	X	X		
2	MW4	6/11/18	9:32	G	Water			X	X	X		
3	MWSW	6/11/18	1120	G	Water			X	X	X		
4	W29	6/11/18	1450	G	Water			X	X	X		
5	MW5	6/11/18	1320	G	Water			X	X	X		
6	W18	6/11/18	1235	G	Water			X	X	X		
	~~DUP~~ MWSW - MS/MSD	6/11/18	1120	G	Water			X	X	X		
7	Blind Dup	6/11/18	12:00	G	Water			X	X	X		
8	Trip Blank	6/11/18	8:00	G	Water					X		
					Water							

Loc: 490
153987

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)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/12/18 1700	BMTK		6/13/18 08:52	TAN
2		6/13/18 12:00	TAN		6/13/18 1200	TAN
3		6/13/18 1700	TAN		6-14-18 1025	TA-NAS

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.7

Ver: 08/04/2016

JULY 2019 GROUNDWATER SAMPLING EVENT

GROUNDWATER FIELD FORM

Project Name: Olean Redevelopment Parcel 3 Date: 7/9/19
Location: Project No.: Field Team: CCB

Well No. WCMW9			Diameter (inches): 2"			Sample Date / Time: 7/10/19 800			
Product Depth (fbTOR): —			Water Column (ft): 6.05			DTW when sampled: 1700			
DTW (static) (fbTOR): 12.12			One Well Volume (gal): 0.98			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 18.17			Total Volume Purged (gal): 1.25			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
727	0 Initial	0	6.66	13.9	615.4	814	6.99	233	rust color, no odor.
730	1 17.91	0.75	6.81	13.1	608.5	>1000	5.98	100	" "
1145	2 17.00	1.25	6.99	19.3	726.2	>1000	7.01	-38	" "
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1	DRY - NO PUMP POST							
	S2	did not fully recharge over night							

7/9
7/10

Well No. MW-4			Diameter (inches): 2"			Sample Date / Time: 7/9/19 805			
Product Depth (fbTOR): —			Water Column (ft): 9.11			DTW when sampled: 21.10			
DTW (static) (fbTOR): 20.66			One Well Volume (gal): 1.48			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 29.77			Total Volume Purged (gal): 5.5			Purge Method: low flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
750	0 Initial	0	6.66	12.0	2127	208	2.19	-52	Clear, Slight Sulfur/Petro odor
753	1 21.10	1.0	6.65	11.5	2102	82.5	1.98	-77	" "
756	2 21.11	1.75	6.63	11.4	2009	39.1	1.84	-91	" "
758	3 21.10	2.5	6.64	11.4	2010	19.5	1.58	-95	" "
800	4 21.10	3.25	6.65	11.5	2009	9.60	1.46	-95	" "
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
805	S1 21.10	4.0	6.64	11.5	2031	4.26	1.55	-98	" "
810	S2 21.0	5.5	6.64	12.0	2039	3.73	1.39	-80	" "

REMARKS:

Blind Dup w/ MW-4 - 800

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: CCB

GROUNDWATER FIELD FORM

Project Name: Olean Redevelopment Parcel 3 Date: 7/9/19
Location: Project No.: Field Team: CCB

Well No. MWSW			Diameter (inches): 2"			Sample Date / Time: 7/9/19 855			
Product Depth (fbTOR): —			Water Column (ft): 5.72			DTW when sampled: 19.59			
DTW (static) (fbTOR): 19.50			One Well Volume (gal): 0.93			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 25.22			Total Volume Purged (gal): 4.5			Purge Method: low flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
840	0 Initial	0	7.31	13.8	1613	85.6	1.91	-50	clear | slight petro sulfur odor
842	1 19.59	0.75	7.22	13.3	1622	24.7	1.91	-34	"
844	2 19.59	1.25	7.13	13.3	1645	9.71	1.45	-18	"
847	3 19.59	1.75	7.05	13.5	1622	3.58	1.26	-5	"
850	4 19.59	2.5	7.06	13.2	1605	3.67	1.25	-1	"
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
855	S1 19.59	3.0	7.09	13.1	1600	3.02	1.21	2	"
900	S2 19.59	4.5	7.10	13.1	1606	4.34	0.91	36	"

7/10/19 1150

Well No. W-18			Diameter (inches): 4"			Sample Date / Time: 7/9/19 ~~850~~			
Product Depth (fbTOR): —			Water Column (ft): 3.72			DTW when sampled: 23.63			
DTW (static) (fbTOR): 22.93			One Well Volume (gal): 2.4			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 26.65			Total Volume Purged (gal): 8.0			Purge Method: low flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1135	0 Initial	0	7.12	17.2	1388	119	5.40	8	clear no odor
1138	1 23.3	1.5	6.66	15.9	1329	28.5	3.06	22	"
1147	2 23.37	2.5	6.65	13.1	1403	14.8	2.51	33	"
1144	3 23.55	~~4.0~~ 4.0	6.68	12.8	1519	12.0	1.93	41	"
1146	4 23.63	5.0	6.71	14.7	1570	7.82	1.55	49	"
1148	5 23.63	6.0	6.77	14.0	1610	6.65	1.76	49	"
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1150	S1 23.63	7.0	6.710	13.2	1619	3.61	1.37	50	"
1200	S2 23.63	8.0	6.610	13.2	1603	12.4	1.07	49	"

REMARKS:
MS/MSD @ MWSW 855

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: CCB

GROUNDWATER FIELD FORM

Project Name: Olean Redevelopment Parcel 3 Date: 7/9/19
Location: Project No.: Field Team: CB

Well No. MW-5			Diameter (inches): 2"			Sample Date / Time: 7/9/19 1030			
Product Depth (fbTOR): -			Water Column (ft): 8.77			DTW when sampled: 20.9			
DTW (static) (fbTOR): 18.1			One Well Volume (gal): 1.4			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 26.87			Total Volume Purged (gal): 3.0			Purge Method: low flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1015	0 Initial	0	6.97	16.0	1549	103.8	1.40	-89	slight sulfur/petro odor
1021	1 19.33	0.75	6.89	13.5	1543	61.1	1.42	-119	" " black tint
1023	2 19.87	1.25	6.94	13.8	1529	48.2	0.86	-119	" "
1026	3 20.8	1.75	6.90	13.9	1520	26.6	0.97	-122	clear slight odor
1028	4 20.85	2.0	6.89	13.5	1510	18.9	1.24	-170	" "
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1030	S1 20.9	2.5	6.92	13.6	1533	15.6	1.45	-136	" "
1035	S2 20.85	3.0	6.94	14.1	1588	17.2	1.61	-137	" "

Well No. W 24			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): 33.27			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
	0 Initial								
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

Pretreat

REMARKS:

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: CB

TurnKey Environmental Restoration LLC

Parcel 3

GROUNDWATER FIELD FORM

Project Name: Oleander Redevelopment Parcel 3 Date: 7/9 - 7/10 2019
Location: Project No.: Field Team: CB

Well No.	MW29	Diameter (inches):	2"	Sample Date / Time:	7/9/19 1300
Product Depth (fbTOR):	-	Water Column (ft):	10.7	DTW when sampled:	1915
DTW (static) (fbTOR):	19.07	One Well Volume (gal):	1.7	Purpose: ☐ Development ☐ Sample ☒ Purge & Sample	
Total Depth (fbTOR):	29.77	Total Volume Purged (gal):	5.5	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
1245	0	Initial	0	7.46	20.1	2669	933	6.67	-23	black/turbid slight petro odor
1248	1	19.15	1.0	7.11	17.2	2703	90.1	1.18	-12	black flecks
1251	2	19.15	2.0	6.95	16.2	2702	45.7	1.41	3	" slight petro odor
1253	3	19.15	2.5	6.92	15.5	2760	19.3	0.96	18	" "
1257	4	19.15	3.0	6.85	15.7	2793	12.5	0.83	21	clear, no odor
1259	5	19.15	4.0	6.81	14.9	2791	6.23	0.77	25	" "
	6			6.80						
	7									
	8									
	9									
	10									
Sample Information:										
1300	S1	19.15	5.0	6.80	14.4	2796	4.44	0.79	27	" "
1305	S2	1915	5.5	6.72	14.6	21008	2.31	0.78	35	" "

Well No.	MW22	Diameter (inches):	4"	Sample Date / Time:	7/10/19 1050
Product Depth (fbTOR):	-	Water Column (ft):	11.67	DTW when sampled:	22.75
DTW (static) (fbTOR):	21.93	One Well Volume (gal):	7.6	Purpose: ☐ Development ☐ Sample ☒ Purge & Sample	
Total Depth (fbTOR):	33.60	Total Volume Purged (gal):	12.5	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
1033	0	Initial	0	7.16	16.7	451.4	21.3	1.10	-161	cloud/petro odor
1037	1	22.50	4	6.79	16.5	710.0	295	1.13	-152	petro odor, suspended solids
1045	2	22.70	8	6.79	13.8	966.0	207	1.09	-134	" "
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
Sample Information:										
1050	S1	22.75	12	6.79	13.8	949.1	259	1.12	-128	" "
1100	S2	22.75	12.5	6.78	14.9	924.5	424	1.88	-124	" "

REMARKS:

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: CB

TURNKEY ENVIRONMENTAL RESTORATION LLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Clean Redevelopment Parcel 273 Date: 7/9/19

Project No.:

Client:

Instrument Source: ☒ BM ☐ Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
☒ pH meter	units	700	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☐ 6243003 ☐ 6223973 ☐	CCB	4.00 7.00 10.01	4.01 7.04 10.00	
☒ Turbidity meter	NTU	700	Hach 2100P or 2100Q Turbidimeter	06120C020523 (P) ☐ 13120C030432 (Q) ☐ 17110C062619 (Q) ☐	CCB	10 NTU verification <0.4 20 100 800	9.7	
☒ Sp. Cond. meter	uS mS	700	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☐ 6243003 ☐ 6223973 ☐	CCB	7000 mS @ 25 °C	7074	
☐ PID	ppm		MinRAE 2000			open air zero ____ ppm Iso. Gas		MIBK response factor = 1.0
☒ Dissolved Oxygen	ppm	700	HACH Model HQ30d	080700023281 ☐ 100500041867 ☐ 140200100319 ☐	CCB	100% Satuartion	100.1	
☐ Particulate meter	mg/m³					zero air		
☐ Radiation Meter	uR/H					background area		

ADDITIONAL REMARKS:

PREPARED BY: CCB **DATE:** 7/9/19

TURNKEY ENVIRONMENTAL RESTORATION, LLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Olean Redevelopment Parcel 2+3 Date: 7/10/19

Project No.:

Client:

Instrument Source: ☒ BM ☐ Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
☒ pH meter	units	800	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☐ 6243003 ☐ 6223973 ☐	CCB	4.00 7.00 10.01	4.02 6.99 10.03	
☒ Turbidity meter	NTU	800	Hach 2100P or 2100Q Turbidimeter	06120C020523 (P) ☐ 13120C030432 (Q) ☐ 17110C062619 (Q) ☐	CCB	10 NTU verification <0.4 20 100 800	9.8	
☒ Sp. Cond. meter	uS mS	800	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☐ 6243003 ☐ 6223973 ☐	CCB	7000 mS @ 25 °C	7085	
☐ PID	ppm		MinRAE 2000			open air zero ____ ppm Iso. Gas		MIBK response factor = 1.0
☒ Dissolved Oxygen	ppm	800	HACH Model HQ30d	080700023281 ☐ 100500041867 ☐ 140200100319 ☐	CCB	100% Satuartion	100%	
☐ Particulate meter	mg/m^3					zero air		
☐ Radiation Meter	uR/H					background area		

ADDITIONAL REMARKS:

PREPARED BY: CCB **DATE:** 7/10/19

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-156102-1
Client Project/Site: Benchmark - Olean Parcel 3 GWS

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

Attn: Mr. Michael Lesakowski

Authorized for release by:
11/7/2019 4:21:59 PM

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

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
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 VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
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

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

Metals

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

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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-156102-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-156102-1

Comments
No additional comments.

Receipt
The samples were received on 7/12/2019 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

GC/MS VOA
Method(s) 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW4 (480-156102-2), MWSW (480-156102-3), W29 (480-156102-4), MW5 (480-156102-5) and BLIND DUP (480-156102-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-482138 recovered above the upper control limit for 2-Butanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: WCMW9 (480-156102-1), W18 (480-156102-6) and W22 (480-156102-7).

Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: W18 (480-156102-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was diluted due to the nature of the sample matrix: W22 (480-156102-7). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MWSW (480-156102-3[MS]) and MWSW (480-156102-3[MSD]). 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) for preparation batch 480-481994 and analytical batch 480-482258 recovered outside control limits for the following analytes: 4-Nitrophenol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted:WCMW9 (480-156102-1), MW4 (480-156102-2), MWSW (480-156102-3), W29 (480-156102-4), MW5 (480-156102-5), W18 (480-156102-6), W22 (480-156102-7) and BLIND DUP (480-156102-8).

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW4 (480-156102-2), MWSW (480-156102-3), MWSW (480-156102-3[MSD]), W29 (480-156102-4), MW5 (480-156102-5), W18 (480-156102-6) and BLIND DUP (480-156102-8). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 480-482258 recovered above the upper control limit for 4-Nitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: WCMW9 (480-156102-1), MW4 (480-156102-2), MWSW (480-156102-3), W29 (480-156102-4), MW5 (480-156102-5), W18 (480-156102-6), W22 (480-156102-7) and BLIND DUP (480-156102-8).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 480-482258 recovered outside acceptance criteria, low biased, for 3-Nitroaniline, Pentachlorophenol and Carbazole. 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 samples are impacted:WCMW9 (480-156102-1), MW4 (480-156102-2), MWSW (480-156102-3), W29 (480-156102-4), MW5 (480-156102-5), W18 (480-156102-6), W22 (480-156102-7) and BLIND DUP (480-156102-8).

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: MW4 (480-156102-2), MWSW (480-156102-3), MWSW (480-156102-3[MS]), MWSW (480-156102-3[MSD]), W29 (480-156102-4), MW5 (480-156102-5), W18

Job ID: 480-156102-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

(480-156102-6) and W22 (480-156102-7). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following sample required a dilution due to the nature of the sample matrix: W22 (480-156102-7). 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.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-481994 and analytical batch 480-482258 were outside control limits. Sample matrix interference is 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.

Metals

Method(s) 6010C: The following sample was diluted due to the presence of Total Iron which interferes with Chromium and Lead: WCMW9 (480-156102-1). 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

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 - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: WCMW9 — Lab Sample ID: 480-156102-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11		10	3.0	ug/L	1		8260C	Total/NA
Carbon disulfide	0.74	J	1.0	0.19	ug/L	1		8260C	Total/NA
Diethyl phthalate	0.37	J	5.2	0.23	ug/L	1		8270D	Total/NA
Phenanthrene	1.6	J B	5.2	0.46	ug/L	1		8270D	Total/NA
Arsenic	0.91		0.015	0.0056	mg/L	1		6010C	Total/NA
Chromium	0.022		0.020	0.0050	mg/L	5		6010C	Total/NA
Lead	0.21		0.050	0.015	mg/L	5		6010C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 480-156102-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	42	J	100	30	ug/L	10		8260C	Total/NA
Benzene	6.9	J	10	4.1	ug/L	10		8260C	Total/NA
Cyclohexane	51		10	1.8	ug/L	10		8260C	Total/NA
Methylcyclohexane	15		10	1.6	ug/L	10		8260C	Total/NA
Methylene Chloride	6.8	J	10	4.4	ug/L	10		8260C	Total/NA
Arsenic	0.0069	J	0.015	0.0056	mg/L	1		6010C	Total/NA

Client Sample ID: MWSW — Lab Sample ID: 480-156102-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyclohexane	7.2	J	10	1.8	ug/L	10		8260C	Total/NA
Methylcyclohexane	5.5	J	10	1.6	ug/L	10		8260C	Total/NA
Methylene Chloride	6.2	J	10	4.4	ug/L	10		8260C	Total/NA

Client Sample ID: W29 — Lab Sample ID: 480-156102-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	8.8	J	20	8.8	ug/L	20		8260C	Total/NA
Chromium	0.0054		0.0040	0.0010	mg/L	1		6010C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 480-156102-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyclohexane	3.7	J	10	1.8	ug/L	10		8260C	Total/NA
Methylcyclohexane	2.1	J	10	1.6	ug/L	10		8260C	Total/NA
Methylene Chloride	5.4	J	10	4.4	ug/L	10		8260C	Total/NA
Arsenic	0.0087	J	0.015	0.0056	mg/L	1		6010C	Total/NA
Lead	0.0045	J	0.010	0.0030	mg/L	1		6010C	Total/NA

Client Sample ID: W18 — Lab Sample ID: 480-156102-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0020	J	0.0040	0.0010	mg/L	1		6010C	Total/NA

Client Sample ID: W22 — Lab Sample ID: 480-156102-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	89	J	200	60	ug/L	20		8260C	Total/NA
Methylcyclohexane	93		20	3.2	ug/L	20		8260C	Total/NA
Pyrene	7.3	J	100	6.8	ug/L	20		8270D	Total/NA
Arsenic	0.024		0.015	0.0056	mg/L	1		6010C	Total/NA
Chromium	0.011		0.0040	0.0010	mg/L	1		6010C	Total/NA
Lead	0.061		0.010	0.0030	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: BLIND DUP

Lab Sample ID: 480-156102-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	1.6	J B	5.0	0.44	ug/L	1		8270D	Total/NA
Chromium	0.0011	J	0.0040	0.0010	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: WCMW9
Date Collected: 07/10/19 08:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-1
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			07/16/19 05:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/16/19 05:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/16/19 05:06	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/16/19 05:06	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/16/19 05:06	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/16/19 05:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/16/19 05:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/16/19 05:06	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/16/19 05:06	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/16/19 05:06	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/16/19 05:06	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/16/19 05:06	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/16/19 05:06	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/16/19 05:06	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/16/19 05:06	1
2-Hexanone	ND		5.0	1.2	ug/L			07/16/19 05:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/16/19 05:06	1
Acetone	**11**		10	3.0	ug/L			07/16/19 05:06	1
Benzene	ND		1.0	0.41	ug/L			07/16/19 05:06	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/16/19 05:06	1
Bromoform	ND		1.0	0.26	ug/L			07/16/19 05:06	1
Bromomethane	ND		1.0	0.69	ug/L			07/16/19 05:06	1
Carbon disulfide	**0.74**	**J**	1.0	0.19	ug/L			07/16/19 05:06	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/16/19 05:06	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/16/19 05:06	1
Chloroethane	ND		1.0	0.32	ug/L			07/16/19 05:06	1
Chloroform	ND		1.0	0.34	ug/L			07/16/19 05:06	1
Chloromethane	ND		1.0	0.35	ug/L			07/16/19 05:06	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/16/19 05:06	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/16/19 05:06	1
Cyclohexane	ND		1.0	0.18	ug/L			07/16/19 05:06	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/16/19 05:06	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/16/19 05:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/16/19 05:06	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/16/19 05:06	1
Methyl acetate	ND		2.5	1.3	ug/L			07/16/19 05:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/16/19 05:06	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/16/19 05:06	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/16/19 05:06	1
Styrene	ND		1.0	0.73	ug/L			07/16/19 05:06	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/16/19 05:06	1
Toluene	ND		1.0	0.51	ug/L			07/16/19 05:06	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/16/19 05:06	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/16/19 05:06	1
Trichloroethene	ND		1.0	0.46	ug/L			07/16/19 05:06	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/16/19 05:06	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/16/19 05:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/16/19 05:06	1

Client Sample ID: WCMW9
Date Collected: 07/10/19 08:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-1
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/16/19 05:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 - 120		07/16/19 05:06	1
4-Bromofluorobenzene (Surr)	93		73 - 120		07/16/19 05:06	1
Toluene-d8 (Surr)	99		80 - 120		07/16/19 05:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.2	0.50	ug/L		07/15/19 07:45	07/16/19 20:13	1
2,4,6-Trichlorophenol	ND		5.2	0.64	ug/L		07/15/19 07:45	07/16/19 20:13	1
2,4-Dichlorophenol	ND		5.2	0.53	ug/L		07/15/19 07:45	07/16/19 20:13	1
2,4-Dimethylphenol	ND		5.2	0.52	ug/L		07/15/19 07:45	07/16/19 20:13	1
2,4-Dinitrophenol	ND		10	2.3	ug/L		07/15/19 07:45	07/16/19 20:13	1
2,4-Dinitrotoluene	ND		5.2	0.47	ug/L		07/15/19 07:45	07/16/19 20:13	1
2,6-Dinitrotoluene	ND		5.2	0.42	ug/L		07/15/19 07:45	07/16/19 20:13	1
2-Chloronaphthalene	ND		5.2	0.48	ug/L		07/15/19 07:45	07/16/19 20:13	1
2-Chlorophenol	ND		5.2	0.55	ug/L		07/15/19 07:45	07/16/19 20:13	1
2-Methylnaphthalene	ND		5.2	0.63	ug/L		07/15/19 07:45	07/16/19 20:13	1
2-Methylphenol	ND		5.2	0.42	ug/L		07/15/19 07:45	07/16/19 20:13	1
2-Nitroaniline	ND		10	0.44	ug/L		07/15/19 07:45	07/16/19 20:13	1
2-Nitrophenol	ND		5.2	0.50	ug/L		07/15/19 07:45	07/16/19 20:13	1
3,3'-Dichlorobenzidine	ND		5.2	0.42	ug/L		07/15/19 07:45	07/16/19 20:13	1
3-Nitroaniline	ND		10	0.50	ug/L		07/15/19 07:45	07/16/19 20:13	1
4,6-Dinitro-2-methylphenol	ND		10	2.3	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Bromophenyl phenyl ether	ND		5.2	0.47	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Chloro-3-methylphenol	ND		5.2	0.47	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Chloroaniline	ND		5.2	0.61	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Chlorophenyl phenyl ether	ND		5.2	0.36	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Methylphenol	ND		10	0.38	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Nitroaniline	ND		10	0.26	ug/L		07/15/19 07:45	07/16/19 20:13	1
4-Nitrophenol	ND	*	10	1.6	ug/L		07/15/19 07:45	07/16/19 20:13	1
Acenaphthene	ND		5.2	0.43	ug/L		07/15/19 07:45	07/16/19 20:13	1
Acenaphthylene	ND		5.2	0.40	ug/L		07/15/19 07:45	07/16/19 20:13	1
Acetophenone	ND		5.2	0.56	ug/L		07/15/19 07:45	07/16/19 20:13	1
Anthracene	ND		5.2	0.29	ug/L		07/15/19 07:45	07/16/19 20:13	1
Atrazine	ND		5.2	0.48	ug/L		07/15/19 07:45	07/16/19 20:13	1
Benzaldehyde	ND		5.2	0.28	ug/L		07/15/19 07:45	07/16/19 20:13	1
Benzo(a)anthracene	ND		5.2	0.38	ug/L		07/15/19 07:45	07/16/19 20:13	1
Benzo(a)pyrene	ND		5.2	0.49	ug/L		07/15/19 07:45	07/16/19 20:13	1
Benzo(b)fluoranthene	ND		5.2	0.35	ug/L		07/15/19 07:45	07/16/19 20:13	1
Benzo(g,h,i)perylene	ND		5.2	0.36	ug/L		07/15/19 07:45	07/16/19 20:13	1
Benzo(k)fluoranthene	ND		5.2	0.76	ug/L		07/15/19 07:45	07/16/19 20:13	1
Biphenyl	ND		5.2	0.68	ug/L		07/15/19 07:45	07/16/19 20:13	1
bis (2-chloroisopropyl) ether	ND		5.2	0.54	ug/L		07/15/19 07:45	07/16/19 20:13	1
Bis(2-chloroethoxy)methane	ND		5.2	0.36	ug/L		07/15/19 07:45	07/16/19 20:13	1
Bis(2-chloroethyl)ether	ND		5.2	0.42	ug/L		07/15/19 07:45	07/16/19 20:13	1
Bis(2-ethylhexyl) phthalate	ND		5.2	2.3	ug/L		07/15/19 07:45	07/16/19 20:13	1
Butyl benzyl phthalate	ND		5.2	1.0	ug/L		07/15/19 07:45	07/16/19 20:13	1
Caprolactam	ND		5.2	2.3	ug/L		07/15/19 07:45	07/16/19 20:13	1

Client Sample ID: WCMW9
Lab Sample ID: 480-156102-1
Date Collected: 07/10/19 08:00
Matrix: Water
Date Received: 07/12/19 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		5.2	0.31	ug/L		07/15/19 07:45	07/16/19 20:13	1
Chrysene	ND		5.2	0.34	ug/L		07/15/19 07:45	07/16/19 20:13	1
Dibenz(a,h)anthracene	ND		5.2	0.44	ug/L		07/15/19 07:45	07/16/19 20:13	1
Dibenzofuran	ND		10	0.53	ug/L		07/15/19 07:45	07/16/19 20:13	1
Diethyl phthalate	**0.37**	**J**	5.2	0.23	ug/L		07/15/19 07:45	07/16/19 20:13	1
Dimethyl phthalate	ND		5.2	0.38	ug/L		07/15/19 07:45	07/16/19 20:13	1
Di-n-butyl phthalate	ND		5.2	0.32	ug/L		07/15/19 07:45	07/16/19 20:13	1
Di-n-octyl phthalate	ND		5.2	0.49	ug/L		07/15/19 07:45	07/16/19 20:13	1
Fluoranthene	ND		5.2	0.42	ug/L		07/15/19 07:45	07/16/19 20:13	1
Fluorene	ND		5.2	0.38	ug/L		07/15/19 07:45	07/16/19 20:13	1
Hexachlorobenzene	ND		5.2	0.53	ug/L		07/15/19 07:45	07/16/19 20:13	1
Hexachlorobutadiene	ND		5.2	0.71	ug/L		07/15/19 07:45	07/16/19 20:13	1
Hexachlorocyclopentadiene	ND		5.2	0.61	ug/L		07/15/19 07:45	07/16/19 20:13	1
Hexachloroethane	ND		5.2	0.61	ug/L		07/15/19 07:45	07/16/19 20:13	1
Indeno(1,2,3-cd)pyrene	ND		5.2	0.49	ug/L		07/15/19 07:45	07/16/19 20:13	1
Isophorone	ND		5.2	0.45	ug/L		07/15/19 07:45	07/16/19 20:13	1
Naphthalene	ND		5.2	0.79	ug/L		07/15/19 07:45	07/16/19 20:13	1
Nitrobenzene	ND		5.2	0.30	ug/L		07/15/19 07:45	07/16/19 20:13	1
N-Nitrosodi-n-propylamine	ND		5.2	0.56	ug/L		07/15/19 07:45	07/16/19 20:13	1
N-Nitrosodiphenylamine	ND		5.2	0.53	ug/L		07/15/19 07:45	07/16/19 20:13	1
Pentachlorophenol	ND		10	2.3	ug/L		07/15/19 07:45	07/16/19 20:13	1
Phenanthrene	**1.6**	**J B**	5.2	0.46	ug/L		07/15/19 07:45	07/16/19 20:13	1
Phenol	ND		5.2	0.41	ug/L		07/15/19 07:45	07/16/19 20:13	1
Pyrene	ND		5.2	0.35	ug/L		07/15/19 07:45	07/16/19 20:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*15*	*T J*	*ug/L*		*2.51*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*130*	*T J*	*ug/L*		*2.77*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*1.7*	*T J*	*ug/L*		*2.85*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*43*	*T J*	*ug/L*		*4.81*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Benzene, 1,3-dimethyl-	*6.1*	*T J N*	*ug/L*		*5.12*	*108-38-3*	*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*5.9*	*T J*	*ug/L*		*5.91*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Column Bleed	*5.2*	*T J*	*ug/L*		*6.86*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*4.4*	*T J*	*ug/L*		*7.75*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*3.0*	*T J*	*ug/L*		*8.51*		*07/15/19 07:45*	*07/16/19 20:13*	*1*
Unknown	*2.0*	*T J*	*ug/L*		*9.19*		*07/15/19 07:45*	*07/16/19 20:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*103*		*41 - 120*	*07/15/19 07:45*	*07/16/19 20:13*	*1*
2-Fluorobiphenyl	*102*		*48 - 120*	*07/15/19 07:45*	*07/16/19 20:13*	*1*
2-Fluorophenol	*66*		*35 - 120*	*07/15/19 07:45*	*07/16/19 20:13*	*1*
Nitrobenzene-d5	*92*		*46 - 120*	*07/15/19 07:45*	*07/16/19 20:13*	*1*
Phenol-d5	*44*		*22 - 120*	*07/15/19 07:45*	*07/16/19 20:13*	*1*
p-Terphenyl-d14	*72*		*59 - 136*	*07/15/19 07:45*	*07/16/19 20:13*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.91**		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 00:21	1
Chromium	**0.022**		0.020	0.0050	mg/L		07/16/19 07:57	07/18/19 12:20	5
Lead	**0.21**		0.050	0.015	mg/L		07/16/19 07:57	07/18/19 12:20	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW4
Date Collected: 07/09/19 08:05
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-2
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		10	8.2	ug/L			07/15/19 16:44	10
1,1,2,2-Tetrachloroethane	ND		10	2.1	ug/L			07/15/19 16:44	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10	3.1	ug/L			07/15/19 16:44	10
1,1,2-Trichloroethane	ND		10	2.3	ug/L			07/15/19 16:44	10
1,1-Dichloroethane	ND		10	3.8	ug/L			07/15/19 16:44	10
1,1-Dichloroethene	ND		10	2.9	ug/L			07/15/19 16:44	10
1,2,4-Trichlorobenzene	ND		10	4.1	ug/L			07/15/19 16:44	10
1,2-Dibromo-3-Chloropropane	ND		10	3.9	ug/L			07/15/19 16:44	10
1,2-Dibromoethane	ND		10	7.3	ug/L			07/15/19 16:44	10
1,2-Dichlorobenzene	ND		10	7.9	ug/L			07/15/19 16:44	10
1,2-Dichloroethane	ND		10	2.1	ug/L			07/15/19 16:44	10
1,2-Dichloropropane	ND		10	7.2	ug/L			07/15/19 16:44	10
1,3-Dichlorobenzene	ND		10	7.8	ug/L			07/15/19 16:44	10
1,4-Dichlorobenzene	ND		10	8.4	ug/L			07/15/19 16:44	10
2-Butanone (MEK)	ND		100	13	ug/L			07/15/19 16:44	10
2-Hexanone	ND		50	12	ug/L			07/15/19 16:44	10
4-Methyl-2-pentanone (MIBK)	ND		50	21	ug/L			07/15/19 16:44	10
Acetone	**42**	**J**	100	30	ug/L			07/15/19 16:44	10
Benzene	**6.9**	**J**	10	4.1	ug/L			07/15/19 16:44	10
Bromodichloromethane	ND		10	3.9	ug/L			07/15/19 16:44	10
Bromoform	ND		10	2.6	ug/L			07/15/19 16:44	10
Bromomethane	ND		10	6.9	ug/L			07/15/19 16:44	10
Carbon disulfide	ND		10	1.9	ug/L			07/15/19 16:44	10
Carbon tetrachloride	ND		10	2.7	ug/L			07/15/19 16:44	10
Chlorobenzene	ND		10	7.5	ug/L			07/15/19 16:44	10
Chloroethane	ND		10	3.2	ug/L			07/15/19 16:44	10
Chloroform	ND		10	3.4	ug/L			07/15/19 16:44	10
Chloromethane	ND		10	3.5	ug/L			07/15/19 16:44	10
cis-1,2-Dichloroethene	ND		10	8.1	ug/L			07/15/19 16:44	10
cis-1,3-Dichloropropene	ND		10	3.6	ug/L			07/15/19 16:44	10
Cyclohexane	**51**		10	1.8	ug/L			07/15/19 16:44	10
Dibromochloromethane	ND		10	3.2	ug/L			07/15/19 16:44	10
Dichlorodifluoromethane	ND		10	6.8	ug/L			07/15/19 16:44	10
Ethylbenzene	ND		10	7.4	ug/L			07/15/19 16:44	10
Isopropylbenzene	ND		10	7.9	ug/L			07/15/19 16:44	10
Methyl acetate	ND		25	13	ug/L			07/15/19 16:44	10
Methyl tert-butyl ether	ND		10	1.6	ug/L			07/15/19 16:44	10
Methylcyclohexane	**15**		10	1.6	ug/L			07/15/19 16:44	10
Methylene Chloride	**6.8**	**J**	10	4.4	ug/L			07/15/19 16:44	10
Styrene	ND		10	7.3	ug/L			07/15/19 16:44	10
Tetrachloroethene	ND		10	3.6	ug/L			07/15/19 16:44	10
Toluene	ND		10	5.1	ug/L			07/15/19 16:44	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			07/15/19 16:44	10
trans-1,3-Dichloropropene	ND		10	3.7	ug/L			07/15/19 16:44	10
Trichloroethene	ND		10	4.6	ug/L			07/15/19 16:44	10
Trichlorofluoromethane	ND		10	8.8	ug/L			07/15/19 16:44	10
Vinyl chloride	ND		10	9.0	ug/L			07/15/19 16:44	10
Xylenes, Total	ND		20	6.6	ug/L			07/15/19 16:44	10

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW4
Date Collected: 07/09/19 08:05
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-2
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, 1,3,5-trimethyl-	80	T J N	ug/L		8.52	108-67-8		07/15/19 16:44	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		07/15/19 16:44	10
4-Bromofluorobenzene (Surr)	107		73 - 120		07/15/19 16:44	10
Toluene-d8 (Surr)	99		80 - 120		07/15/19 16:44	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
2,4,6-Trichlorophenol	ND		25	3.1	ug/L		07/15/19 07:45	07/16/19 20:41	5
2,4-Dichlorophenol	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
2,4-Dimethylphenol	ND		25	2.5	ug/L		07/15/19 07:45	07/16/19 20:41	5
2,4-Dinitrophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 20:41	5
2,4-Dinitrotoluene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 20:41	5
2,6-Dinitrotoluene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
2-Chloronaphthalene	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
2-Chlorophenol	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 20:41	5
2-Methylnaphthalene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
2-Methylphenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
2-Nitroaniline	ND		50	2.1	ug/L		07/15/19 07:45	07/16/19 20:41	5
2-Nitrophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
3,3'-Dichlorobenzidine	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
3-Nitroaniline	ND		50	2.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
4,6-Dinitro-2-methylphenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Bromophenyl phenyl ether	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Chloro-3-methylphenol	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Chloroaniline	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Chlorophenyl phenyl ether	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Methylphenol	ND		50	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Nitroaniline	ND		50	1.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
4-Nitrophenol	ND	*	50	7.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
Acenaphthene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 20:41	5
Acenaphthylene	ND		25	1.9	ug/L		07/15/19 07:45	07/16/19 20:41	5
Acetophenone	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 20:41	5
Anthracene	ND		25	1.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
Atrazine	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
Benzaldehyde	ND		25	1.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
Benzo(a)anthracene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
Benzo(a)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
Benzo(b)fluoranthene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 20:41	5
Benzo(g,h,i)perylene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
Benzo(k)fluoranthene	ND		25	3.7	ug/L		07/15/19 07:45	07/16/19 20:41	5
Biphenyl	ND		25	3.3	ug/L		07/15/19 07:45	07/16/19 20:41	5
bis (2-chloroisopropyl) ether	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
Bis(2-chloroethoxy)methane	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
Bis(2-chloroethyl)ether	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
Bis(2-ethylhexyl) phthalate	ND		25	11	ug/L		07/15/19 07:45	07/16/19 20:41	5
Butyl benzyl phthalate	ND		25	5.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
Caprolactam	ND		25	11	ug/L		07/15/19 07:45	07/16/19 20:41	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW4
Date Collected: 07/09/19 08:05
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 20:41	5
Chrysene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 20:41	5
Dibenz(a,h)anthracene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 20:41	5
Dibenzofuran	ND		50	2.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
Diethyl phthalate	ND		25	1.1	ug/L		07/15/19 07:45	07/16/19 20:41	5
Dimethyl phthalate	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
Di-n-butyl phthalate	ND		25	1.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
Di-n-octyl phthalate	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
Fluoranthene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
Fluorene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
Hexachlorobenzene	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
Hexachlorobutadiene	ND		25	3.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
Hexachlorocyclopentadiene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
Hexachloroethane	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
Indeno(1,2,3-cd)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 20:41	5
Isophorone	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 20:41	5
Naphthalene	ND		25	3.8	ug/L		07/15/19 07:45	07/16/19 20:41	5
Nitrobenzene	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 20:41	5
N-Nitrosodi-n-propylamine	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 20:41	5
N-Nitrosodiphenylamine	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 20:41	5
Pentachlorophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 20:41	5
Phenanthrene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 20:41	5
Phenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 20:41	5
Pyrene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 20:41	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*93*	*T J*	*ug/L*		*2.49*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*98*	*T J*	*ug/L*		*2.67*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*25*	*T J*	*ug/L*		*4.79*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*16*	*T J*	*ug/L*		*5.24*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*32*	*T J*	*ug/L*		*5.45*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*25*	*T J*	*ug/L*		*5.91*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*17*	*T J*	*ug/L*		*6.00*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Benzene, 1,2,3-trimethyl-	*78*	*T J N*	*ug/L*		*6.11*	*526-73-8*	*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*21*	*T J*	*ug/L*		*6.28*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*20*	*T J*	*ug/L*		*6.38*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*22*	*T J*	*ug/L*		*6.70*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*14*	*T J*	*ug/L*		*6.78*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*24*	*T J*	*ug/L*		*6.91*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*16*	*T J*	*ug/L*		*6.99*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*16*	*T J*	*ug/L*		*7.12*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
2-Propanone, 1-(1-cyclohexen-1-yl)-	*18*	*T J N*	*ug/L*		*7.20*	*768-50-3*	*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*22*	*T J*	*ug/L*		*7.28*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*62*	*T J*	*ug/L*		*7.54*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Unknown	*20*	*T J*	*ug/L*		*7.74*		*07/15/19 07:45*	*07/16/19 20:41*	*5*
Benzoic acid, 3,5-dimethyl-	*17*	*T J N*	*ug/L*		*8.33*	*499-06-9*	*07/15/19 07:45*	*07/16/19 20:41*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*106*		*41 - 120*	*07/15/19 07:45*	*07/16/19 20:41*	*5*
2-Fluorobiphenyl	*84*		*48 - 120*	*07/15/19 07:45*	*07/16/19 20:41*	*5*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW4
Date Collected: 07/09/19 08:05
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-2
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*58*		*35 - 120*	*07/15/19 07:45*	*07/16/19 20:41*	*5*
Nitrobenzene-d5	*81*		*46 - 120*	*07/15/19 07:45*	*07/16/19 20:41*	*5*
Phenol-d5	*43*		*22 - 120*	*07/15/19 07:45*	*07/16/19 20:41*	*5*
p-Terphenyl-d14	*45*	*X*	*59 - 136*	*07/15/19 07:45*	*07/16/19 20:41*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0069**	**J**	0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 00:25	1
Chromium	ND		0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 00:25	1
Lead	ND		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 00:25	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MWSW
Date Collected: 07/09/19 08:55
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-3
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		10	8.2	ug/L			07/15/19 17:08	10
1,1,2,2-Tetrachloroethane	ND		10	2.1	ug/L			07/15/19 17:08	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10	3.1	ug/L			07/15/19 17:08	10
1,1,2-Trichloroethane	ND		10	2.3	ug/L			07/15/19 17:08	10
1,1-Dichloroethane	ND		10	3.8	ug/L			07/15/19 17:08	10
1,1-Dichloroethene	ND		10	2.9	ug/L			07/15/19 17:08	10
1,2,4-Trichlorobenzene	ND		10	4.1	ug/L			07/15/19 17:08	10
1,2-Dibromo-3-Chloropropane	ND		10	3.9	ug/L			07/15/19 17:08	10
1,2-Dibromoethane	ND		10	7.3	ug/L			07/15/19 17:08	10
1,2-Dichlorobenzene	ND		10	7.9	ug/L			07/15/19 17:08	10
1,2-Dichloroethane	ND		10	2.1	ug/L			07/15/19 17:08	10
1,2-Dichloropropane	ND		10	7.2	ug/L			07/15/19 17:08	10
1,3-Dichlorobenzene	ND		10	7.8	ug/L			07/15/19 17:08	10
1,4-Dichlorobenzene	ND		10	8.4	ug/L			07/15/19 17:08	10
2-Butanone (MEK)	ND		100	13	ug/L			07/15/19 17:08	10
2-Hexanone	ND		50	12	ug/L			07/15/19 17:08	10
4-Methyl-2-pentanone (MIBK)	ND		50	21	ug/L			07/15/19 17:08	10
Acetone	ND		100	30	ug/L			07/15/19 17:08	10
Benzene	ND		10	4.1	ug/L			07/15/19 17:08	10
Bromodichloromethane	ND		10	3.9	ug/L			07/15/19 17:08	10
Bromoform	ND	F1	10	2.6	ug/L			07/15/19 17:08	10
Bromomethane	ND		10	6.9	ug/L			07/15/19 17:08	10
Carbon disulfide	ND		10	1.9	ug/L			07/15/19 17:08	10
Carbon tetrachloride	ND		10	2.7	ug/L			07/15/19 17:08	10
Chlorobenzene	ND		10	7.5	ug/L			07/15/19 17:08	10
Chloroethane	ND		10	3.2	ug/L			07/15/19 17:08	10
Chloroform	ND		10	3.4	ug/L			07/15/19 17:08	10
Chloromethane	ND		10	3.5	ug/L			07/15/19 17:08	10
cis-1,2-Dichloroethene	ND		10	8.1	ug/L			07/15/19 17:08	10
cis-1,3-Dichloropropene	ND		10	3.6	ug/L			07/15/19 17:08	10
Cyclohexane	**7.2**	**J**	10	1.8	ug/L			07/15/19 17:08	10
Dibromochloromethane	ND		10	3.2	ug/L			07/15/19 17:08	10
Dichlorodifluoromethane	ND		10	6.8	ug/L			07/15/19 17:08	10
Ethylbenzene	ND		10	7.4	ug/L			07/15/19 17:08	10
Isopropylbenzene	ND		10	7.9	ug/L			07/15/19 17:08	10
Methyl acetate	ND		25	13	ug/L			07/15/19 17:08	10
Methyl tert-butyl ether	ND		10	1.6	ug/L			07/15/19 17:08	10
Methylcyclohexane	**5.5**	**J**	10	1.6	ug/L			07/15/19 17:08	10
Methylene Chloride	**6.2**	**J**	10	4.4	ug/L			07/15/19 17:08	10
Styrene	ND		10	7.3	ug/L			07/15/19 17:08	10
Tetrachloroethene	ND		10	3.6	ug/L			07/15/19 17:08	10
Toluene	ND		10	5.1	ug/L			07/15/19 17:08	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			07/15/19 17:08	10
trans-1,3-Dichloropropene	ND		10	3.7	ug/L			07/15/19 17:08	10
Trichloroethene	ND		10	4.6	ug/L			07/15/19 17:08	10
Trichlorofluoromethane	ND		10	8.8	ug/L			07/15/19 17:08	10
Vinyl chloride	ND		10	9.0	ug/L			07/15/19 17:08	10
Xylenes, Total	ND		20	6.6	ug/L			07/15/19 17:08	10

Client Sample ID: MWSW
Date Collected: 07/09/19 08:55
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-3
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	*None*		*ug/L*					*07/15/19 17:08*	*10*

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*07/15/19 17:08*	*10*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*07/15/19 17:08*	*10*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/15/19 17:08*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
2,4,6-Trichlorophenol	ND		25	3.1	ug/L		07/15/19 07:45	07/16/19 17:25	5
2,4-Dichlorophenol	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
2,4-Dimethylphenol	ND		25	2.5	ug/L		07/15/19 07:45	07/16/19 17:25	5
2,4-Dinitrophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 17:25	5
2,4-Dinitrotoluene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 17:25	5
2,6-Dinitrotoluene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
2-Chloronaphthalene	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
2-Chlorophenol	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 17:25	5
2-Methylnaphthalene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
2-Methylphenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
2-Nitroaniline	ND		50	2.1	ug/L		07/15/19 07:45	07/16/19 17:25	5
2-Nitrophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
3,3'-Dichlorobenzidine	ND	F1	25	2.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
3-Nitroaniline	ND	F2	50	2.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
4,6-Dinitro-2-methylphenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Bromophenyl phenyl ether	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Chloro-3-methylphenol	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Chloroaniline	ND	F1	25	3.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Chlorophenyl phenyl ether	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Methylphenol	ND		50	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Nitroaniline	ND	F1	50	1.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
4-Nitrophenol	ND	*	50	7.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
Acenaphthene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 17:25	5
Acenaphthylene	ND		25	1.9	ug/L		07/15/19 07:45	07/16/19 17:25	5
Acetophenone	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 17:25	5
Anthracene	ND		25	1.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
Atrazine	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
Benzaldehyde	ND		25	1.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
Benzo(a)anthracene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
Benzo(a)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
Benzo(b)fluoranthene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 17:25	5
Benzo(g,h,i)perylene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
Benzo(k)fluoranthene	ND		25	3.7	ug/L		07/15/19 07:45	07/16/19 17:25	5
Biphenyl	ND		25	3.3	ug/L		07/15/19 07:45	07/16/19 17:25	5
bis (2-chloroisopropyl) ether	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
Bis(2-chloroethoxy)methane	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
Bis(2-chloroethyl)ether	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
Bis(2-ethylhexyl) phthalate	ND		25	11	ug/L		07/15/19 07:45	07/16/19 17:25	5
Butyl benzyl phthalate	ND		25	5.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
Caprolactam	ND		25	11	ug/L		07/15/19 07:45	07/16/19 17:25	5

Client Sample ID: MWSW
Lab Sample ID: 480-156102-3
Date Collected: 07/09/19 08:55
Matrix: Water
Date Received: 07/12/19 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 17:25	5
Chrysene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 17:25	5
Dibenz(a,h)anthracene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 17:25	5
Dibenzofuran	ND		50	2.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
Diethyl phthalate	ND		25	1.1	ug/L		07/15/19 07:45	07/16/19 17:25	5
Dimethyl phthalate	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
Di-n-butyl phthalate	ND		25	1.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
Di-n-octyl phthalate	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
Fluoranthene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
Fluorene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
Hexachlorobenzene	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
Hexachlorobutadiene	ND		25	3.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
Hexachlorocyclopentadiene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
Hexachloroethane	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
Indeno(1,2,3-cd)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 17:25	5
Isophorone	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 17:25	5
Naphthalene	ND		25	3.8	ug/L		07/15/19 07:45	07/16/19 17:25	5
Nitrobenzene	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 17:25	5
N-Nitrosodi-n-propylamine	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 17:25	5
N-Nitrosodiphenylamine	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 17:25	5
Pentachlorophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 17:25	5
Phenanthrene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 17:25	5
Phenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 17:25	5
Pyrene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 17:25	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*110*	*T J*	*ug/L*		*2.48*		*07/15/19 07:45*	*07/16/19 17:25*	*5*
Unknown	*110*	*T J*	*ug/L*		*2.66*		*07/15/19 07:45*	*07/16/19 17:25*	*5*
Unknown	*36*	*T J*	*ug/L*		*4.79*		*07/15/19 07:45*	*07/16/19 17:25*	*5*
Unknown	*17*	*T J*	*ug/L*		*5.91*		*07/15/19 07:45*	*07/16/19 17:25*	*5*
Unknown	*13*	*T J*	*ug/L*		*6.86*		*07/15/19 07:45*	*07/16/19 17:25*	*5*
Unknown	*17*	*T J*	*ug/L*		*7.75*		*07/15/19 07:45*	*07/16/19 17:25*	*5*
Disulfoton	*5.4*	*J*	*ug/L*		*10.08*	*298-04-4*	*07/15/19 07:45*	*07/16/19 17:25*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*93*		*41 - 120*	*07/15/19 07:45*	*07/16/19 17:25*	*5*
2-Fluorobiphenyl	*88*		*48 - 120*	*07/15/19 07:45*	*07/16/19 17:25*	*5*
2-Fluorophenol	*54*		*35 - 120*	*07/15/19 07:45*	*07/16/19 17:25*	*5*
Nitrobenzene-d5	*76*		*46 - 120*	*07/15/19 07:45*	*07/16/19 17:25*	*5*
Phenol-d5	*33*		*22 - 120*	*07/15/19 07:45*	*07/16/19 17:25*	*5*
p-Terphenyl-d14	*50*	*X*	*59 - 136*	*07/15/19 07:45*	*07/16/19 17:25*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 00:29	1
Chromium	ND		0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 00:29	1
Lead	ND		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 00:29	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: W29
Date Collected: 07/09/19 13:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-4
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		20	16	ug/L			07/15/19 17:32	20
1,1,2,2-Tetrachloroethane	ND		20	4.2	ug/L			07/15/19 17:32	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20	6.2	ug/L			07/15/19 17:32	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			07/15/19 17:32	20
1,1-Dichloroethane	ND		20	7.6	ug/L			07/15/19 17:32	20
1,1-Dichloroethene	ND		20	5.8	ug/L			07/15/19 17:32	20
1,2,4-Trichlorobenzene	ND		20	8.2	ug/L			07/15/19 17:32	20
1,2-Dibromo-3-Chloropropane	ND		20	7.8	ug/L			07/15/19 17:32	20
1,2-Dibromoethane	ND		20	15	ug/L			07/15/19 17:32	20
1,2-Dichlorobenzene	ND		20	16	ug/L			07/15/19 17:32	20
1,2-Dichloroethane	ND		20	4.2	ug/L			07/15/19 17:32	20
1,2-Dichloropropane	ND		20	14	ug/L			07/15/19 17:32	20
1,3-Dichlorobenzene	ND		20	16	ug/L			07/15/19 17:32	20
1,4-Dichlorobenzene	ND		20	17	ug/L			07/15/19 17:32	20
2-Butanone (MEK)	ND		200	26	ug/L			07/15/19 17:32	20
2-Hexanone	ND		100	25	ug/L			07/15/19 17:32	20
4-Methyl-2-pentanone (MIBK)	ND		100	42	ug/L			07/15/19 17:32	20
Acetone	ND		200	60	ug/L			07/15/19 17:32	20
Benzene	ND		20	8.2	ug/L			07/15/19 17:32	20
Bromodichloromethane	ND		20	7.8	ug/L			07/15/19 17:32	20
Bromoform	ND		20	5.2	ug/L			07/15/19 17:32	20
Bromomethane	ND		20	14	ug/L			07/15/19 17:32	20
Carbon disulfide	ND		20	3.8	ug/L			07/15/19 17:32	20
Carbon tetrachloride	ND		20	5.4	ug/L			07/15/19 17:32	20
Chlorobenzene	ND		20	15	ug/L			07/15/19 17:32	20
Chloroethane	ND		20	6.4	ug/L			07/15/19 17:32	20
Chloroform	ND		20	6.8	ug/L			07/15/19 17:32	20
Chloromethane	ND		20	7.0	ug/L			07/15/19 17:32	20
cis-1,2-Dichloroethene	ND		20	16	ug/L			07/15/19 17:32	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			07/15/19 17:32	20
Cyclohexane	ND		20	3.6	ug/L			07/15/19 17:32	20
Dibromochloromethane	ND		20	6.4	ug/L			07/15/19 17:32	20
Dichlorodifluoromethane	ND		20	14	ug/L			07/15/19 17:32	20
Ethylbenzene	ND		20	15	ug/L			07/15/19 17:32	20
Isopropylbenzene	ND		20	16	ug/L			07/15/19 17:32	20
Methyl acetate	ND		50	26	ug/L			07/15/19 17:32	20
Methyl tert-butyl ether	ND		20	3.2	ug/L			07/15/19 17:32	20
Methylcyclohexane	ND		20	3.2	ug/L			07/15/19 17:32	20
Methylene Chloride	**8.8**	**J**	20	8.8	ug/L			07/15/19 17:32	20
Styrene	ND		20	15	ug/L			07/15/19 17:32	20
Tetrachloroethene	ND		20	7.2	ug/L			07/15/19 17:32	20
Toluene	ND		20	10	ug/L			07/15/19 17:32	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			07/15/19 17:32	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			07/15/19 17:32	20
Trichloroethene	ND		20	9.2	ug/L			07/15/19 17:32	20
Trichlorofluoromethane	ND		20	18	ug/L			07/15/19 17:32	20
Vinyl chloride	ND		20	18	ug/L			07/15/19 17:32	20
Xylenes, Total	ND		40	13	ug/L			07/15/19 17:32	20

Client Sample ID: W29
Lab Sample ID: 480-156102-4
Date Collected: 07/09/19 13:00
Matrix: Water
Date Received: 07/12/19 09:50

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/15/19 17:32	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		07/15/19 17:32	20
4-Bromofluorobenzene (Surr)	106		73 - 120		07/15/19 17:32	20
Toluene-d8 (Surr)	95		80 - 120		07/15/19 17:32	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
2,4,6-Trichlorophenol	ND		25	3.1	ug/L		07/15/19 07:45	07/16/19 21:09	5
2,4-Dichlorophenol	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
2,4-Dimethylphenol	ND		25	2.5	ug/L		07/15/19 07:45	07/16/19 21:09	5
2,4-Dinitrophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 21:09	5
2,4-Dinitrotoluene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 21:09	5
2,6-Dinitrotoluene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
2-Chloronaphthalene	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
2-Chlorophenol	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 21:09	5
2-Methylnaphthalene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
2-Methylphenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
2-Nitroaniline	ND		50	2.1	ug/L		07/15/19 07:45	07/16/19 21:09	5
2-Nitrophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
3,3'-Dichlorobenzidine	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
3-Nitroaniline	ND		50	2.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
4,6-Dinitro-2-methylphenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Bromophenyl phenyl ether	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Chloro-3-methylphenol	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Chloroaniline	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Chlorophenyl phenyl ether	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Methylphenol	ND		50	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Nitroaniline	ND		50	1.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
4-Nitrophenol	ND	*	50	7.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
Acenaphthene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 21:09	5
Acenaphthylene	ND		25	1.9	ug/L		07/15/19 07:45	07/16/19 21:09	5
Acetophenone	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 21:09	5
Anthracene	ND		25	1.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
Atrazine	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
Benzaldehyde	ND		25	1.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
Benzo(a)anthracene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
Benzo(a)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
Benzo(b)fluoranthene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 21:09	5
Benzo(g,h,i)perylene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
Benzo(k)fluoranthene	ND		25	3.7	ug/L		07/15/19 07:45	07/16/19 21:09	5
Biphenyl	ND		25	3.3	ug/L		07/15/19 07:45	07/16/19 21:09	5
bis (2-chloroisopropyl) ether	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
Bis(2-chloroethoxy)methane	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
Bis(2-chloroethyl)ether	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
Bis(2-ethylhexyl) phthalate	ND		25	11	ug/L		07/15/19 07:45	07/16/19 21:09	5
Butyl benzyl phthalate	ND		25	5.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
Caprolactam	ND		25	11	ug/L		07/15/19 07:45	07/16/19 21:09	5

Client Sample ID: W29
Date Collected: 07/09/19 13:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 21:09	5
Chrysene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 21:09	5
Dibenz(a,h)anthracene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 21:09	5
Dibenzofuran	ND		50	2.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
Diethyl phthalate	ND		25	1.1	ug/L		07/15/19 07:45	07/16/19 21:09	5
Dimethyl phthalate	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
Di-n-butyl phthalate	ND		25	1.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
Di-n-octyl phthalate	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
Fluoranthene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
Fluorene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
Hexachlorobenzene	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
Hexachlorobutadiene	ND		25	3.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
Hexachlorocyclopentadiene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
Hexachloroethane	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
Indeno(1,2,3-cd)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:09	5
Isophorone	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 21:09	5
Naphthalene	ND		25	3.8	ug/L		07/15/19 07:45	07/16/19 21:09	5
Nitrobenzene	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 21:09	5
N-Nitrosodi-n-propylamine	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 21:09	5
N-Nitrosodiphenylamine	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:09	5
Pentachlorophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 21:09	5
Phenanthrene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 21:09	5
Phenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:09	5
Pyrene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 21:09	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*120*	*T J*	*ug/L*		*2.48*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*110*	*T J*	*ug/L*		*2.67*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*26*	*T J*	*ug/L*		*4.79*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*16*	*T J*	*ug/L*		*5.91*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*16*	*T J*	*ug/L*		*6.86*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*20*	*T J*	*ug/L*		*7.74*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*9.9*	*T J*	*ug/L*		*8.52*		*07/15/19 07:45*	*07/16/19 21:09*	*5*
Unknown	*15*	*T J*	*ug/L*		*10.52*		*07/15/19 07:45*	*07/16/19 21:09*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*93*		*41 - 120*	*07/15/19 07:45*	*07/16/19 21:09*	*5*
2-Fluorobiphenyl	*84*		*48 - 120*	*07/15/19 07:45*	*07/16/19 21:09*	*5*
2-Fluorophenol	*53*		*35 - 120*	*07/15/19 07:45*	*07/16/19 21:09*	*5*
Nitrobenzene-d5	*76*		*46 - 120*	*07/15/19 07:45*	*07/16/19 21:09*	*5*
Phenol-d5	*36*		*22 - 120*	*07/15/19 07:45*	*07/16/19 21:09*	*5*
p-Terphenyl-d14	*39*	*X*	*59 - 136*	*07/15/19 07:45*	*07/16/19 21:09*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 00:59	1
Chromium	**0.0054**		0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 00:59	1
Lead	ND		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 00:59	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW5
Date Collected: 07/09/19 10:30
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		10	8.2	ug/L			07/15/19 17:56	10
1,1,2,2-Tetrachloroethane	ND		10	2.1	ug/L			07/15/19 17:56	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10	3.1	ug/L			07/15/19 17:56	10
1,1,2-Trichloroethane	ND		10	2.3	ug/L			07/15/19 17:56	10
1,1-Dichloroethane	ND		10	3.8	ug/L			07/15/19 17:56	10
1,1-Dichloroethene	ND		10	2.9	ug/L			07/15/19 17:56	10
1,2,4-Trichlorobenzene	ND		10	4.1	ug/L			07/15/19 17:56	10
1,2-Dibromo-3-Chloropropane	ND		10	3.9	ug/L			07/15/19 17:56	10
1,2-Dibromoethane	ND		10	7.3	ug/L			07/15/19 17:56	10
1,2-Dichlorobenzene	ND		10	7.9	ug/L			07/15/19 17:56	10
1,2-Dichloroethane	ND		10	2.1	ug/L			07/15/19 17:56	10
1,2-Dichloropropane	ND		10	7.2	ug/L			07/15/19 17:56	10
1,3-Dichlorobenzene	ND		10	7.8	ug/L			07/15/19 17:56	10
1,4-Dichlorobenzene	ND		10	8.4	ug/L			07/15/19 17:56	10
2-Butanone (MEK)	ND		100	13	ug/L			07/15/19 17:56	10
2-Hexanone	ND		50	12	ug/L			07/15/19 17:56	10
4-Methyl-2-pentanone (MIBK)	ND		50	21	ug/L			07/15/19 17:56	10
Acetone	ND		100	30	ug/L			07/15/19 17:56	10
Benzene	ND		10	4.1	ug/L			07/15/19 17:56	10
Bromodichloromethane	ND		10	3.9	ug/L			07/15/19 17:56	10
Bromoform	ND		10	2.6	ug/L			07/15/19 17:56	10
Bromomethane	ND		10	6.9	ug/L			07/15/19 17:56	10
Carbon disulfide	ND		10	1.9	ug/L			07/15/19 17:56	10
Carbon tetrachloride	ND		10	2.7	ug/L			07/15/19 17:56	10
Chlorobenzene	ND		10	7.5	ug/L			07/15/19 17:56	10
Chloroethane	ND		10	3.2	ug/L			07/15/19 17:56	10
Chloroform	ND		10	3.4	ug/L			07/15/19 17:56	10
Chloromethane	ND		10	3.5	ug/L			07/15/19 17:56	10
cis-1,2-Dichloroethene	ND		10	8.1	ug/L			07/15/19 17:56	10
cis-1,3-Dichloropropene	ND		10	3.6	ug/L			07/15/19 17:56	10
Cyclohexane	**3.7**	**J**	10	1.8	ug/L			07/15/19 17:56	10
Dibromochloromethane	ND		10	3.2	ug/L			07/15/19 17:56	10
Dichlorodifluoromethane	ND		10	6.8	ug/L			07/15/19 17:56	10
Ethylbenzene	ND		10	7.4	ug/L			07/15/19 17:56	10
Isopropylbenzene	ND		10	7.9	ug/L			07/15/19 17:56	10
Methyl acetate	ND		25	13	ug/L			07/15/19 17:56	10
Methyl tert-butyl ether	ND		10	1.6	ug/L			07/15/19 17:56	10
Methylcyclohexane	**2.1**	**J**	10	1.6	ug/L			07/15/19 17:56	10
Methylene Chloride	**5.4**	**J**	10	4.4	ug/L			07/15/19 17:56	10
Styrene	ND		10	7.3	ug/L			07/15/19 17:56	10
Tetrachloroethene	ND		10	3.6	ug/L			07/15/19 17:56	10
Toluene	ND		10	5.1	ug/L			07/15/19 17:56	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			07/15/19 17:56	10
trans-1,3-Dichloropropene	ND		10	3.7	ug/L			07/15/19 17:56	10
Trichloroethene	ND		10	4.6	ug/L			07/15/19 17:56	10
Trichlorofluoromethane	ND		10	8.8	ug/L			07/15/19 17:56	10
Vinyl chloride	ND		10	9.0	ug/L			07/15/19 17:56	10
Xylenes, Total	ND		20	6.6	ug/L			07/15/19 17:56	10

Client Sample ID: MW5
Lab Sample ID: 480-156102-5
Date Collected: 07/09/19 10:30
Matrix: Water
Date Received: 07/12/19 09:50

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/15/19 17:56	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		07/15/19 17:56	10
4-Bromofluorobenzene (Surr)	106		73 - 120		07/15/19 17:56	10
Toluene-d8 (Surr)	96		80 - 120		07/15/19 17:56	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
2,4,6-Trichlorophenol	ND		25	3.1	ug/L		07/15/19 07:45	07/16/19 21:36	5
2,4-Dichlorophenol	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
2,4-Dimethylphenol	ND		25	2.5	ug/L		07/15/19 07:45	07/16/19 21:36	5
2,4-Dinitrophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 21:36	5
2,4-Dinitrotoluene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 21:36	5
2,6-Dinitrotoluene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
2-Chloronaphthalene	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
2-Chlorophenol	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 21:36	5
2-Methylnaphthalene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
2-Methylphenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
2-Nitroaniline	ND		50	2.1	ug/L		07/15/19 07:45	07/16/19 21:36	5
2-Nitrophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
3,3'-Dichlorobenzidine	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
3-Nitroaniline	ND		50	2.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
4,6-Dinitro-2-methylphenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Bromophenyl phenyl ether	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Chloro-3-methylphenol	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Chloroaniline	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Chlorophenyl phenyl ether	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Methylphenol	ND		50	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Nitroaniline	ND		50	1.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
4-Nitrophenol	ND	*	50	7.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
Acenaphthene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 21:36	5
Acenaphthylene	ND		25	1.9	ug/L		07/15/19 07:45	07/16/19 21:36	5
Acetophenone	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 21:36	5
Anthracene	ND		25	1.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
Atrazine	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
Benzaldehyde	ND		25	1.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
Benzo(a)anthracene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
Benzo(a)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
Benzo(b)fluoranthene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 21:36	5
Benzo(g,h,i)perylene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
Benzo(k)fluoranthene	ND		25	3.7	ug/L		07/15/19 07:45	07/16/19 21:36	5
Biphenyl	ND		25	3.3	ug/L		07/15/19 07:45	07/16/19 21:36	5
bis (2-chloroisopropyl) ether	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
Bis(2-chloroethoxy)methane	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
Bis(2-chloroethyl)ether	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
Bis(2-ethylhexyl) phthalate	ND		25	11	ug/L		07/15/19 07:45	07/16/19 21:36	5
Butyl benzyl phthalate	ND		25	5.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
Caprolactam	ND		25	11	ug/L		07/15/19 07:45	07/16/19 21:36	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW5
Date Collected: 07/09/19 10:30
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 21:36	5
Chrysene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 21:36	5
Dibenz(a,h)anthracene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 21:36	5
Dibenzofuran	ND		50	2.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
Diethyl phthalate	ND		25	1.1	ug/L		07/15/19 07:45	07/16/19 21:36	5
Dimethyl phthalate	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
Di-n-butyl phthalate	ND		25	1.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
Di-n-octyl phthalate	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
Fluoranthene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
Fluorene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
Hexachlorobenzene	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
Hexachlorobutadiene	ND		25	3.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
Hexachlorocyclopentadiene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
Hexachloroethane	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
Indeno(1,2,3-cd)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 21:36	5
Isophorone	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 21:36	5
Naphthalene	ND		25	3.8	ug/L		07/15/19 07:45	07/16/19 21:36	5
Nitrobenzene	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 21:36	5
N-Nitrosodi-n-propylamine	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 21:36	5
N-Nitrosodiphenylamine	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 21:36	5
Pentachlorophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 21:36	5
Phenanthrene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 21:36	5
Phenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 21:36	5
Pyrene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 21:36	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*72*	*T J*	*ug/L*		*2.49*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*70*	*T J*	*ug/L*		*2.66*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*46*	*T J*	*ug/L*		*5.46*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*36*	*T J*	*ug/L*		*5.70*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*59*	*T J*	*ug/L*		*6.69*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*43*	*T J*	*ug/L*		*7.19*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*48*	*T J*	*ug/L*		*7.51*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
1H-Inden-1-one, 2,3-dihydro-3-methyl-	*48*	*T J N*	*ug/L*		*8.02*	*6072-57-7*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*93*	*T J*	*ug/L*		*8.11*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Benzoic acid, 2,4-dimethyl-	*400*	*T J N*	*ug/L*		*8.19*	*611-01-8*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*40*	*T J*	*ug/L*		*8.26*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*55*	*T J*	*ug/L*		*8.30*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*270*	*T J*	*ug/L*		*8.38*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Benzoic acid, 3,5-dimethyl-	*1100*	*T J N*	*ug/L*		*8.45*	*499-06-9*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*48*	*T J*	*ug/L*		*8.48*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*130*	*T J*	*ug/L*		*8.57*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*78*	*T J*	*ug/L*		*8.65*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*72*	*T J*	*ug/L*		*8.72*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*51*	*T J*	*ug/L*		*8.87*		*07/15/19 07:45*	*07/16/19 21:36*	*5*
Unknown	*43*	*T J*	*ug/L*		*9.11*		*07/15/19 07:45*	*07/16/19 21:36*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*102*		*41 - 120*	*07/15/19 07:45*	*07/16/19 21:36*	*5*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW5
Date Collected: 07/09/19 10:30
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-5
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*48 - 120*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
2-Fluorophenol	*56*		*35 - 120*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
Nitrobenzene-d5	*77*		*46 - 120*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
Phenol-d5	*50*		*22 - 120*	*07/15/19 07:45*	*07/16/19 21:36*	*5*
p-Terphenyl-d14	*29*	*X*	*59 - 136*	*07/15/19 07:45*	*07/16/19 21:36*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0087**	**J**	0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 01:03	1
Chromium	ND		0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 01:03	1
Lead	**0.0045**	**J**	0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 01:03	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: W18
Date Collected: 07/10/19 11:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		10	8.2	ug/L			07/16/19 05:29	10
1,1,2,2-Tetrachloroethane	ND		10	2.1	ug/L			07/16/19 05:29	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10	3.1	ug/L			07/16/19 05:29	10
1,1,2-Trichloroethane	ND		10	2.3	ug/L			07/16/19 05:29	10
1,1-Dichloroethane	ND		10	3.8	ug/L			07/16/19 05:29	10
1,1-Dichloroethene	ND		10	2.9	ug/L			07/16/19 05:29	10
1,2,4-Trichlorobenzene	ND		10	4.1	ug/L			07/16/19 05:29	10
1,2-Dibromo-3-Chloropropane	ND		10	3.9	ug/L			07/16/19 05:29	10
1,2-Dibromoethane	ND		10	7.3	ug/L			07/16/19 05:29	10
1,2-Dichlorobenzene	ND		10	7.9	ug/L			07/16/19 05:29	10
1,2-Dichloroethane	ND		10	2.1	ug/L			07/16/19 05:29	10
1,2-Dichloropropane	ND		10	7.2	ug/L			07/16/19 05:29	10
1,3-Dichlorobenzene	ND		10	7.8	ug/L			07/16/19 05:29	10
1,4-Dichlorobenzene	ND		10	8.4	ug/L			07/16/19 05:29	10
2-Butanone (MEK)	ND		100	13	ug/L			07/16/19 05:29	10
2-Hexanone	ND		50	12	ug/L			07/16/19 05:29	10
4-Methyl-2-pentanone (MIBK)	ND		50	21	ug/L			07/16/19 05:29	10
Acetone	ND		100	30	ug/L			07/16/19 05:29	10
Benzene	ND		10	4.1	ug/L			07/16/19 05:29	10
Bromodichloromethane	ND		10	3.9	ug/L			07/16/19 05:29	10
Bromoform	ND		10	2.6	ug/L			07/16/19 05:29	10
Bromomethane	ND		10	6.9	ug/L			07/16/19 05:29	10
Carbon disulfide	ND		10	1.9	ug/L			07/16/19 05:29	10
Carbon tetrachloride	ND		10	2.7	ug/L			07/16/19 05:29	10
Chlorobenzene	ND		10	7.5	ug/L			07/16/19 05:29	10
Chloroethane	ND		10	3.2	ug/L			07/16/19 05:29	10
Chloroform	ND		10	3.4	ug/L			07/16/19 05:29	10
Chloromethane	ND		10	3.5	ug/L			07/16/19 05:29	10
cis-1,2-Dichloroethene	ND		10	8.1	ug/L			07/16/19 05:29	10
cis-1,3-Dichloropropene	ND		10	3.6	ug/L			07/16/19 05:29	10
Cyclohexane	ND		10	1.8	ug/L			07/16/19 05:29	10
Dibromochloromethane	ND		10	3.2	ug/L			07/16/19 05:29	10
Dichlorodifluoromethane	ND		10	6.8	ug/L			07/16/19 05:29	10
Ethylbenzene	ND		10	7.4	ug/L			07/16/19 05:29	10
Isopropylbenzene	ND		10	7.9	ug/L			07/16/19 05:29	10
Methyl acetate	ND		25	13	ug/L			07/16/19 05:29	10
Methyl tert-butyl ether	ND		10	1.6	ug/L			07/16/19 05:29	10
Methylcyclohexane	ND		10	1.6	ug/L			07/16/19 05:29	10
Methylene Chloride	ND		10	4.4	ug/L			07/16/19 05:29	10
Styrene	ND		10	7.3	ug/L			07/16/19 05:29	10
Tetrachloroethene	ND		10	3.6	ug/L			07/16/19 05:29	10
Toluene	ND		10	5.1	ug/L			07/16/19 05:29	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			07/16/19 05:29	10
trans-1,3-Dichloropropene	ND		10	3.7	ug/L			07/16/19 05:29	10
Trichloroethene	ND		10	4.6	ug/L			07/16/19 05:29	10
Trichlorofluoromethane	ND		10	8.8	ug/L			07/16/19 05:29	10
Vinyl chloride	ND		10	9.0	ug/L			07/16/19 05:29	10
Xylenes, Total	ND		20	6.6	ug/L			07/16/19 05:29	10

Client Sample ID: W18
Date Collected: 07/10/19 11:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-6
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	*None*		*ug/L*					*07/16/19 05:29*	*10*

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*07/16/19 05:29*	*10*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*07/16/19 05:29*	*10*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/16/19 05:29*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
2,4,6-Trichlorophenol	ND		25	3.1	ug/L		07/15/19 07:45	07/16/19 22:04	5
2,4-Dichlorophenol	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
2,4-Dimethylphenol	ND		25	2.5	ug/L		07/15/19 07:45	07/16/19 22:04	5
2,4-Dinitrophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 22:04	5
2,4-Dinitrotoluene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 22:04	5
2,6-Dinitrotoluene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
2-Chloronaphthalene	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
2-Chlorophenol	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 22:04	5
2-Methylnaphthalene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
2-Methylphenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
2-Nitroaniline	ND		50	2.1	ug/L		07/15/19 07:45	07/16/19 22:04	5
2-Nitrophenol	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
3,3'-Dichlorobenzidine	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
3-Nitroaniline	ND		50	2.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
4,6-Dinitro-2-methylphenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Bromophenyl phenyl ether	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Chloro-3-methylphenol	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Chloroaniline	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Chlorophenyl phenyl ether	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Methylphenol	ND		50	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Nitroaniline	ND		50	1.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
4-Nitrophenol	ND	*	50	7.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
Acenaphthene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 22:04	5
Acenaphthylene	ND		25	1.9	ug/L		07/15/19 07:45	07/16/19 22:04	5
Acetophenone	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 22:04	5
Anthracene	ND		25	1.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
Atrazine	ND		25	2.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
Benzaldehyde	ND		25	1.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
Benzo(a)anthracene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
Benzo(a)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
Benzo(b)fluoranthene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 22:04	5
Benzo(g,h,i)perylene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
Benzo(k)fluoranthene	ND		25	3.7	ug/L		07/15/19 07:45	07/16/19 22:04	5
Biphenyl	ND		25	3.3	ug/L		07/15/19 07:45	07/16/19 22:04	5
bis (2-chloroisopropyl) ether	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
Bis(2-chloroethoxy)methane	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
Bis(2-chloroethyl)ether	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
Bis(2-ethylhexyl) phthalate	ND		25	11	ug/L		07/15/19 07:45	07/16/19 22:04	5
Butyl benzyl phthalate	ND		25	5.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
Caprolactam	ND		25	11	ug/L		07/15/19 07:45	07/16/19 22:04	5

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: W18
Date Collected: 07/10/19 11:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 22:04	5
Chrysene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 22:04	5
Dibenz(a,h)anthracene	ND		25	2.1	ug/L		07/15/19 07:45	07/16/19 22:04	5
Dibenzofuran	ND		50	2.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
Diethyl phthalate	ND		25	1.1	ug/L		07/15/19 07:45	07/16/19 22:04	5
Dimethyl phthalate	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
Di-n-butyl phthalate	ND		25	1.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
Di-n-octyl phthalate	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
Fluoranthene	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
Fluorene	ND		25	1.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
Hexachlorobenzene	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
Hexachlorobutadiene	ND		25	3.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
Hexachlorocyclopentadiene	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
Hexachloroethane	ND		25	3.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
Indeno(1,2,3-cd)pyrene	ND		25	2.4	ug/L		07/15/19 07:45	07/16/19 22:04	5
Isophorone	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 22:04	5
Naphthalene	ND		25	3.8	ug/L		07/15/19 07:45	07/16/19 22:04	5
Nitrobenzene	ND		25	1.5	ug/L		07/15/19 07:45	07/16/19 22:04	5
N-Nitrosodi-n-propylamine	ND		25	2.7	ug/L		07/15/19 07:45	07/16/19 22:04	5
N-Nitrosodiphenylamine	ND		25	2.6	ug/L		07/15/19 07:45	07/16/19 22:04	5
Pentachlorophenol	ND		50	11	ug/L		07/15/19 07:45	07/16/19 22:04	5
Phenanthrene	ND		25	2.2	ug/L		07/15/19 07:45	07/16/19 22:04	5
Phenol	ND		25	2.0	ug/L		07/15/19 07:45	07/16/19 22:04	5
Pyrene	ND		25	1.7	ug/L		07/15/19 07:45	07/16/19 22:04	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*110*	*T J*	*ug/L*		*2.48*		*07/15/19 07:45*	*07/16/19 22:04*	*5*
Unknown	*110*	*T J*	*ug/L*		*2.67*		*07/15/19 07:45*	*07/16/19 22:04*	*5*
Unknown	*34*	*T J*	*ug/L*		*4.79*		*07/15/19 07:45*	*07/16/19 22:04*	*5*
Unknown	*11*	*T J*	*ug/L*		*5.91*		*07/15/19 07:45*	*07/16/19 22:04*	*5*
Unknown	*12*	*T J*	*ug/L*		*6.86*		*07/15/19 07:45*	*07/16/19 22:04*	*5*
Unknown	*14*	*T J*	*ug/L*		*7.74*		*07/15/19 07:45*	*07/16/19 22:04*	*5*
Unknown	*12*	*T J*	*ug/L*		*8.51*		*07/15/19 07:45*	*07/16/19 22:04*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*88*		*41 - 120*	*07/15/19 07:45*	*07/16/19 22:04*	*5*
2-Fluorobiphenyl	*91*		*48 - 120*	*07/15/19 07:45*	*07/16/19 22:04*	*5*
2-Fluorophenol	*58*		*35 - 120*	*07/15/19 07:45*	*07/16/19 22:04*	*5*
Nitrobenzene-d5	*81*		*46 - 120*	*07/15/19 07:45*	*07/16/19 22:04*	*5*
Phenol-d5	*34*		*22 - 120*	*07/15/19 07:45*	*07/16/19 22:04*	*5*
p-Terphenyl-d14	*51*	*X*	*59 - 136*	*07/15/19 07:45*	*07/16/19 22:04*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 01:07	1
Chromium	**0.0020**	**J**	0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 01:07	1
Lead	ND		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 01:07	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: W22
Date Collected: 07/10/19 10:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	16	ug/L			07/16/19 05:52	20
1,1,2,2-Tetrachloroethane	ND		20	4.2	ug/L			07/16/19 05:52	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20	6.2	ug/L			07/16/19 05:52	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			07/16/19 05:52	20
1,1-Dichloroethane	ND		20	7.6	ug/L			07/16/19 05:52	20
1,1-Dichloroethene	ND		20	5.8	ug/L			07/16/19 05:52	20
1,2,4-Trichlorobenzene	ND		20	8.2	ug/L			07/16/19 05:52	20
1,2-Dibromo-3-Chloropropane	ND		20	7.8	ug/L			07/16/19 05:52	20
1,2-Dibromoethane	ND		20	15	ug/L			07/16/19 05:52	20
1,2-Dichlorobenzene	ND		20	16	ug/L			07/16/19 05:52	20
1,2-Dichloroethane	ND		20	4.2	ug/L			07/16/19 05:52	20
1,2-Dichloropropane	ND		20	14	ug/L			07/16/19 05:52	20
1,3-Dichlorobenzene	ND		20	16	ug/L			07/16/19 05:52	20
1,4-Dichlorobenzene	ND		20	17	ug/L			07/16/19 05:52	20
2-Butanone (MEK)	ND		200	26	ug/L			07/16/19 05:52	20
2-Hexanone	ND		100	25	ug/L			07/16/19 05:52	20
4-Methyl-2-pentanone (MIBK)	ND		100	42	ug/L			07/16/19 05:52	20
Acetone	**89**	**J**	200	60	ug/L			07/16/19 05:52	20
Benzene	ND		20	8.2	ug/L			07/16/19 05:52	20
Bromodichloromethane	ND		20	7.8	ug/L			07/16/19 05:52	20
Bromoform	ND		20	5.2	ug/L			07/16/19 05:52	20
Bromomethane	ND		20	14	ug/L			07/16/19 05:52	20
Carbon disulfide	ND		20	3.8	ug/L			07/16/19 05:52	20
Carbon tetrachloride	ND		20	5.4	ug/L			07/16/19 05:52	20
Chlorobenzene	ND		20	15	ug/L			07/16/19 05:52	20
Chloroethane	ND		20	6.4	ug/L			07/16/19 05:52	20
Chloroform	ND		20	6.8	ug/L			07/16/19 05:52	20
Chloromethane	ND		20	7.0	ug/L			07/16/19 05:52	20
cis-1,2-Dichloroethene	ND		20	16	ug/L			07/16/19 05:52	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			07/16/19 05:52	20
Cyclohexane	ND		20	3.6	ug/L			07/16/19 05:52	20
Dibromochloromethane	ND		20	6.4	ug/L			07/16/19 05:52	20
Dichlorodifluoromethane	ND		20	14	ug/L			07/16/19 05:52	20
Ethylbenzene	ND		20	15	ug/L			07/16/19 05:52	20
Isopropylbenzene	ND		20	16	ug/L			07/16/19 05:52	20
Methyl acetate	ND		50	26	ug/L			07/16/19 05:52	20
Methyl tert-butyl ether	ND		20	3.2	ug/L			07/16/19 05:52	20
Methylcyclohexane	**93**		20	3.2	ug/L			07/16/19 05:52	20
Methylene Chloride	ND		20	8.8	ug/L			07/16/19 05:52	20
Styrene	ND		20	15	ug/L			07/16/19 05:52	20
Tetrachloroethene	ND		20	7.2	ug/L			07/16/19 05:52	20
Toluene	ND		20	10	ug/L			07/16/19 05:52	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			07/16/19 05:52	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			07/16/19 05:52	20
Trichloroethene	ND		20	9.2	ug/L			07/16/19 05:52	20
Trichlorofluoromethane	ND		20	18	ug/L			07/16/19 05:52	20
Vinyl chloride	ND		20	18	ug/L			07/16/19 05:52	20
Xylenes, Total	ND		40	13	ug/L			07/16/19 05:52	20

Client Sample ID: W22
Date Collected: 07/10/19 10:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-7
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
1-Ethyl-3-methylcyclohexane (c,t)	720	T J N	ug/L		8.52	3728-55-0		07/16/19 05:52	20
Unknown	1300	T J	ug/L		8.80			07/16/19 05:52	20
Octane, 2,6-dimethyl-	500	T J N	ug/L		9.04	2051-30-1		07/16/19 05:52	20
Unknown	1300	T J	ug/L		9.20			07/16/19 05:52	20
Unknown	890	T J	ug/L		9.37			07/16/19 05:52	20
Unknown	750	T J	ug/L		12.09			07/16/19 05:52	20
Unknown	560	T J	ug/L		12.68			07/16/19 05:52	20
Unknown	730	T J	ug/L		13.56			07/16/19 05:52	20
Unknown	1300	T J	ug/L		13.75			07/16/19 05:52	20
Dodecane, 4,6-dimethyl-	1300	T J N	ug/L		14.09	61141-72-8		07/16/19 05:52	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		77 - 120		07/16/19 05:52	20
4-Bromofluorobenzene (Surr)	89		73 - 120		07/16/19 05:52	20
Toluene-d8 (Surr)	91		80 - 120		07/16/19 05:52	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		100	9.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
2,4,6-Trichlorophenol	ND		100	12	ug/L		07/15/19 07:45	07/16/19 22:32	20
2,4-Dichlorophenol	ND		100	10	ug/L		07/15/19 07:45	07/16/19 22:32	20
2,4-Dimethylphenol	ND		100	10	ug/L		07/15/19 07:45	07/16/19 22:32	20
2,4-Dinitrophenol	ND		200	44	ug/L		07/15/19 07:45	07/16/19 22:32	20
2,4-Dinitrotoluene	ND		100	8.9	ug/L		07/15/19 07:45	07/16/19 22:32	20
2,6-Dinitrotoluene	ND		100	8.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
2-Chloronaphthalene	ND		100	9.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
2-Chlorophenol	ND		100	11	ug/L		07/15/19 07:45	07/16/19 22:32	20
2-Methylnaphthalene	ND		100	12	ug/L		07/15/19 07:45	07/16/19 22:32	20
2-Methylphenol	ND		100	8.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
2-Nitroaniline	ND		200	8.4	ug/L		07/15/19 07:45	07/16/19 22:32	20
2-Nitrophenol	ND		100	9.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
3,3'-Dichlorobenzidine	ND		100	8.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
3-Nitroaniline	ND		200	9.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
4,6-Dinitro-2-methylphenol	ND		200	44	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Bromophenyl phenyl ether	ND		100	9.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Chloro-3-methylphenol	ND		100	9.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Chloroaniline	ND		100	12	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Chlorophenyl phenyl ether	ND		100	7.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Methylphenol	ND		200	7.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Nitroaniline	ND		200	5.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
4-Nitrophenol	ND	*	200	30	ug/L		07/15/19 07:45	07/16/19 22:32	20
Acenaphthene	ND		100	8.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
Acenaphthylene	ND		100	7.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
Acetophenone	ND		100	11	ug/L		07/15/19 07:45	07/16/19 22:32	20
Anthracene	ND		100	5.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
Atrazine	ND		100	9.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
Benzaldehyde	ND		100	5.3	ug/L		07/15/19 07:45	07/16/19 22:32	20
Benzo(a)anthracene	ND		100	7.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
Benzo(a)pyrene	ND		100	9.4	ug/L		07/15/19 07:45	07/16/19 22:32	20
Benzo(b)fluoranthene	ND		100	6.8	ug/L		07/15/19 07:45	07/16/19 22:32	20

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: W22
Date Collected: 07/10/19 10:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo(g,h,i)perylene	ND		100	7.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
Benzo(k)fluoranthene	ND		100	15	ug/L		07/15/19 07:45	07/16/19 22:32	20
Biphenyl	ND		100	13	ug/L		07/15/19 07:45	07/16/19 22:32	20
bis (2-chloroisopropyl) ether	ND		100	10	ug/L		07/15/19 07:45	07/16/19 22:32	20
Bis(2-chloroethoxy)methane	ND		100	7.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
Bis(2-chloroethyl)ether	ND		100	8.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
Bis(2-ethylhexyl) phthalate	ND		100	44	ug/L		07/15/19 07:45	07/16/19 22:32	20
Butyl benzyl phthalate	ND		100	20	ug/L		07/15/19 07:45	07/16/19 22:32	20
Caprolactam	ND		100	44	ug/L		07/15/19 07:45	07/16/19 22:32	20
Carbazole	ND		100	6.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
Chrysene	ND		100	6.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
Dibenz(a,h)anthracene	ND		100	8.4	ug/L		07/15/19 07:45	07/16/19 22:32	20
Dibenzofuran	ND		200	10	ug/L		07/15/19 07:45	07/16/19 22:32	20
Diethyl phthalate	ND		100	4.4	ug/L		07/15/19 07:45	07/16/19 22:32	20
Dimethyl phthalate	ND		100	7.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
Di-n-butyl phthalate	ND		100	6.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
Di-n-octyl phthalate	ND		100	9.4	ug/L		07/15/19 07:45	07/16/19 22:32	20
Fluoranthene	ND		100	8.0	ug/L		07/15/19 07:45	07/16/19 22:32	20
Fluorene	ND		100	7.2	ug/L		07/15/19 07:45	07/16/19 22:32	20
Hexachlorobenzene	ND		100	10	ug/L		07/15/19 07:45	07/16/19 22:32	20
Hexachlorobutadiene	ND		100	14	ug/L		07/15/19 07:45	07/16/19 22:32	20
Hexachlorocyclopentadiene	ND		100	12	ug/L		07/15/19 07:45	07/16/19 22:32	20
Hexachloroethane	ND		100	12	ug/L		07/15/19 07:45	07/16/19 22:32	20
Indeno(1,2,3-cd)pyrene	ND		100	9.4	ug/L		07/15/19 07:45	07/16/19 22:32	20
Isophorone	ND		100	8.6	ug/L		07/15/19 07:45	07/16/19 22:32	20
Naphthalene	ND		100	15	ug/L		07/15/19 07:45	07/16/19 22:32	20
Nitrobenzene	ND		100	5.8	ug/L		07/15/19 07:45	07/16/19 22:32	20
N-Nitrosodi-n-propylamine	ND		100	11	ug/L		07/15/19 07:45	07/16/19 22:32	20
N-Nitrosodiphenylamine	ND		100	10	ug/L		07/15/19 07:45	07/16/19 22:32	20
Pentachlorophenol	ND		200	44	ug/L		07/15/19 07:45	07/16/19 22:32	20
Phenanthrene	ND		100	8.8	ug/L		07/15/19 07:45	07/16/19 22:32	20
Phenol	ND		100	7.8	ug/L		07/15/19 07:45	07/16/19 22:32	20
Pyrene	**7.3**	**J**	100	6.8	ug/L		07/15/19 07:45	07/16/19 22:32	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*340*	*T J*	*ug/L*		*2.47*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*96*	*T J*	*ug/L*		*2.65*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Undecane, 5,6-dimethyl-	*85*	*T J N*	*ug/L*		*5.77*	*17615-91-7*	*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*98*	*T J*	*ug/L*		*5.87*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*140*	*T J*	*ug/L*		*6.70*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*100*	*T J*	*ug/L*		*6.80*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
trans-Decalin, 2-methyl-	*130*	*T J N*	*ug/L*		*6.94*	*1000152-47-3*	*07/15/19 07:45*	*07/16/19 22:32*	*20*
Naphthalene, decahydro-2-methyl-	*170*	*T J N*	*ug/L*		*7.04*	*2958-76-1*	*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*180*	*T J*	*ug/L*		*7.28*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*130*	*T J*	*ug/L*		*7.41*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*120*	*T J*	*ug/L*		*7.58*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*260*	*T J*	*ug/L*		*7.67*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*110*	*T J*	*ug/L*		*7.86*		*07/15/19 07:45*	*07/16/19 22:32*	*20*
Unknown	*150*	*T J*	*ug/L*		*7.89*		*07/15/19 07:45*	*07/16/19 22:32*	*20*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: W22
Date Collected: 07/10/19 10:50
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-7
Matrix: Water

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	89	T J	ug/L		8.03		07/15/19 07:45	07/16/19 22:32	20
Unknown	96	T J	ug/L		8.31		07/15/19 07:45	07/16/19 22:32	20
Tridecane, 3-ethyl-	120	T J N	ug/L		8.55	13286-73-2	07/15/19 07:45	07/16/19 22:32	20
Pentadecane, 2,6,10-trimethyl-	230	T J N	ug/L		9.32	3892-00-0	07/15/19 07:45	07/16/19 22:32	20
Tetradecane	290	T J N	ug/L		9.93	629-59-4	07/15/19 07:45	07/16/19 22:32	20
Eicosane, 9-octyl-	130	T J N	ug/L		10.23	13475-77-9	07/15/19 07:45	07/16/19 22:32	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	105		41 - 120	07/15/19 07:45	07/16/19 22:32	20
2-Fluorobiphenyl	90		48 - 120	07/15/19 07:45	07/16/19 22:32	20
2-Fluorophenol	47		35 - 120	07/15/19 07:45	07/16/19 22:32	20
Nitrobenzene-d5	79		46 - 120	07/15/19 07:45	07/16/19 22:32	20
Phenol-d5	37		22 - 120	07/15/19 07:45	07/16/19 22:32	20
p-Terphenyl-d14	67		59 - 136	07/15/19 07:45	07/16/19 22:32	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.024		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 01:11	1
Chromium	0.011		0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 01:11	1
Lead	0.061		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 01:11	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: BLIND DUP
Date Collected: 07/09/19 08:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-8
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		10	8.2	ug/L			07/15/19 18:21	10
1,1,2,2-Tetrachloroethane	ND		10	2.1	ug/L			07/15/19 18:21	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10	3.1	ug/L			07/15/19 18:21	10
1,1,2-Trichloroethane	ND		10	2.3	ug/L			07/15/19 18:21	10
1,1-Dichloroethane	ND		10	3.8	ug/L			07/15/19 18:21	10
1,1-Dichloroethene	ND		10	2.9	ug/L			07/15/19 18:21	10
1,2,4-Trichlorobenzene	ND		10	4.1	ug/L			07/15/19 18:21	10
1,2-Dibromo-3-Chloropropane	ND		10	3.9	ug/L			07/15/19 18:21	10
1,2-Dibromoethane	ND		10	7.3	ug/L			07/15/19 18:21	10
1,2-Dichlorobenzene	ND		10	7.9	ug/L			07/15/19 18:21	10
1,2-Dichloroethane	ND		10	2.1	ug/L			07/15/19 18:21	10
1,2-Dichloropropane	ND		10	7.2	ug/L			07/15/19 18:21	10
1,3-Dichlorobenzene	ND		10	7.8	ug/L			07/15/19 18:21	10
1,4-Dichlorobenzene	ND		10	8.4	ug/L			07/15/19 18:21	10
2-Butanone (MEK)	ND		100	13	ug/L			07/15/19 18:21	10
2-Hexanone	ND		50	12	ug/L			07/15/19 18:21	10
4-Methyl-2-pentanone (MIBK)	ND		50	21	ug/L			07/15/19 18:21	10
Acetone	ND		100	30	ug/L			07/15/19 18:21	10
Benzene	ND		10	4.1	ug/L			07/15/19 18:21	10
Bromodichloromethane	ND		10	3.9	ug/L			07/15/19 18:21	10
Bromoform	ND		10	2.6	ug/L			07/15/19 18:21	10
Bromomethane	ND		10	6.9	ug/L			07/15/19 18:21	10
Carbon disulfide	ND		10	1.9	ug/L			07/15/19 18:21	10
Carbon tetrachloride	ND		10	2.7	ug/L			07/15/19 18:21	10
Chlorobenzene	ND		10	7.5	ug/L			07/15/19 18:21	10
Chloroethane	ND		10	3.2	ug/L			07/15/19 18:21	10
Chloroform	ND		10	3.4	ug/L			07/15/19 18:21	10
Chloromethane	ND		10	3.5	ug/L			07/15/19 18:21	10
cis-1,2-Dichloroethene	ND		10	8.1	ug/L			07/15/19 18:21	10
cis-1,3-Dichloropropene	ND		10	3.6	ug/L			07/15/19 18:21	10
Cyclohexane	ND		10	1.8	ug/L			07/15/19 18:21	10
Dibromochloromethane	ND		10	3.2	ug/L			07/15/19 18:21	10
Dichlorodifluoromethane	ND		10	6.8	ug/L			07/15/19 18:21	10
Ethylbenzene	ND		10	7.4	ug/L			07/15/19 18:21	10
Isopropylbenzene	ND		10	7.9	ug/L			07/15/19 18:21	10
Methyl acetate	ND		25	13	ug/L			07/15/19 18:21	10
Methyl tert-butyl ether	ND		10	1.6	ug/L			07/15/19 18:21	10
Methylcyclohexane	ND		10	1.6	ug/L			07/15/19 18:21	10
Methylene Chloride	ND		10	4.4	ug/L			07/15/19 18:21	10
Styrene	ND		10	7.3	ug/L			07/15/19 18:21	10
Tetrachloroethene	ND		10	3.6	ug/L			07/15/19 18:21	10
Toluene	ND		10	5.1	ug/L			07/15/19 18:21	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			07/15/19 18:21	10
trans-1,3-Dichloropropene	ND		10	3.7	ug/L			07/15/19 18:21	10
Trichloroethene	ND		10	4.6	ug/L			07/15/19 18:21	10
Trichlorofluoromethane	ND		10	8.8	ug/L			07/15/19 18:21	10
Vinyl chloride	ND		10	9.0	ug/L			07/15/19 18:21	10
Xylenes, Total	ND		20	6.6	ug/L			07/15/19 18:21	10

Client Sample ID: BLIND DUP
Lab Sample ID: 480-156102-8

Date Collected: 07/09/19 08:00
Matrix: Water
Date Received: 07/12/19 09:50

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/15/19 18:21	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		07/15/19 18:21	10
4-Bromofluorobenzene (Surr)	108		73 - 120		07/15/19 18:21	10
Toluene-d8 (Surr)	97		80 - 120		07/15/19 18:21	10

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		07/15/19 07:45	07/16/19 23:00	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		07/15/19 07:45	07/16/19 23:00	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		07/15/19 07:45	07/16/19 23:00	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		07/15/19 07:45	07/16/19 23:00	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		07/15/19 07:45	07/16/19 23:00	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		07/15/19 07:45	07/16/19 23:00	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 23:00	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		07/15/19 07:45	07/16/19 23:00	1
2-Chlorophenol	ND		5.0	0.53	ug/L		07/15/19 07:45	07/16/19 23:00	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		07/15/19 07:45	07/16/19 23:00	1
2-Methylphenol	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 23:00	1
2-Nitroaniline	ND		10	0.42	ug/L		07/15/19 07:45	07/16/19 23:00	1
2-Nitrophenol	ND		5.0	0.48	ug/L		07/15/19 07:45	07/16/19 23:00	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 23:00	1
3-Nitroaniline	ND		10	0.48	ug/L		07/15/19 07:45	07/16/19 23:00	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Chloroaniline	ND		5.0	0.59	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Methylphenol	ND		10	0.36	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Nitroaniline	ND		10	0.25	ug/L		07/15/19 07:45	07/16/19 23:00	1
4-Nitrophenol	ND	*	10	1.5	ug/L		07/15/19 07:45	07/16/19 23:00	1
Acenaphthene	ND		5.0	0.41	ug/L		07/15/19 07:45	07/16/19 23:00	1
Acenaphthylene	ND		5.0	0.38	ug/L		07/15/19 07:45	07/16/19 23:00	1
Acetophenone	ND		5.0	0.54	ug/L		07/15/19 07:45	07/16/19 23:00	1
Anthracene	ND		5.0	0.28	ug/L		07/15/19 07:45	07/16/19 23:00	1
Atrazine	ND		5.0	0.46	ug/L		07/15/19 07:45	07/16/19 23:00	1
Benzaldehyde	ND		5.0	0.27	ug/L		07/15/19 07:45	07/16/19 23:00	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		07/15/19 07:45	07/16/19 23:00	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		07/15/19 07:45	07/16/19 23:00	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		07/15/19 07:45	07/16/19 23:00	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		07/15/19 07:45	07/16/19 23:00	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		07/15/19 07:45	07/16/19 23:00	1
Biphenyl	ND		5.0	0.65	ug/L		07/15/19 07:45	07/16/19 23:00	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		07/15/19 07:45	07/16/19 23:00	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		07/15/19 07:45	07/16/19 23:00	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 23:00	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		07/15/19 07:45	07/16/19 23:00	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		07/15/19 07:45	07/16/19 23:00	1
Caprolactam	ND		5.0	2.2	ug/L		07/15/19 07:45	07/16/19 23:00	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: BLIND DUP
Date Collected: 07/09/19 08:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND		5.0	0.30	ug/L		07/15/19 07:45	07/16/19 23:00	1
Chrysene	ND		5.0	0.33	ug/L		07/15/19 07:45	07/16/19 23:00	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		07/15/19 07:45	07/16/19 23:00	1
Dibenzofuran	ND		10	0.51	ug/L		07/15/19 07:45	07/16/19 23:00	1
Diethyl phthalate	ND		5.0	0.22	ug/L		07/15/19 07:45	07/16/19 23:00	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		07/15/19 07:45	07/16/19 23:00	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		07/15/19 07:45	07/16/19 23:00	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		07/15/19 07:45	07/16/19 23:00	1
Fluoranthene	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 23:00	1
Fluorene	ND		5.0	0.36	ug/L		07/15/19 07:45	07/16/19 23:00	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		07/15/19 07:45	07/16/19 23:00	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		07/15/19 07:45	07/16/19 23:00	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		07/15/19 07:45	07/16/19 23:00	1
Hexachloroethane	ND		5.0	0.59	ug/L		07/15/19 07:45	07/16/19 23:00	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		07/15/19 07:45	07/16/19 23:00	1
Isophorone	ND		5.0	0.43	ug/L		07/15/19 07:45	07/16/19 23:00	1
Naphthalene	ND		5.0	0.76	ug/L		07/15/19 07:45	07/16/19 23:00	1
Nitrobenzene	ND		5.0	0.29	ug/L		07/15/19 07:45	07/16/19 23:00	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		07/15/19 07:45	07/16/19 23:00	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		07/15/19 07:45	07/16/19 23:00	1
Pentachlorophenol	ND		10	2.2	ug/L		07/15/19 07:45	07/16/19 23:00	1
Phenanthrene	**1.6**	**J B**	5.0	0.44	ug/L		07/15/19 07:45	07/16/19 23:00	1
Phenol	ND		5.0	0.39	ug/L		07/15/19 07:45	07/16/19 23:00	1
Pyrene	ND		5.0	0.34	ug/L		07/15/19 07:45	07/16/19 23:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*48*	*T J*	*ug/L*		*2.75*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*14*	*T J*	*ug/L*		*4.80*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*7.6*	*T J*	*ug/L*		*5.25*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*16*	*T J*	*ug/L*		*5.46*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.92*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*11*	*T J*	*ug/L*		*6.00*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Benzene, 1,2,3-trimethyl-	*39*	*T J N*	*ug/L*		*6.11*	*526-73-8*	*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*12*	*T J*	*ug/L*		*6.28*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*9.7*	*T J*	*ug/L*		*6.38*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*15*	*T J*	*ug/L*		*6.78*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*9.5*	*T J*	*ug/L*		*6.91*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*9.6*	*T J*	*ug/L*		*6.99*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*8.2*	*T J*	*ug/L*		*7.12*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.20*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*15*	*T J*	*ug/L*		*7.61*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*17*	*T J*	*ug/L*		*8.05*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Benzoic acid, 3,5-dimethyl-	*40*	*T J N*	*ug/L*		*8.40*	*499-06-9*	*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*11*	*T J*	*ug/L*		*8.46*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*16*	*T J*	*ug/L*		*8.55*		*07/15/19 07:45*	*07/16/19 23:00*	*1*
Unknown	*16*	*T J*	*ug/L*		*9.38*		*07/15/19 07:45*	*07/16/19 23:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*41 - 120*	*07/15/19 07:45*	*07/16/19 23:00*	*1*
2-Fluorobiphenyl	*86*		*48 - 120*	*07/15/19 07:45*	*07/16/19 23:00*	*1*

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: BLIND DUP
Date Collected: 07/09/19 08:00
Date Received: 07/12/19 09:50

Lab Sample ID: 480-156102-8
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*52*		*35 - 120*	*07/15/19 07:45*	*07/16/19 23:00*	*1*
Nitrobenzene-d5	*79*		*46 - 120*	*07/15/19 07:45*	*07/16/19 23:00*	*1*
Phenol-d5	*39*		*22 - 120*	*07/15/19 07:45*	*07/16/19 23:00*	*1*
p-Terphenyl-d14	*46*	*X*	*59 - 136*	*07/15/19 07:45*	*07/16/19 23:00*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 01:15	1
Chromium	**0.0011**	**J**	0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 01:15	1
Lead	ND		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 01:15	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		DCA	BFB	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(80-120)
480-156102-1	WCMW9	106	93	99
480-156102-2	MW4	100	107	99
480-156102-3	MWSW	100	108	96
480-156102-3 MS	MWSW	99	106	98
480-156102-3 MSD	MWSW	102	105	97
480-156102-4	W29	98	106	95
480-156102-5	MW5	98	106	96
480-156102-6	W18	102	93	99
480-156102-7	W22	105	89	91
480-156102-8	BLIND DUP	100	108	97
LCS 480-481998/5	Lab Control Sample	98	106	97
LCS 480-482138/5	Lab Control Sample	96	93	99
LCS 480-482185/6	Lab Control Sample	101	108	96
MB 480-481998/7	Method Blank	98	107	96
MB 480-482138/7	Method Blank	105	92	97
MB 480-482185/8	Method Blank	99	108	98

Surrogate Legend

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

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

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

		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)
480-156102-1	WCMW9	103	102	66	92	44	72
480-156102-2	MW4	106	84	58	81	43	45 X
480-156102-3	MWSW	93	88	54	76	33	50 X
480-156102-3 MS	MWSW	96	90	56	81	43	60
480-156102-3 MSD	MWSW	101	84	60	75	43	53 X
480-156102-4	W29	93	84	53	76	36	39 X
480-156102-5	MW5	102	76	56	77	50	29 X
480-156102-6	W18	88	91	58	81	34	51 X
480-156102-7	W22	105	90	47	79	37	67
480-156102-8	BLIND DUP	101	86	52	79	39	46 X
LCS 480-481994/2-A	Lab Control Sample	103	92	64	87	47	97
MB 480-481994/1-A	Method Blank	90	94	62	91	43	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: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-481998/7
Matrix: Water
Analysis Batch: 481998

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			07/15/19 11:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/15/19 11:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/15/19 11:02	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/15/19 11:02	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/15/19 11:02	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/15/19 11:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/15/19 11:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/15/19 11:02	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/15/19 11:02	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/15/19 11:02	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/15/19 11:02	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/15/19 11:02	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/15/19 11:02	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/15/19 11:02	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/15/19 11:02	1
2-Hexanone	ND		5.0	1.2	ug/L			07/15/19 11:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/15/19 11:02	1
Acetone	ND		10	3.0	ug/L			07/15/19 11:02	1
Benzene	ND		1.0	0.41	ug/L			07/15/19 11:02	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/15/19 11:02	1
Bromoform	ND		1.0	0.26	ug/L			07/15/19 11:02	1
Bromomethane	ND		1.0	0.69	ug/L			07/15/19 11:02	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/15/19 11:02	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/15/19 11:02	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/15/19 11:02	1
Chloroethane	ND		1.0	0.32	ug/L			07/15/19 11:02	1
Chloroform	ND		1.0	0.34	ug/L			07/15/19 11:02	1
Chloromethane	ND		1.0	0.35	ug/L			07/15/19 11:02	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/15/19 11:02	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/15/19 11:02	1
Cyclohexane	ND		1.0	0.18	ug/L			07/15/19 11:02	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/15/19 11:02	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/15/19 11:02	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/15/19 11:02	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/15/19 11:02	1
Methyl acetate	ND		2.5	1.3	ug/L			07/15/19 11:02	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/15/19 11:02	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/15/19 11:02	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/15/19 11:02	1
Styrene	ND		1.0	0.73	ug/L			07/15/19 11:02	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/15/19 11:02	1
Toluene	ND		1.0	0.51	ug/L			07/15/19 11:02	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/15/19 11:02	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/15/19 11:02	1
Trichloroethene	ND		1.0	0.46	ug/L			07/15/19 11:02	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/15/19 11:02	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/15/19 11:02	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/15/19 11:02	1

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

Lab Sample ID: MB 480-481998/7
Matrix: Water
Analysis Batch: 481998

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

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/15/19 11:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		07/15/19 11:02	1
4-Bromofluorobenzene (Surr)	107		73 - 120		07/15/19 11:02	1
Toluene-d8 (Surr)	96		80 - 120		07/15/19 11:02	1

Lab Sample ID: LCS 480-481998/5
Matrix: Water
Analysis Batch: 481998

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	25.4		ug/L		101	73 - 126
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.6		ug/L		99	61 - 148
1,1,2-Trichloroethane	25.0	24.0		ug/L		96	76 - 122
1,1-Dichloroethane	25.0	24.0		ug/L		96	77 - 120
1,1-Dichloroethene	25.0	23.1		ug/L		92	66 - 127
1,2,4-Trichlorobenzene	25.0	27.2		ug/L		109	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	27.6		ug/L		110	56 - 134
1,2-Dibromoethane	25.0	25.2		ug/L		101	77 - 120
1,2-Dichlorobenzene	25.0	24.6		ug/L		98	80 - 124
1,2-Dichloroethane	25.0	24.2		ug/L		97	75 - 120
1,2-Dichloropropane	25.0	23.9		ug/L		96	76 - 120
1,3-Dichlorobenzene	25.0	24.2		ug/L		97	77 - 120
1,4-Dichlorobenzene	25.0	24.1		ug/L		96	80 - 120
2-Butanone (MEK)	125	122		ug/L		97	57 - 140
2-Hexanone	125	122		ug/L		98	65 - 127
4-Methyl-2-pentanone (MIBK)	125	123		ug/L		98	71 - 125
Acetone	125	120		ug/L		96	56 - 142
Benzene	25.0	22.9		ug/L		92	71 - 124
Bromodichloromethane	25.0	27.2		ug/L		109	80 - 122
Bromoform	25.0	31.7		ug/L		127	61 - 132
Bromomethane	25.0	20.7		ug/L		83	55 - 144
Carbon disulfide	25.0	23.6		ug/L		94	59 - 134
Carbon tetrachloride	25.0	25.1		ug/L		100	72 - 134
Chlorobenzene	25.0	23.5		ug/L		94	80 - 120
Chloroethane	25.0	20.4		ug/L		82	69 - 136
Chloroform	25.0	23.7		ug/L		95	73 - 127
Chloromethane	25.0	20.8		ug/L		83	68 - 124
cis-1,2-Dichloroethene	25.0	23.7		ug/L		95	74 - 124
cis-1,3-Dichloropropene	25.0	24.4		ug/L		98	74 - 124
Cyclohexane	25.0	24.5		ug/L		98	59 - 135
Dibromochloromethane	25.0	29.6		ug/L		119	75 - 125
Dichlorodifluoromethane	25.0	18.6		ug/L		74	59 - 135
Ethylbenzene	25.0	23.2		ug/L		93	77 - 123
Isopropylbenzene	25.0	23.5		ug/L		94	77 - 122

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

Lab Sample ID: LCS 480-481998/5
Matrix: Water
Analysis Batch: 481998

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	50.0	44.7		ug/L		89	74 - 133
Methyl tert-butyl ether	25.0	24.0		ug/L		96	77 - 120
Methylcyclohexane	25.0	24.8		ug/L		99	68 - 134
Methylene Chloride	25.0	24.2		ug/L		97	75 - 124
Styrene	25.0	23.9		ug/L		96	80 - 120
Tetrachloroethene	25.0	26.2		ug/L		105	74 - 122
Toluene	25.0	22.8		ug/L		91	80 - 122
trans-1,2-Dichloroethene	25.0	23.9		ug/L		95	73 - 127
trans-1,3-Dichloropropene	25.0	23.6		ug/L		94	80 - 120
Trichloroethene	25.0	23.3		ug/L		93	74 - 123
Trichlorofluoromethane	25.0	21.2		ug/L		85	62 - 150
Vinyl chloride	25.0	21.5		ug/L		86	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: MB 480-482138/7
Matrix: Water
Analysis Batch: 482138

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			07/15/19 22:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/15/19 22:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/15/19 22:07	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/15/19 22:07	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/15/19 22:07	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/15/19 22:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/15/19 22:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/15/19 22:07	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/15/19 22:07	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/15/19 22:07	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/15/19 22:07	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/15/19 22:07	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/15/19 22:07	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/15/19 22:07	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/15/19 22:07	1
2-Hexanone	ND		5.0	1.2	ug/L			07/15/19 22:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/15/19 22:07	1
Acetone	ND		10	3.0	ug/L			07/15/19 22:07	1
Benzene	ND		1.0	0.41	ug/L			07/15/19 22:07	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/15/19 22:07	1
Bromoform	ND		1.0	0.26	ug/L			07/15/19 22:07	1
Bromomethane	ND		1.0	0.69	ug/L			07/15/19 22:07	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/15/19 22:07	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/15/19 22:07	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/15/19 22:07	1

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

Lab Sample ID: MB 480-482138/7
Matrix: Water
Analysis Batch: 482138

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		1.0	0.32	ug/L			07/15/19 22:07	1
Chloroform	ND		1.0	0.34	ug/L			07/15/19 22:07	1
Chloromethane	ND		1.0	0.35	ug/L			07/15/19 22:07	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/15/19 22:07	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/15/19 22:07	1
Cyclohexane	ND		1.0	0.18	ug/L			07/15/19 22:07	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/15/19 22:07	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/15/19 22:07	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/15/19 22:07	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/15/19 22:07	1
Methyl acetate	ND		2.5	1.3	ug/L			07/15/19 22:07	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/15/19 22:07	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/15/19 22:07	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/15/19 22:07	1
Styrene	ND		1.0	0.73	ug/L			07/15/19 22:07	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/15/19 22:07	1
Toluene	ND		1.0	0.51	ug/L			07/15/19 22:07	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/15/19 22:07	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/15/19 22:07	1
Trichloroethene	ND		1.0	0.46	ug/L			07/15/19 22:07	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/15/19 22:07	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/15/19 22:07	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/15/19 22:07	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*07/15/19 22:07*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*07/15/19 22:07*	*1*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*		*07/15/19 22:07*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/15/19 22:07*	*1*

Lab Sample ID: LCS 480-482138/5
Matrix: Water
Analysis Batch: 482138

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	24.1		ug/L		96	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.2		ug/L		105	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.7		ug/L		103	61 - 148
1,1,2-Trichloroethane	25.0	25.2		ug/L		101	76 - 122
1,1-Dichloroethane	25.0	25.0		ug/L		100	77 - 120
1,1-Dichloroethene	25.0	23.3		ug/L		93	66 - 127
1,2,4-Trichlorobenzene	25.0	21.9		ug/L		88	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	25.3		ug/L		101	56 - 134
1,2-Dibromoethane	25.0	24.3		ug/L		97	77 - 120
1,2-Dichlorobenzene	25.0	24.5		ug/L		98	80 - 124

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

Lab Sample ID: LCS 480-482138/5
Matrix: Water
Analysis Batch: 482138

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	24.2		ug/L		97	75 - 120
1,2-Dichloropropane	25.0	26.4		ug/L		106	76 - 120
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	77 - 120
1,4-Dichlorobenzene	25.0	25.4		ug/L		102	80 - 120
2-Butanone (MEK)	125	151		ug/L		120	57 - 140
2-Hexanone	125	143		ug/L		115	65 - 127
4-Methyl-2-pentanone (MIBK)	125	141		ug/L		113	71 - 125
Acetone	125	170		ug/L		136	56 - 142
Benzene	25.0	25.0		ug/L		100	71 - 124
Bromodichloromethane	25.0	24.6		ug/L		98	80 - 122
Bromoform	25.0	25.1		ug/L		100	61 - 132
Bromomethane	25.0	24.9		ug/L		100	55 - 144
Carbon disulfide	25.0	23.4		ug/L		94	59 - 134
Carbon tetrachloride	25.0	24.7		ug/L		99	72 - 134
Chlorobenzene	25.0	24.7		ug/L		99	80 - 120
Chloroethane	25.0	27.5		ug/L		110	69 - 136
Chloroform	25.0	21.9		ug/L		88	73 - 127
Chloromethane	25.0	27.6		ug/L		110	68 - 124
cis-1,2-Dichloroethene	25.0	23.1		ug/L		93	74 - 124
cis-1,3-Dichloropropene	25.0	25.4		ug/L		101	74 - 124
Cyclohexane	25.0	27.0		ug/L		108	59 - 135
Dibromochloromethane	25.0	24.2		ug/L		97	75 - 125
Dichlorodifluoromethane	25.0	26.1		ug/L		104	59 - 135
Ethylbenzene	25.0	25.2		ug/L		101	77 - 123
Isopropylbenzene	25.0	26.9		ug/L		107	77 - 122
Methyl acetate	50.0	53.1		ug/L		106	74 - 133
Methyl tert-butyl ether	25.0	23.6		ug/L		94	77 - 120
Methylcyclohexane	25.0	25.0		ug/L		100	68 - 134
Methylene Chloride	25.0	24.0		ug/L		96	75 - 124
Styrene	25.0	24.5		ug/L		98	80 - 120
Tetrachloroethene	25.0	24.6		ug/L		98	74 - 122
Toluene	25.0	24.8		ug/L		99	80 - 122
trans-1,2-Dichloroethene	25.0	23.9		ug/L		96	73 - 127
trans-1,3-Dichloropropene	25.0	25.9		ug/L		104	80 - 120
Trichloroethene	25.0	24.4		ug/L		98	74 - 123
Trichlorofluoromethane	25.0	26.2		ug/L		105	62 - 150
Vinyl chloride	25.0	27.7		ug/L		111	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

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

Lab Sample ID: MB 480-482185/8
Matrix: Water
Analysis Batch: 482185

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			07/16/19 10:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/16/19 10:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/16/19 10:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/16/19 10:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/16/19 10:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/16/19 10:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/16/19 10:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/16/19 10:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/16/19 10:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/16/19 10:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/16/19 10:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/16/19 10:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/16/19 10:50	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/16/19 10:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/16/19 10:50	1
2-Hexanone	ND		5.0	1.2	ug/L			07/16/19 10:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/16/19 10:50	1
Acetone	ND		10	3.0	ug/L			07/16/19 10:50	1
Benzene	ND		1.0	0.41	ug/L			07/16/19 10:50	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/16/19 10:50	1
Bromoform	ND		1.0	0.26	ug/L			07/16/19 10:50	1
Bromomethane	ND		1.0	0.69	ug/L			07/16/19 10:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/16/19 10:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/16/19 10:50	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/16/19 10:50	1
Chloroethane	ND		1.0	0.32	ug/L			07/16/19 10:50	1
Chloroform	ND		1.0	0.34	ug/L			07/16/19 10:50	1
Chloromethane	ND		1.0	0.35	ug/L			07/16/19 10:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/16/19 10:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/16/19 10:50	1
Cyclohexane	ND		1.0	0.18	ug/L			07/16/19 10:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/16/19 10:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/16/19 10:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/16/19 10:50	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/16/19 10:50	1
Methyl acetate	ND		2.5	1.3	ug/L			07/16/19 10:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/16/19 10:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/16/19 10:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/16/19 10:50	1
Styrene	ND		1.0	0.73	ug/L			07/16/19 10:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/16/19 10:50	1
Toluene	ND		1.0	0.51	ug/L			07/16/19 10:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/16/19 10:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/16/19 10:50	1
Trichloroethene	ND		1.0	0.46	ug/L			07/16/19 10:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/16/19 10:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/16/19 10:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/16/19 10:50	1

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

Lab Sample ID: MB 480-482185/8
Matrix: Water
Analysis Batch: 482185

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

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/16/19 10:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		07/16/19 10:50	1
4-Bromofluorobenzene (Surr)	108		73 - 120		07/16/19 10:50	1
Toluene-d8 (Surr)	98		80 - 120		07/16/19 10:50	1

Lab Sample ID: LCS 480-482185/6
Matrix: Water
Analysis Batch: 482185

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	25.2		ug/L		101	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	27.9		ug/L		112	61 - 148
1,1,2-Trichloroethane	25.0	24.8		ug/L		99	76 - 122
1,1-Dichloroethane	25.0	25.2		ug/L		101	77 - 120
1,1-Dichloroethene	25.0	25.5		ug/L		102	66 - 127
1,2,4-Trichlorobenzene	25.0	27.2		ug/L		109	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	29.7		ug/L		119	56 - 134
1,2-Dibromoethane	25.0	25.8		ug/L		103	77 - 120
1,2-Dichlorobenzene	25.0	24.7		ug/L		99	80 - 124
1,2-Dichloroethane	25.0	25.3		ug/L		101	75 - 120
1,2-Dichloropropane	25.0	24.4		ug/L		98	76 - 120
1,3-Dichlorobenzene	25.0	25.1		ug/L		100	77 - 120
1,4-Dichlorobenzene	25.0	24.4		ug/L		98	80 - 120
2-Butanone (MEK)	125	139		ug/L		111	57 - 140
2-Hexanone	125	136		ug/L		109	65 - 127
4-Methyl-2-pentanone (MIBK)	125	129		ug/L		103	71 - 125
Acetone	125	161		ug/L		128	56 - 142
Benzene	25.0	24.4		ug/L		98	71 - 124
Bromodichloromethane	25.0	28.1		ug/L		112	80 - 122
Bromoform	25.0	34.2	*	ug/L		137	61 - 132
Bromomethane	25.0	20.8		ug/L		83	55 - 144
Carbon disulfide	25.0	26.6		ug/L		106	59 - 134
Carbon tetrachloride	25.0	28.2		ug/L		113	72 - 134
Chlorobenzene	25.0	24.7		ug/L		99	80 - 120
Chloroethane	25.0	20.8		ug/L		83	69 - 136
Chloroform	25.0	24.2		ug/L		97	73 - 127
Chloromethane	25.0	21.2		ug/L		85	68 - 124
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	74 - 124
cis-1,3-Dichloropropene	25.0	25.0		ug/L		100	74 - 124
Cyclohexane	25.0	26.5		ug/L		106	59 - 135
Dibromochloromethane	25.0	31.3		ug/L		125	75 - 125
Dichlorodifluoromethane	25.0	21.9		ug/L		88	59 - 135
Ethylbenzene	25.0	24.5		ug/L		98	77 - 123
Isopropylbenzene	25.0	24.7		ug/L		99	77 - 122

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

Lab Sample ID: LCS 480-482185/6
Matrix: Water
Analysis Batch: 482185

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	50.0	48.1		ug/L		96	74 - 133
Methyl tert-butyl ether	25.0	25.0		ug/L		100	77 - 120
Methylcyclohexane	25.0	27.1		ug/L		109	68 - 134
Methylene Chloride	25.0	25.6		ug/L		102	75 - 124
Styrene	25.0	24.0		ug/L		96	80 - 120
Tetrachloroethene	25.0	28.1		ug/L		112	74 - 122
Toluene	25.0	23.8		ug/L		95	80 - 122
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	73 - 127
trans-1,3-Dichloropropene	25.0	24.6		ug/L		99	80 - 120
Trichloroethene	25.0	24.8		ug/L		99	74 - 123
Trichlorofluoromethane	25.0	22.3		ug/L		89	62 - 150
Vinyl chloride	25.0	22.5		ug/L		90	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: 480-156102-3 MS
Matrix: Water
Analysis Batch: 482185

Client Sample ID: MWSW
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		250	281		ug/L		113	73 - 126
1,1,2,2-Tetrachloroethane	ND		250	247		ug/L		99	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	290		ug/L		116	61 - 148
1,1,2-Trichloroethane	ND		250	251		ug/L		100	76 - 122
1,1-Dichloroethane	ND		250	255		ug/L		102	77 - 120
1,1-Dichloroethene	ND		250	266		ug/L		106	66 - 127
1,2,4-Trichlorobenzene	ND		250	265		ug/L		106	79 - 122
1,2-Dibromo-3-Chloropropane	ND		250	281		ug/L		112	56 - 134
1,2-Dibromoethane	ND		250	255		ug/L		102	77 - 120
1,2-Dichlorobenzene	ND		250	248		ug/L		99	80 - 124
1,2-Dichloroethane	ND		250	250		ug/L		100	75 - 120
1,2-Dichloropropane	ND		250	245		ug/L		98	76 - 120
1,3-Dichlorobenzene	ND		250	245		ug/L		98	77 - 120
1,4-Dichlorobenzene	ND		250	241		ug/L		97	78 - 124
2-Butanone (MEK)	ND		1250	1300		ug/L		104	57 - 140
2-Hexanone	ND		1250	1330		ug/L		107	65 - 127
4-Methyl-2-pentanone (MIBK)	ND		1250	1300		ug/L		104	71 - 125
Acetone	ND		1250	1370		ug/L		110	56 - 142
Benzene	ND		250	243		ug/L		97	71 - 124
Bromodichloromethane	ND		250	280		ug/L		112	80 - 122
Bromoform	ND	F1	250	319		ug/L		128	61 - 132
Bromomethane	ND		250	213		ug/L		85	55 - 144
Carbon disulfide	ND		250	269		ug/L		107	59 - 134
Carbon tetrachloride	ND		250	290		ug/L		116	72 - 134
Chlorobenzene	ND		250	247		ug/L		99	80 - 120

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

Lab Sample ID: 480-156102-3 MS
Matrix: Water
Analysis Batch: 482185

Client Sample ID: MWSW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	ND		250	218		ug/L		87	69 - 136
Chloroform	ND		250	245		ug/L		98	73 - 127
Chloromethane	ND		250	216		ug/L		86	68 - 124
cis-1,2-Dichloroethene	ND		250	248		ug/L		99	74 - 124
cis-1,3-Dichloropropene	ND		250	244		ug/L		98	74 - 124
Cyclohexane	7.2	J	250	309		ug/L		121	59 - 135
Dibromochloromethane	ND		250	307		ug/L		123	75 - 125
Dichlorodifluoromethane	ND		250	217		ug/L		87	59 - 135
Ethylbenzene	ND		250	248		ug/L		99	77 - 123
Isopropylbenzene	ND		250	252		ug/L		101	77 - 122
Methyl acetate	ND		500	464		ug/L		93	74 - 133
Methyl tert-butyl ether	ND		250	241		ug/L		96	77 - 120
Methylcyclohexane	5.5	J	250	309		ug/L		121	68 - 134
Methylene Chloride	6.2	J	250	253		ug/L		99	75 - 124
Styrene	ND		250	245		ug/L		98	80 - 120
Tetrachloroethene	ND		250	286		ug/L		114	74 - 122
Toluene	ND		250	240		ug/L		96	80 - 122
trans-1,2-Dichloroethene	ND		250	257		ug/L		103	73 - 127
trans-1,3-Dichloropropene	ND		250	239		ug/L		96	80 - 120
Trichloroethene	ND		250	248		ug/L		99	74 - 123
Trichlorofluoromethane	ND		250	232		ug/L		93	62 - 150
Vinyl chloride	ND		250	224		ug/L		89	65 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 480-156102-3 MSD
Matrix: Water
Analysis Batch: 482185

Client Sample ID: MWSW
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		250	277		ug/L		111	73 - 126	2	15
1,1,2,2-Tetrachloroethane	ND		250	254		ug/L		102	76 - 120	3	15
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		250	287		ug/L		115	61 - 148	1	20
1,1,2-Trichloroethane	ND		250	244		ug/L		98	76 - 122	3	15
1,1-Dichloroethane	ND		250	250		ug/L		100	77 - 120	2	20
1,1-Dichloroethene	ND		250	262		ug/L		105	66 - 127	1	16
1,2,4-Trichlorobenzene	ND		250	266		ug/L		106	79 - 122	0	20
1,2-Dibromo-3-Chloropropane	ND		250	304		ug/L		122	56 - 134	8	15
1,2-Dibromoethane	ND		250	257		ug/L		103	77 - 120	1	15
1,2-Dichlorobenzene	ND		250	246		ug/L		98	80 - 124	1	20
1,2-Dichloroethane	ND		250	250		ug/L		100	75 - 120	0	20
1,2-Dichloropropane	ND		250	241		ug/L		96	76 - 120	1	20
1,3-Dichlorobenzene	ND		250	239		ug/L		96	77 - 120	2	20
1,4-Dichlorobenzene	ND		250	244		ug/L		98	78 - 124	1	20
2-Butanone (MEK)	ND		1250	1380		ug/L		111	57 - 140	6	20

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

Lab Sample ID: 480-156102-3 MSD
Matrix: Water
Analysis Batch: 482185

Client Sample ID: MWSW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	ND		1250	1330		ug/L		107	65 - 127	0	15
4-Methyl-2-pentanone (MIBK)	ND		1250	1280		ug/L		102	71 - 125	1	35
Acetone	ND		1250	1480		ug/L		119	56 - 142	8	15
Benzene	ND		250	241		ug/L		96	71 - 124	1	13
Bromodichloromethane	ND		250	281		ug/L		112	80 - 122	0	15
Bromoform	ND	F1	250	334	F1	ug/L		134	61 - 132	5	15
Bromomethane	ND		250	215		ug/L		86	55 - 144	1	15
Carbon disulfide	ND		250	265		ug/L		106	59 - 134	1	15
Carbon tetrachloride	ND		250	287		ug/L		115	72 - 134	1	15
Chlorobenzene	ND		250	243		ug/L		97	80 - 120	2	25
Chloroethane	ND		250	210		ug/L		84	69 - 136	4	15
Chloroform	ND		250	245		ug/L		98	73 - 127	0	20
Chloromethane	ND		250	219		ug/L		87	68 - 124	1	15
cis-1,2-Dichloroethene	ND		250	248		ug/L		99	74 - 124	0	15
cis-1,3-Dichloropropene	ND		250	244		ug/L		98	74 - 124	0	15
Cyclohexane	7.2	J	250	302		ug/L		118	59 - 135	2	20
Dibromochloromethane	ND		250	306		ug/L		122	75 - 125	1	15
Dichlorodifluoromethane	ND		250	218		ug/L		87	59 - 135	0	20
Ethylbenzene	ND		250	241		ug/L		96	77 - 123	3	15
Isopropylbenzene	ND		250	249		ug/L		100	77 - 122	1	20
Methyl acetate	ND		500	494		ug/L		99	74 - 133	6	20
Methyl tert-butyl ether	ND		250	245		ug/L		98	77 - 120	2	37
Methylcyclohexane	5.5	J	250	301		ug/L		118	68 - 134	3	20
Methylene Chloride	6.2	J	250	256		ug/L		100	75 - 124	1	15
Styrene	ND		250	241		ug/L		97	80 - 120	2	20
Tetrachloroethene	ND		250	279		ug/L		112	74 - 122	2	20
Toluene	ND		250	232		ug/L		93	80 - 122	3	15
trans-1,2-Dichloroethene	ND		250	259		ug/L		104	73 - 127	1	20
trans-1,3-Dichloropropene	ND		250	242		ug/L		97	80 - 120	1	15
Trichloroethene	ND		250	246		ug/L		98	74 - 123	1	16
Trichlorofluoromethane	ND		250	228		ug/L		91	62 - 150	2	20
Vinyl chloride	ND		250	230		ug/L		92	65 - 133	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

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

Lab Sample ID: MB 480-481994/1-A
Matrix: Water
Analysis Batch: 482258

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		07/15/19 07:45	07/16/19 14:09	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		07/15/19 07:45	07/16/19 14:09	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		07/15/19 07:45	07/16/19 14:09	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		07/15/19 07:45	07/16/19 14:09	1

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

Lab Sample ID: MB 480-481994/1-A
Matrix: Water
Analysis Batch: 482258

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		10	2.2	ug/L		07/15/19 07:45	07/16/19 14:09	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		07/15/19 07:45	07/16/19 14:09	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 14:09	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		07/15/19 07:45	07/16/19 14:09	1
2-Chlorophenol	ND		5.0	0.53	ug/L		07/15/19 07:45	07/16/19 14:09	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		07/15/19 07:45	07/16/19 14:09	1
2-Methylphenol	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 14:09	1
2-Nitroaniline	ND		10	0.42	ug/L		07/15/19 07:45	07/16/19 14:09	1
2-Nitrophenol	ND		5.0	0.48	ug/L		07/15/19 07:45	07/16/19 14:09	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 14:09	1
3-Nitroaniline	ND		10	0.48	ug/L		07/15/19 07:45	07/16/19 14:09	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Chloroaniline	ND		5.0	0.59	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Methylphenol	ND		10	0.36	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Nitroaniline	ND		10	0.25	ug/L		07/15/19 07:45	07/16/19 14:09	1
4-Nitrophenol	ND		10	1.5	ug/L		07/15/19 07:45	07/16/19 14:09	1
Acenaphthene	ND		5.0	0.41	ug/L		07/15/19 07:45	07/16/19 14:09	1
Acenaphthylene	ND		5.0	0.38	ug/L		07/15/19 07:45	07/16/19 14:09	1
Acetophenone	ND		5.0	0.54	ug/L		07/15/19 07:45	07/16/19 14:09	1
Anthracene	ND		5.0	0.28	ug/L		07/15/19 07:45	07/16/19 14:09	1
Atrazine	ND		5.0	0.46	ug/L		07/15/19 07:45	07/16/19 14:09	1
Benzaldehyde	ND		5.0	0.27	ug/L		07/15/19 07:45	07/16/19 14:09	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		07/15/19 07:45	07/16/19 14:09	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		07/15/19 07:45	07/16/19 14:09	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		07/15/19 07:45	07/16/19 14:09	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		07/15/19 07:45	07/16/19 14:09	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		07/15/19 07:45	07/16/19 14:09	1
Biphenyl	ND		5.0	0.65	ug/L		07/15/19 07:45	07/16/19 14:09	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		07/15/19 07:45	07/16/19 14:09	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		07/15/19 07:45	07/16/19 14:09	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 14:09	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		07/15/19 07:45	07/16/19 14:09	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		07/15/19 07:45	07/16/19 14:09	1
Caprolactam	ND		5.0	2.2	ug/L		07/15/19 07:45	07/16/19 14:09	1
Carbazole	ND		5.0	0.30	ug/L		07/15/19 07:45	07/16/19 14:09	1
Chrysene	ND		5.0	0.33	ug/L		07/15/19 07:45	07/16/19 14:09	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		07/15/19 07:45	07/16/19 14:09	1
Dibenzofuran	ND		10	0.51	ug/L		07/15/19 07:45	07/16/19 14:09	1
Diethyl phthalate	ND		5.0	0.22	ug/L		07/15/19 07:45	07/16/19 14:09	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		07/15/19 07:45	07/16/19 14:09	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		07/15/19 07:45	07/16/19 14:09	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		07/15/19 07:45	07/16/19 14:09	1
Fluoranthene	ND		5.0	0.40	ug/L		07/15/19 07:45	07/16/19 14:09	1
Fluorene	ND		5.0	0.36	ug/L		07/15/19 07:45	07/16/19 14:09	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		07/15/19 07:45	07/16/19 14:09	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		07/15/19 07:45	07/16/19 14:09	1

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

Lab Sample ID: MB 480-481994/1-A
Matrix: Water
Analysis Batch: 482258

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		07/15/19 07:45	07/16/19 14:09	1
Hexachloroethane	ND		5.0	0.59	ug/L		07/15/19 07:45	07/16/19 14:09	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		07/15/19 07:45	07/16/19 14:09	1
Isophorone	ND		5.0	0.43	ug/L		07/15/19 07:45	07/16/19 14:09	1
Naphthalene	ND		5.0	0.76	ug/L		07/15/19 07:45	07/16/19 14:09	1
Nitrobenzene	ND		5.0	0.29	ug/L		07/15/19 07:45	07/16/19 14:09	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		07/15/19 07:45	07/16/19 14:09	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		07/15/19 07:45	07/16/19 14:09	1
Pentachlorophenol	ND		10	2.2	ug/L		07/15/19 07:45	07/16/19 14:09	1
Phenanthrene	1.88	J	5.0	0.44	ug/L		07/15/19 07:45	07/16/19 14:09	1
Phenol	ND		5.0	0.39	ug/L		07/15/19 07:45	07/16/19 14:09	1
Pyrene	ND		5.0	0.34	ug/L		07/15/19 07:45	07/16/19 14:09	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.65*	*T J*	*ug/L*		*2.62*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*1.63*	*T J*	*ug/L*		*2.68*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*118*	*T J*	*ug/L*		*2.76*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*3.81*	*T J*	*ug/L*		*2.83*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*41.1*	*T J*	*ug/L*		*4.80*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*5.37*	*T J*	*ug/L*		*5.91*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*4.70*	*T J*	*ug/L*		*6.86*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*4.45*	*T J*	*ug/L*		*7.74*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*3.83*	*T J*	*ug/L*		*8.52*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*2.75*	*T J*	*ug/L*		*9.19*		*07/15/19 07:45*	*07/16/19 14:09*	*1*
Unknown	*1.78*	*T J*	*ug/L*		*9.78*		*07/15/19 07:45*	*07/16/19 14:09*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*41 - 120*	*07/15/19 07:45*	*07/16/19 14:09*	*1*
2-Fluorobiphenyl	*94*		*48 - 120*	*07/15/19 07:45*	*07/16/19 14:09*	*1*
2-Fluorophenol	*62*		*35 - 120*	*07/15/19 07:45*	*07/16/19 14:09*	*1*
Nitrobenzene-d5	*91*		*46 - 120*	*07/15/19 07:45*	*07/16/19 14:09*	*1*
Phenol-d5	*43*		*22 - 120*	*07/15/19 07:45*	*07/16/19 14:09*	*1*
p-Terphenyl-d14	*105*		*59 - 136*	*07/15/19 07:45*	*07/16/19 14:09*	*1*

Lab Sample ID: LCS 480-481994/2-A
Matrix: Water
Analysis Batch: 482258

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	32.0	33.4		ug/L		104	65 - 126
2,4,6-Trichlorophenol	32.0	34.7		ug/L		108	64 - 120
2,4-Dichlorophenol	32.0	32.6		ug/L		102	63 - 120
2,4-Dimethylphenol	32.0	30.7		ug/L		96	47 - 120
2,4-Dinitrophenol	64.0	64.6		ug/L		101	31 - 137
2,4-Dinitrotoluene	32.0	30.2		ug/L		94	69 - 120
2,6-Dinitrotoluene	32.0	31.0		ug/L		97	68 - 120
2-Chloronaphthalene	32.0	27.2		ug/L		85	58 - 120
2-Chlorophenol	32.0	26.6		ug/L		83	48 - 120

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

Lab Sample ID: LCS 480-481994/2-A
Matrix: Water
Analysis Batch: 482258

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	32.0	29.4		ug/L		92	59 - 120
2-Methylphenol	32.0	29.8		ug/L		93	39 - 120
3,3'-Dichlorobenzidine	64.0	70.8		ug/L		111	49 - 135
3-Nitroaniline	32.0	28.3		ug/L		89	51 - 120
4,6-Dinitro-2-methylphenol	64.0	67.7		ug/L		106	46 - 136
4-Bromophenyl phenyl ether	32.0	31.4		ug/L		98	65 - 120
4-Chloro-3-methylphenol	32.0	28.0		ug/L		87	61 - 123
4-Chloroaniline	32.0	26.1		ug/L		82	30 - 120
4-Methylphenol	32.0	26.1		ug/L		82	29 - 131
4-Nitroaniline	32.0	26.7		ug/L		83	65 - 120
4-Nitrophenol	64.0	78.8	*	ug/L		123	45 - 120
Acenaphthene	32.0	30.3		ug/L		95	60 - 120
Acenaphthylene	32.0	29.8		ug/L		93	63 - 120
Anthracene	32.0	30.2		ug/L		94	67 - 120
Atrazine	64.0	75.1		ug/L		117	71 - 130
Benzaldehyde	64.0	52.2		ug/L		82	10 - 140
Benzo(a)anthracene	32.0	31.5		ug/L		98	70 - 121
Benzo(a)pyrene	32.0	29.3		ug/L		92	60 - 123
Benzo(b)fluoranthene	32.0	32.0		ug/L		100	66 - 126
Benzo(g,h,i)perylene	32.0	32.1		ug/L		100	66 - 150
Benzo(k)fluoranthene	32.0	31.1		ug/L		97	65 - 124
Biphenyl	32.0	28.0		ug/L		88	59 - 120
bis (2-chloroisopropyl) ether	32.0	24.0		ug/L		75	21 - 136
Bis(2-chloroethoxy)methane	32.0	25.6		ug/L		80	50 - 128
Bis(2-chloroethyl)ether	32.0	22.1		ug/L		69	44 - 120
Bis(2-ethylhexyl) phthalate	32.0	33.4		ug/L		104	63 - 139
Butyl benzyl phthalate	32.0	30.1		ug/L		94	70 - 129
Caprolactam	64.0	20.9		ug/L		33	22 - 120
Carbazole	32.0	29.4		ug/L		92	66 - 123
Chrysene	32.0	33.7		ug/L		105	69 - 120
Dibenz(a,h)anthracene	32.0	32.4		ug/L		101	65 - 135
Dibenzofuran	32.0	29.8		ug/L		93	66 - 120
Diethyl phthalate	32.0	34.3		ug/L		107	59 - 127
Dimethyl phthalate	32.0	33.2		ug/L		104	68 - 120
Di-n-butyl phthalate	32.0	32.0		ug/L		100	69 - 131
Di-n-octyl phthalate	32.0	31.0		ug/L		97	63 - 140
Fluoranthene	32.0	32.9		ug/L		103	69 - 126
Fluorene	32.0	31.5		ug/L		98	66 - 120
Hexachlorobenzene	32.0	29.8		ug/L		93	61 - 120
Hexachlorobutadiene	32.0	25.5		ug/L		80	35 - 120
Hexachlorocyclopentadiene	32.0	18.7		ug/L		58	31 - 120
Hexachloroethane	32.0	23.4		ug/L		73	43 - 120
Indeno(1,2,3-cd)pyrene	32.0	32.8		ug/L		103	69 - 146
Isophorone	32.0	29.6		ug/L		92	55 - 120
Naphthalene	32.0	28.3		ug/L		88	57 - 120
Nitrobenzene	32.0	30.5		ug/L		95	53 - 123
N-Nitrosodi-n-propylamine	32.0	26.9		ug/L		84	32 - 140
Pentachlorophenol	64.0	47.7		ug/L		74	29 - 136
Phenanthrene	32.0	32.8		ug/L		103	68 - 120

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

Lab Sample ID: LCS 480-481994/2-A
Matrix: Water
Analysis Batch: 482258

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481994

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Phenol			32.0	18.0		ug/L		56	17 - 120		
Pyrene			32.0	31.4		ug/L		98	70 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*41 - 120*
2-Fluorobiphenyl	*92*		*48 - 120*
2-Fluorophenol	*64*		*35 - 120*
Nitrobenzene-d5	*87*		*46 - 120*
Phenol-d5	*47*		*22 - 120*
p-Terphenyl-d14	*97*		*59 - 136*

Lab Sample ID: 480-156102-3 MS
Matrix: Water
Analysis Batch: 482258

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 481994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,4,5-Trichlorophenol	ND		32.0	33.1		ug/L		103	65 - 126		
2,4,6-Trichlorophenol	ND		32.0	32.1		ug/L		100	64 - 120		
2,4-Dichlorophenol	ND		32.0	27.8		ug/L		87	48 - 132		
2,4-Dimethylphenol	ND		32.0	27.0		ug/L		85	39 - 130		
2,4-Dinitrophenol	ND		64.0	59.0		ug/L		92	21 - 150		
2,4-Dinitrotoluene	ND		32.0	32.1		ug/L		100	54 - 138		
2,6-Dinitrotoluene	ND		32.0	32.1		ug/L		100	17 - 150		
2-Chloronaphthalene	ND		32.0	26.7		ug/L		83	52 - 124		
2-Chlorophenol	ND		32.0	24.2	J	ug/L		76	48 - 120		
2-Methylnaphthalene	ND		32.0	28.7		ug/L		90	34 - 140		
2-Methylphenol	ND		32.0	23.8	J	ug/L		75	46 - 120		
3,3'-Dichlorobenzidine	ND	F1	64.0	ND	F1	ug/L		0	10 - 150		
3-Nitroaniline	ND	F2	32.0	19.8	J	ug/L		62	32 - 150		
4,6-Dinitro-2-methylphenol	ND		64.0	66.5		ug/L		104	38 - 150		
4-Bromophenyl phenyl ether	ND		32.0	29.3		ug/L		92	63 - 126		
4-Chloro-3-methylphenol	ND		32.0	26.2		ug/L		82	64 - 127		
4-Chloroaniline	ND	F1	32.0	ND	F1	ug/L		0	16 - 124		
4-Methylphenol	ND		32.0	22.9	J	ug/L		72	36 - 120		
4-Nitroaniline	ND	F1	32.0	ND	F1	ug/L		0	32 - 150		
4-Nitrophenol	ND	*	64.0	47.9	J	ug/L		75	23 - 132		
Acenaphthene	ND		32.0	29.6		ug/L		93	48 - 120		
Acenaphthylene	ND		32.0	29.6		ug/L		92	63 - 120		
Anthracene	ND		32.0	29.7		ug/L		93	65 - 122		
Atrazine	ND		64.0	62.8		ug/L		98	50 - 150		
Benzaldehyde	ND		64.0	52.6		ug/L		82	10 - 150		
Benzo(a)anthracene	ND		32.0	27.4		ug/L		86	43 - 124		
Benzo(a)pyrene	ND		32.0	25.3		ug/L		79	23 - 125		
Benzo(b)fluoranthene	ND		32.0	27.7		ug/L		87	27 - 127		
Benzo(g,h,i)perylene	ND		32.0	29.3		ug/L		92	16 - 147		
Benzo(k)fluoranthene	ND		32.0	28.9		ug/L		90	20 - 124		
Biphenyl	ND		32.0	28.1		ug/L		88	57 - 120		
bis (2-chloroisopropyl) ether	ND		32.0	22.3	J	ug/L		70	28 - 121		

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

Lab Sample ID: 480-156102-3 MS
Matrix: Water
Analysis Batch: 482258

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 481994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethoxy)methane	ND		32.0	23.4	J	ug/L		73	44 - 128
Bis(2-chloroethyl)ether	ND		32.0	20.6	J	ug/L		64	45 - 120
Bis(2-ethylhexyl) phthalate	ND		32.0	31.2		ug/L		97	16 - 150
Butyl benzyl phthalate	ND		32.0	28.5		ug/L		89	51 - 140
Caprolactam	ND		64.0	19.8	J	ug/L		31	10 - 120
Carbazole	ND		32.0	29.7		ug/L		93	16 - 148
Chrysene	ND		32.0	30.2		ug/L		94	44 - 122
Dibenz(a,h)anthracene	ND		32.0	27.5		ug/L		86	16 - 139
Dibenzofuran	ND		32.0	29.1	J	ug/L		91	60 - 120
Diethyl phthalate	ND		32.0	34.4		ug/L		108	53 - 133
Dimethyl phthalate	ND		32.0	31.5		ug/L		98	59 - 123
Di-n-butyl phthalate	ND		32.0	27.2		ug/L		85	65 - 129
Di-n-octyl phthalate	ND		32.0	30.5		ug/L		95	16 - 150
Fluoranthene	ND		32.0	30.1		ug/L		94	63 - 129
Fluorene	ND		32.0	29.8		ug/L		93	62 - 120
Hexachlorobenzene	ND		32.0	28.2		ug/L		88	57 - 121
Hexachlorobutadiene	ND		32.0	27.2		ug/L		85	37 - 120
Hexachlorocyclopentadiene	ND		32.0	20.9	J	ug/L		65	21 - 120
Hexachloroethane	ND		32.0	27.5		ug/L		86	16 - 130
Indeno(1,2,3-cd)pyrene	ND		32.0	28.6		ug/L		89	16 - 140
Isophorone	ND		32.0	26.6		ug/L		83	48 - 133
Naphthalene	ND		32.0	27.1		ug/L		85	45 - 120
Nitrobenzene	ND		32.0	31.2		ug/L		98	45 - 123
N-Nitrosodi-n-propylamine	ND		32.0	25.8		ug/L		81	49 - 120
Pentachlorophenol	ND		64.0	52.0		ug/L		81	23 - 149
Phenanthrene	ND		32.0	32.3		ug/L		101	65 - 122
Phenol	ND		32.0	16.6	J	ug/L		52	16 - 120
Pyrene	ND		32.0	30.8		ug/L		96	58 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*96*		*41 - 120*
2-Fluorobiphenyl	*90*		*48 - 120*
2-Fluorophenol	*56*		*35 - 120*
Nitrobenzene-d5	*81*		*46 - 120*
Phenol-d5	*43*		*22 - 120*
p-Terphenyl-d14	*60*		*59 - 136*

Lab Sample ID: 480-156102-3 MSD
Matrix: Water
Analysis Batch: 482258

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 481994

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	27.7		ug/L		87	65 - 126	18	18
2,4,6-Trichlorophenol	ND		32.0	32.0		ug/L		100	64 - 120	0	19
2,4-Dichlorophenol	ND		32.0	29.1		ug/L		91	48 - 132	5	19
2,4-Dimethylphenol	ND		32.0	27.6		ug/L		86	39 - 130	2	42
2,4-Dinitrophenol	ND		64.0	58.3		ug/L		91	21 - 150	1	22
2,4-Dinitrotoluene	ND		32.0	26.9		ug/L		84	54 - 138	18	20

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

Lab Sample ID: 480-156102-3 MSD
Matrix: Water
Analysis Batch: 482258

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 481994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,6-Dinitrotoluene	ND		32.0	28.3		ug/L		89	17 - 150	12	15
2-Chloronaphthalene	ND		32.0	26.4		ug/L		82	52 - 124	1	21
2-Chlorophenol	ND		32.0	25.4		ug/L		80	48 - 120	5	25
2-Methylnaphthalene	ND		32.0	28.1		ug/L		88	34 - 140	2	21
2-Methylphenol	ND		32.0	25.0		ug/L		78	46 - 120	5	27
3,3'-Dichlorobenzidine	ND	F1	64.0	ND	F1	ug/L		0	10 - 150	NC	25
3-Nitroaniline	ND	F2	32.0	12.5	J F2	ug/L		39	32 - 150	46	19
4,6-Dinitro-2-methylphenol	ND		64.0	69.0		ug/L		108	38 - 150	4	15
4-Bromophenyl phenyl ether	ND		32.0	30.4		ug/L		95	63 - 126	4	15
4-Chloro-3-methylphenol	ND		32.0	25.0		ug/L		78	64 - 127	5	27
4-Chloroaniline	ND	F1	32.0	13.2	J	ug/L		41	16 - 124	NC	22
4-Methylphenol	ND		32.0	23.6	J	ug/L		74	36 - 120	3	24
4-Nitroaniline	ND	F1	32.0	ND	F1	ug/L		0	32 - 150	NC	24
4-Nitrophenol	ND	*	64.0	50.1		ug/L		78	23 - 132	4	48
Acenaphthene	ND		32.0	29.7		ug/L		93	48 - 120	0	24
Acenaphthylene	ND		32.0	29.2		ug/L		91	63 - 120	1	18
Anthracene	ND		32.0	30.9		ug/L		97	65 - 122	4	15
Atrazine	ND		64.0	58.7		ug/L		92	50 - 150	7	20
Benzaldehyde	ND		64.0	53.6		ug/L		84	10 - 150	2	20
Benzo(a)anthracene	ND		32.0	28.4		ug/L		89	43 - 124	3	15
Benzo(a)pyrene	ND		32.0	24.5	J	ug/L		77	23 - 125	3	15
Benzo(b)fluoranthene	ND		32.0	25.4		ug/L		80	27 - 127	9	15
Benzo(g,h,i)perylene	ND		32.0	29.0		ug/L		91	16 - 147	1	15
Benzo(k)fluoranthene	ND		32.0	25.1		ug/L		78	20 - 124	14	22
Biphenyl	ND		32.0	27.3		ug/L		85	57 - 120	3	20
bis (2-chloroisopropyl) ether	ND		32.0	22.0	J	ug/L		69	28 - 121	1	24
Bis(2-chloroethoxy)methane	ND		32.0	22.5	J	ug/L		70	44 - 128	4	17
Bis(2-chloroethyl)ether	ND		32.0	20.5	J	ug/L		64	45 - 120	1	21
Bis(2-ethylhexyl) phthalate	ND		32.0	30.7		ug/L		96	16 - 150	2	15
Butyl benzyl phthalate	ND		32.0	27.3		ug/L		85	51 - 140	4	16
Caprolactam	ND		64.0	20.5	J	ug/L		32	10 - 120	3	20
Carbazole	ND		32.0	31.1		ug/L		97	16 - 148	5	20
Chrysene	ND		32.0	29.8		ug/L		93	44 - 122	1	15
Dibenz(a,h)anthracene	ND		32.0	25.9		ug/L		81	16 - 139	6	15
Dibenzofuran	ND		32.0	29.2	J	ug/L		91	60 - 120	0	15
Diethyl phthalate	ND		32.0	30.7		ug/L		96	53 - 133	12	15
Dimethyl phthalate	ND		32.0	31.9		ug/L		100	59 - 123	1	15
Di-n-butyl phthalate	ND		32.0	28.9		ug/L		90	65 - 129	6	15
Di-n-octyl phthalate	ND		32.0	30.9		ug/L		97	16 - 150	1	16
Fluoranthene	ND		32.0	30.4		ug/L		95	63 - 129	1	15
Fluorene	ND		32.0	30.2		ug/L		94	62 - 120	1	15
Hexachlorobenzene	ND		32.0	32.6		ug/L		102	57 - 121	14	15
Hexachlorobutadiene	ND		32.0	29.2		ug/L		91	37 - 120	7	44
Hexachlorocyclopentadiene	ND		32.0	20.1	J	ug/L		63	21 - 120	4	49
Hexachloroethane	ND		32.0	26.1		ug/L		82	16 - 130	5	46
Indeno(1,2,3-cd)pyrene	ND		32.0	27.5		ug/L		86	16 - 140	4	15
Isophorone	ND		32.0	26.6		ug/L		83	48 - 133	0	17
Naphthalene	ND		32.0	26.4		ug/L		83	45 - 120	3	29
Nitrobenzene	ND		32.0	30.0		ug/L		94	45 - 123	4	24

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

Lab Sample ID: 480-156102-3 MSD — **Client Sample ID: MWSW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 482258 — **Prep Batch: 481994**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine	ND		32.0	24.7	J	ug/L		77	49 - 120	4	31
Pentachlorophenol	ND		64.0	58.5		ug/L		91	23 - 149	12	37
Phenanthrene	ND		32.0	36.2		ug/L		113	65 - 122	11	15
Phenol	ND		32.0	16.7	J	ug/L		52	16 - 120	0	34
Pyrene	ND		32.0	27.7		ug/L		87	58 - 128	10	19

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*101*		*41 - 120*
2-Fluorobiphenyl	*84*		*48 - 120*
2-Fluorophenol	*60*		*35 - 120*
Nitrobenzene-d5	*75*		*46 - 120*
Phenol-d5	*43*		*22 - 120*
p-Terphenyl-d14	*53*	*X*	*59 - 136*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-482043/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 482429 — **Prep Batch: 482043**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		07/16/19 07:57	07/17/19 00:13	1
Chromium	ND		0.0040	0.0010	mg/L		07/16/19 07:57	07/17/19 00:13	1
Lead	ND		0.010	0.0030	mg/L		07/16/19 07:57	07/17/19 00:13	1

Lab Sample ID: LCS 480-482043/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 482429 — **Prep Batch: 482043**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.200	0.203		mg/L		102	80 - 120
Chromium	0.200	0.198		mg/L		99	80 - 120
Lead	0.200	0.193		mg/L		96	80 - 120

Lab Sample ID: 480-156102-3 MS — **Client Sample ID: MWSW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 482429 — **Prep Batch: 482043**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.200	0.217		mg/L		109	75 - 125
Chromium	ND		0.200	0.199		mg/L		99	75 - 125
Lead	ND		0.200	0.206		mg/L		103	75 - 125

Lab Sample ID: 480-156102-3 MSD — **Client Sample ID: MWSW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 482429 — **Prep Batch: 482043**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.200	0.207		mg/L		103	75 - 125	5	20

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

Lab Sample ID: 480-156102-3 MSD
Matrix: Water
Analysis Batch: 482429

Client Sample ID: MWSW
Prep Type: Total/NA
Prep Batch: 482043

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	ND		0.200	0.196		mg/L		98	75 - 125	2	20
Lead	ND		0.200	0.195		mg/L		98	75 - 125	5	20

GC/MS VOA

Analysis Batch: 481998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-2	MW4	Total/NA	Water	8260C	
480-156102-3	MWSW	Total/NA	Water	8260C	
480-156102-4	W29	Total/NA	Water	8260C	
480-156102-5	MW5	Total/NA	Water	8260C	
480-156102-8	BLIND DUP	Total/NA	Water	8260C	
MB 480-481998/7	Method Blank	Total/NA	Water	8260C	
LCS 480-481998/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 482138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-1	WCMW9	Total/NA	Water	8260C	
480-156102-6	W18	Total/NA	Water	8260C	
480-156102-7	W22	Total/NA	Water	8260C	
MB 480-482138/7	Method Blank	Total/NA	Water	8260C	
LCS 480-482138/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 482185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-482185/8	Method Blank	Total/NA	Water	8260C	
LCS 480-482185/6	Lab Control Sample	Total/NA	Water	8260C	
480-156102-3 MS	MWSW	Total/NA	Water	8260C	
480-156102-3 MSD	MWSW	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 481994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-1	WCMW9	Total/NA	Water	3510C	
480-156102-2	MW4	Total/NA	Water	3510C	
480-156102-3	MWSW	Total/NA	Water	3510C	
480-156102-4	W29	Total/NA	Water	3510C	
480-156102-5	MW5	Total/NA	Water	3510C	
480-156102-6	W18	Total/NA	Water	3510C	
480-156102-7	W22	Total/NA	Water	3510C	
480-156102-8	BLIND DUP	Total/NA	Water	3510C	
MB 480-481994/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-481994/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-156102-3 MS	MWSW	Total/NA	Water	3510C	
480-156102-3 MSD	MWSW	Total/NA	Water	3510C	

Analysis Batch: 482258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-1	WCMW9	Total/NA	Water	8270D	481994
480-156102-2	MW4	Total/NA	Water	8270D	481994
480-156102-3	MWSW	Total/NA	Water	8270D	481994
480-156102-4	W29	Total/NA	Water	8270D	481994
480-156102-5	MW5	Total/NA	Water	8270D	481994
480-156102-6	W18	Total/NA	Water	8270D	481994
480-156102-7	W22	Total/NA	Water	8270D	481994
480-156102-8	BLIND DUP	Total/NA	Water	8270D	481994
MB 480-481994/1-A	Method Blank	Total/NA	Water	8270D	481994

GC/MS Semi VOA (Continued)

Analysis Batch: 482258 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-481994/2-A	Lab Control Sample	Total/NA	Water	8270D	481994
480-156102-3 MS	MWSW	Total/NA	Water	8270D	481994
480-156102-3 MSD	MWSW	Total/NA	Water	8270D	481994

Metals

Prep Batch: 482043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-1	WCMW9	Total/NA	Water	3005A	
480-156102-2	MW4	Total/NA	Water	3005A	
480-156102-3	MWSW	Total/NA	Water	3005A	
480-156102-4	W29	Total/NA	Water	3005A	
480-156102-5	MW5	Total/NA	Water	3005A	
480-156102-6	W18	Total/NA	Water	3005A	
480-156102-7	W22	Total/NA	Water	3005A	
480-156102-8	BLIND DUP	Total/NA	Water	3005A	
MB 480-482043/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-482043/2-A	Lab Control Sample	Total/NA	Water	3005A	
480-156102-3 MS	MWSW	Total/NA	Water	3005A	
480-156102-3 MSD	MWSW	Total/NA	Water	3005A	

Analysis Batch: 482429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-1	WCMW9	Total/NA	Water	6010C	482043
480-156102-2	MW4	Total/NA	Water	6010C	482043
480-156102-3	MWSW	Total/NA	Water	6010C	482043
480-156102-4	W29	Total/NA	Water	6010C	482043
480-156102-5	MW5	Total/NA	Water	6010C	482043
480-156102-6	W18	Total/NA	Water	6010C	482043
480-156102-7	W22	Total/NA	Water	6010C	482043
480-156102-8	BLIND DUP	Total/NA	Water	6010C	482043
MB 480-482043/1-A	Method Blank	Total/NA	Water	6010C	482043
LCS 480-482043/2-A	Lab Control Sample	Total/NA	Water	6010C	482043
480-156102-3 MS	MWSW	Total/NA	Water	6010C	482043
480-156102-3 MSD	MWSW	Total/NA	Water	6010C	482043

Analysis Batch: 482764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156102-1	WCMW9	Total/NA	Water	6010C	482043

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: WCMW9

Lab Sample ID: 480-156102-1
Date Collected: 07/10/19 08:00
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	482138	07/16/19 05:06	AMM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		1	482258	07/16/19 20:13	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 00:21	LMH	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		5	482764	07/18/19 12:20	LMH	TAL BUF

Client Sample ID: MW4

Lab Sample ID: 480-156102-2
Date Collected: 07/09/19 08:05
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	481998	07/15/19 16:44	AEM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		5	482258	07/16/19 20:41	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 00:25	LMH	TAL BUF

Client Sample ID: MWSW

Lab Sample ID: 480-156102-3
Date Collected: 07/09/19 08:55
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	481998	07/15/19 17:08	AEM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		5	482258	07/16/19 17:25	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 00:29	LMH	TAL BUF

Client Sample ID: W29

Lab Sample ID: 480-156102-4
Date Collected: 07/09/19 13:00
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	481998	07/15/19 17:32	AEM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		5	482258	07/16/19 21:09	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 00:59	LMH	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Client Sample ID: MW5

Lab Sample ID: 480-156102-5
Date Collected: 07/09/19 10:30
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	481998	07/15/19 17:56	AEM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		5	482258	07/16/19 21:36	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 01:03	LMH	TAL BUF

Client Sample ID: W18

Lab Sample ID: 480-156102-6
Date Collected: 07/10/19 11:50
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	482138	07/16/19 05:29	AMM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		5	482258	07/16/19 22:04	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 01:07	LMH	TAL BUF

Client Sample ID: W22

Lab Sample ID: 480-156102-7
Date Collected: 07/10/19 10:50
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	482138	07/16/19 05:52	AMM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		20	482258	07/16/19 22:32	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 01:11	LMH	TAL BUF

Client Sample ID: BLIND DUP

Lab Sample ID: 480-156102-8
Date Collected: 07/09/19 08:00
Matrix: Water
Date Received: 07/12/19 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	481998	07/15/19 18:21	AEM	TAL BUF
Total/NA	Prep	3510C			481994	07/15/19 07:45	JMP	TAL BUF
Total/NA	Analysis	8270D		1	482258	07/16/19 23:00	RJS	TAL BUF
Total/NA	Prep	3005A			482043	07/16/19 07:57	EMB	TAL BUF
Total/NA	Analysis	6010C		1	482429	07/17/19 01:15	LMH	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-156102-1
Project/Site: Benchmark - Olean Parcel 3 GWS

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-20

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
3005A	Preparation, Total Metals	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
5030C	Purge and Trap	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 = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Olean Parcel 3 GWS

Job ID: 480-156102-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-156102-1	WCMW9	Water	07/10/19 08:00	07/12/19 09:50	
480-156102-2	MW4	Water	07/09/19 08:05	07/12/19 09:50	
480-156102-3	MWSW	Water	07/09/19 08:55	07/12/19 09:50	
480-156102-4	W29	Water	07/09/19 13:00	07/12/19 09:50	
480-156102-5	MW5	Water	07/09/19 10:30	07/12/19 09:50	
480-156102-6	W18	Water	07/10/19 11:50	07/12/19 09:50	
480-156102-7	W22	Water	07/10/19 10:50	07/12/19 09:50	
480-156102-8	BLIND DUP	Water	07/09/19 08:00	07/12/19 09:50	

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: CAROLINE BUROWSKI	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-132561-29887.1
Client Contact: Ms. Lori Riker	Phone: 716 856-0599	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: Benchmark Env. Eng. & Science, PLLC				Job #:
Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:			
City: Lackawanna	TAT Requested (days): Standard			
State, Zip: NY, 14218				
Phone: 716-856-0599(Tel)	PO #: T0334-016-001			
Email: lriker@benchmarkturnkey.com	WO #:			
Project Name: Benchmark - Olean Parcel 3 GWS	Project #: 48020513			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, ...H2SO4, ...SP Dodecahydrate, ...Acetone, ...MCAA, ...pH 4-5, ...ther (specify)

480-156102 Chain of Custody

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)	8270D - (MOD) TCL SVOA - OLM04.2 w/ TICs	8260C - (MOD) TCL list OLM04.2 w/ TICs	6010C - (MOD) As/Cr/Pb only	Total Numb	Special Instructions/Note:
TRIP BLANK			Preservation Code:				N	A	D		
WCMW9	7/10/19	800	G	Water			X	X	X		
MW4	7/9/19	805	G	Water			X	X	X		
MWSW	7/9/19	855	G	Water			X	X	X		
W29	7/9/19	1300	G	Water			X	X	X		
MW5	7/9/19	1030	G	Water			X	X	X		
W18	7/10/19	1150	G	Water			X	X	X		
~~W24~~			G	~~Water~~			X	X	X		
W22	7/10/19	1050	G	Water			X	X	X		
BLIND DUP	7/9/19	800	G	Water			X	X	X		
MS (MWSW)	7/9/19	855	G	Water			X	X	X		
MSD (MWSW)	7/9/19	855	G	Water			X	X	X		

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)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/10/19 1600	BMTK		7/12/19 09:10	TAB
2		7/12/19 09:50	TAB			
3					7-12-19 950	TAB

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.2 #1

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-156102-1

Login Number: 156102

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

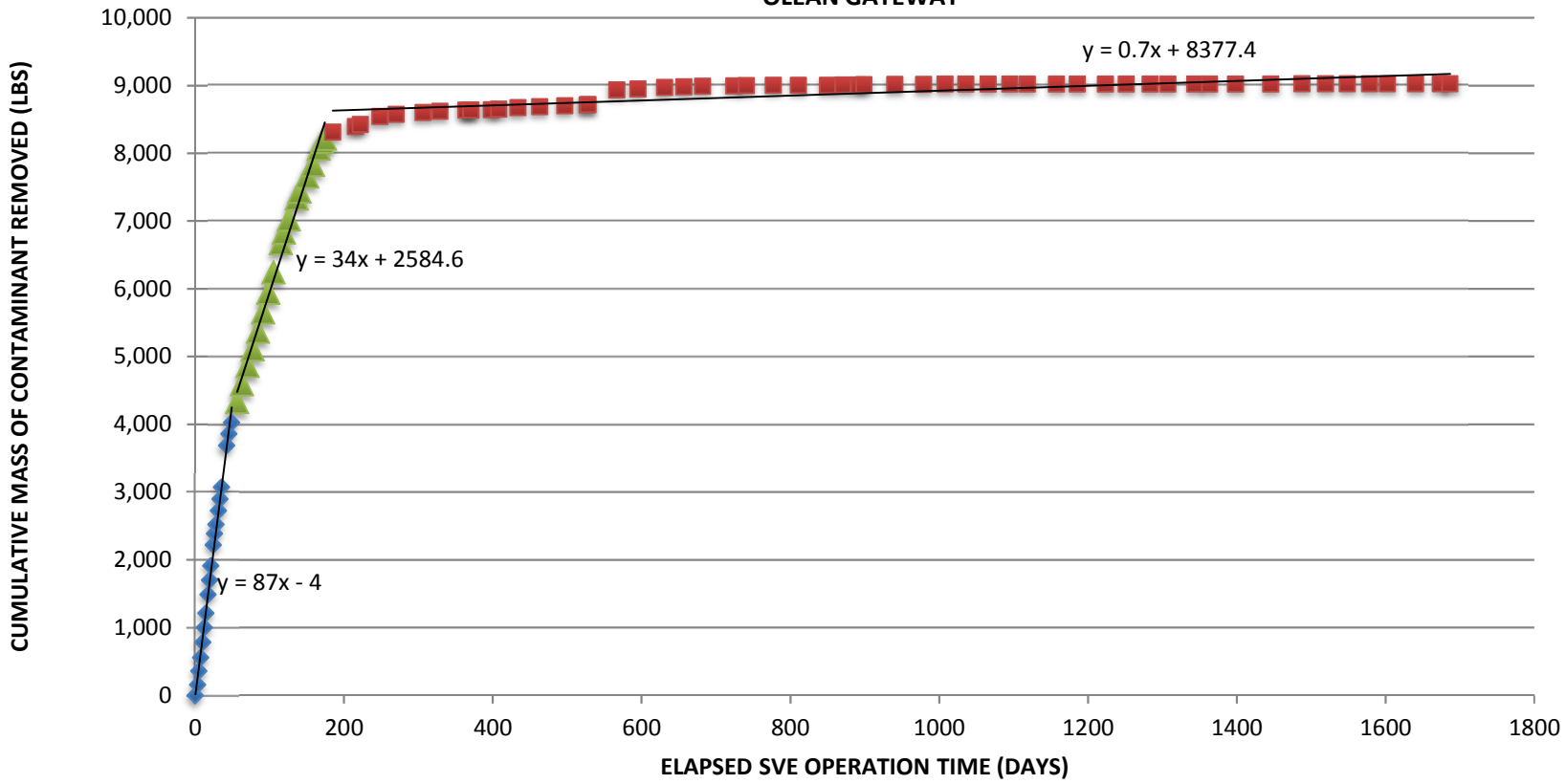
Creator: Harper, Marcus D

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	BMTK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

APPENDIX D

SVE SYSTEM MASS REMOVAL TRACKING TABLES AND CHARTS

CHART 3-SVE-1
CUMULATIVE MASS REMOVAL VERSUS TIME
SVE SYSTEM
OLEAN GATEWAY



Mass removal is based on a correlation of PID readings and vapor sample analysis for gasoline and diesel range organics (GRO and DRO) measured in influent air.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table D-1
Summary of VOC Mass Removal: 3-SVE-1 System

BCP Parcel 3
Olean, New York

Date	Elapsed Time (days)	SVE Operation Time (days)	Time	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration[1] (mg/m^3)	Vacuum (in of H_2O)	Air Velocity (ft/min)	Pipe Diameter (in)	Air Flow Rate		Volume of Air Processed Since Previous Reading (CF)	Rate of VOC Removal (lb/day)	VOCs Removed Since Last Monitoring Period (lb)	Total VOC Removal to Date (lb)	Notes
										(ACFM)	(SCFM)					
1/5/15	0	0	9:30 AM			0	29.0	3000	6	589	514	0	0.0			Set-up/start-up 1/5-3/6/15
2/20/15	0	0.0	9:15 AM	700	100	2022	28.0	3600	6	707	616	0	0.0	0.0	0	
2/23/15	3	3.0	8:30 AM	660	90	1907	28.0	3600	6	707	616	2634847	105.7	156.9	157	
2/25/15	5	5.0	8:30 AM	615	80	1777	28.0	3600	6	707	616	1775055	98.5	204.1	361	
2/27/15	7	7.2	3:00 PM	480	75	1387	28.0	3600	6	707	616	2015427	76.9	199.1	560	
3/2/15	10	10.0	8:30 AM	550	80	1589	28.0	3600	6	707	616	2422210	88.1	225.0	785	
3/4/15	12	12.1	12:15 PM	715	70	2066	28.0	3600	6	707	616	1913731	114.5	218.4	1,003	
3/6/15	14	14.2	1:30 PM	570	60	1647	28.0	3600	6	707	616	1821280	91.3	211.1	1,215	
3/9/15	17	17.0	8:45 AM	645	150	1864	28.0	3600	6	707	616	2486926	103.3	272.6	1,487	
3/11/15	19	19.0	9:00 AM	640	105	1849	28.0	3800	6	746	651	1883428	108.2	212.5	1,700	
3/13/15	21	21.0	9:00 AM	635	130	1835	30.0	3800	6	746	651	1873669	107.3	215.5	1,915	
3/16/15	24	24.0	8:15 AM	590	120	1705	32.0	3800	6	746	651	2781228	99.7	307.3	2,222	
3/18/15	26	25.9	8:00 AM	400	85	1156	34.0	3800	6	746	651	1863910	67.6	166.4	2,389	
3/20/15	28	27.9	8:00 AM	400	75	1156	32.0	3800	6	746	651	1873669	67.6	135.2	2,524	
3/23/15	31	31.0	8:30 AM	400	90	1156	32.0	3800	6	746	651	2830021	67.6	204.2	2,728	
3/25/15	33	33.3	4:30 PM	445	50	1286	32.0	4000	6	785	685	2300997	79.2	171.2	2,900	
3/27/15	35	35.2	1:30 PM	600	60	1734	32.0	4000	6	785	685	1849016	106.7	174.3	3,074	
4/3/15	42	42.3	4:00 PM	370	100	1069	27.0	4000	6	785	685	7005714	65.8	613.0	3,687	
4/6/15	45	45.3	3:30 PM	275	30	795	27.0	4000	6	785	685	2937880	48.9	170.9	3,858	
4/10/15	49	49.0	8:30 AM	240	40	693	28.0	4000	6	785	685	3656942	42.7	169.9	4,028	
4/17/15	56	56.3	4:00 PM	223	55	644	27.0	4000	6	785	685	7211161	39.7	301.2	4,329	
4/24/15	63	63.0	8:15 AM	215	30	621	27.0	4000	6	785	685	6584550	38.2	260.1	4,589	
5/1/15	70	70.3	4:00 PM	205	20	592	26.0	4000	6	785	685	7221433	36.5	273.6	4,862	
5/8/15	77	77.2	3:00 PM	185	40	535	26.0	4000	6	785	685	6861902	32.9	241.4	5,104	
5/15/15	84	84.3	3:45 PM	235	60	679	26.0	4000	6	785	685	6933808	41.8	262.7	5,367	
5/22/15	91	91.3	4:30 PM	225	30	650	26.0	4000	6	785	685	6933808	40.0	287.7	5,654	
5/29/15	98	98.3	4:45 PM	236	20	682	26.0	4000	6	785	685	6913264	42.0	287.5	5,942	
6/5/15	105	105.3	5:00 PM	250	40	722	27.0	4000	6	785	685	6913264	44.5	303.1	6,245	
6/15/15	115	115.2	3:00 PM	260	20	751	32.0	3600	6	707	616	8801314	41.6	426.9	6,672	
6/19/15	119	119.3	5:00 PM	225	20	650	30.0	3600	6	707	616	3624070	36.0	158.5	6,830	
6/26/15	126	125.6		165	40	477	30.0	3600	6	707	616	5584027	26.4	196.4	7,027	
7/6/15	136	136.3	4:30 PM	190	20	549	32.0	3600	6	707	616	9485450	30.4	303.7	7,330	
7/10/15	140	140.2	3:00 PM	150	10	433	32.0	3600	6	707	616	3494639	24.0	107.2	7,438	
7/20/15	150	150.3	4:00 PM	120	10	347	28.0	3600	6	707	616	8912255	19.2	217.0	7,655	
7/28/15	158	158.1	11:30 AM	155	10	448	28.0	3600	6	707	616	6933808	24.8	172.0	7,827	
8/5/15	166	166.1	11:10 AM	225	20	650	28.0	3600	6	707	616	7087893	36.0	242.9	8,070	
8/10/15	171	170.6		225	20	650	28.0	3600	6	707	616	1017876	9.1	102.3	8,172	System shut-down due to high water
8/13/15	174	174.3	3:30 PM	290	20	838	32.0	3600	6	707	616	1017876	14.6	43.2	8,215	
8/24/15	185	185.1	10:30 AM	215	20	621	30.0	3600	6	707	616	1017876	3.7	98.6	8,314	
9/23/15	215	215.3	5:15 PM	265	20	766	30.0	3600	6	707	616	1017876	1.6	79.7	8,393	
9/30/15	222	221.9	8:00 AM	265	20	766	30.0	3600	6	707	616	1017876	7.4	29.6	8,423	System shut-down due to high water
10/26/15	248	248.3	4:30 PM	240	10	693	31.0	3600	6	707	616	1017876	1.7	119.0	8,542	
11/17/15	270	270.2	3:00 PM	160	10	462	33.0	2800	6	550	479	791681	1.0	29.8	8,572	
12/23/15	306	306.2	2:30 PM	170	10	491	33.0	2800	6	550	479	791681	0.7	30.9	8,603	
1/15/16	329	329.2		100	10	289	33.0	3100	6	609	531	876504	0.7	15.7	8,618	
2/19/16	364	364.0		70	10	202	36.0	3100	6	609	531	876504	0.3	17.5	8,636	
2/26/16	371	370.6				0		3100	6	609	531	876504	0.0	1.1	8,637	System down 2/22-3/1 too much water
3/1/16	375	370.6		10	ND	29	26.0	3100	6	609	531	876504	0.0	1.1	8,637	
3/28/16	402	398.1		59	8	170	38.0	3100	6	609	531	876504	0.3	4.7	8,642	
4/7/16	412	408.1		50	5	144	38.0	5150	6	1011	882	1456128	1.3	8.3	8,650	
5/3/16	438	434.0		50	5	144	40.0	5150	6	1011	882	1456128	0.5	23.7	8,674	
6/1/16	467	463.1		40	10	116	38.0	5150	6	1011	882	1456128	0.4	12.6	8,686	
7/5/16	501	497.0		55	5	159	40.0	5150	6	1011	882	1456128	0.4	13.3	8,699	
8/4/16	531	527.1		56	3	162	38.0	5150	6	1011	882	1456128	0.5	13.8	8,713	Turn off wells 3-SVE-1, -2, -3, -4
8/5/16	532	528.1		63	4	182	40.0	3100	6	609	531	876504	10.6	5.2	8,718	
9/13/16	571	566.9		120	10	347	54.0	3100	6	609	531	876504	0.5	216.0	8,934	
10/11/16	599	595.2		110	15	318	55.0	3100	6	609	531	876504	0.6	15.6	8,950	
11/16/16	635	631.2		95	10	274	60.0	3100	6	609	531	876504	0.4	18.6	8,969	
12/12/16	661	657.1		80	10	231	56.0	3100	6	609	531	876504	0.5	11.7	8,980	
1/6/17	686	682.2		35	5	101	58.0	3100	6	609	531	876504	0.2	8.9	8,989	
2/17/17	728	723.9		15	5	43	58.0	3100	6	609	531	876504	0.1	5.8	8,995	
3/6/17	745	740.9		20	5	58	58.0	2400	6	471	411	678584	0.1	1.7	8,997	
4/11/17	781	777.0		15	2	43	58.0	2400	6	471	411	678584	0.1	3.5	9,000	
5/15/17	815	811.0		15	2	43	64.0	2400	6	471	411	678584	0.1	1.8	9,002	
6/23/17	854	850.2		19	3	55	66.0	2400	6	471	411	678584	0.1	2.2	9,004	
7/14/17	875	870.9		18	3	52	82.0	2400	6	471	411	678584	0.1	1.7	9,006	7/31: all wells on except SVE-3, -4, -5, -6, -11, -14, -17
8/4/17	896	892.1		15	1.3	43	56.0	2400	6	471	411	678584	0.1	2.0	9,008	
8/11/17	903	899.1		16	3	46	55.0	2400	6	471	411	678584	0.3	1.3	9,009	
9/21/17	944	940.3		18	2	52	63.0	2400	6	471	411	678584	0.1	6.9	9,016	
10/30/17	983	979.1		8.7	3.4	25	82.0	2400	6	471	411	678584	0.0	1.6	9,018	
11/28/17	1012	1008.1		6.5	4.7	19	60.0	2400	6	471	411		0.0	0.4	9,018	
12/26/17	1040	1036.1		2.9	3	8	66.0	2400	6	471	411	678584	0.0	0.2	9,018	
1/25/18	1070	1066.1		10.8	1.8	31	52.0	2400	6	471	411	678584	0.0	0.9	9,019	

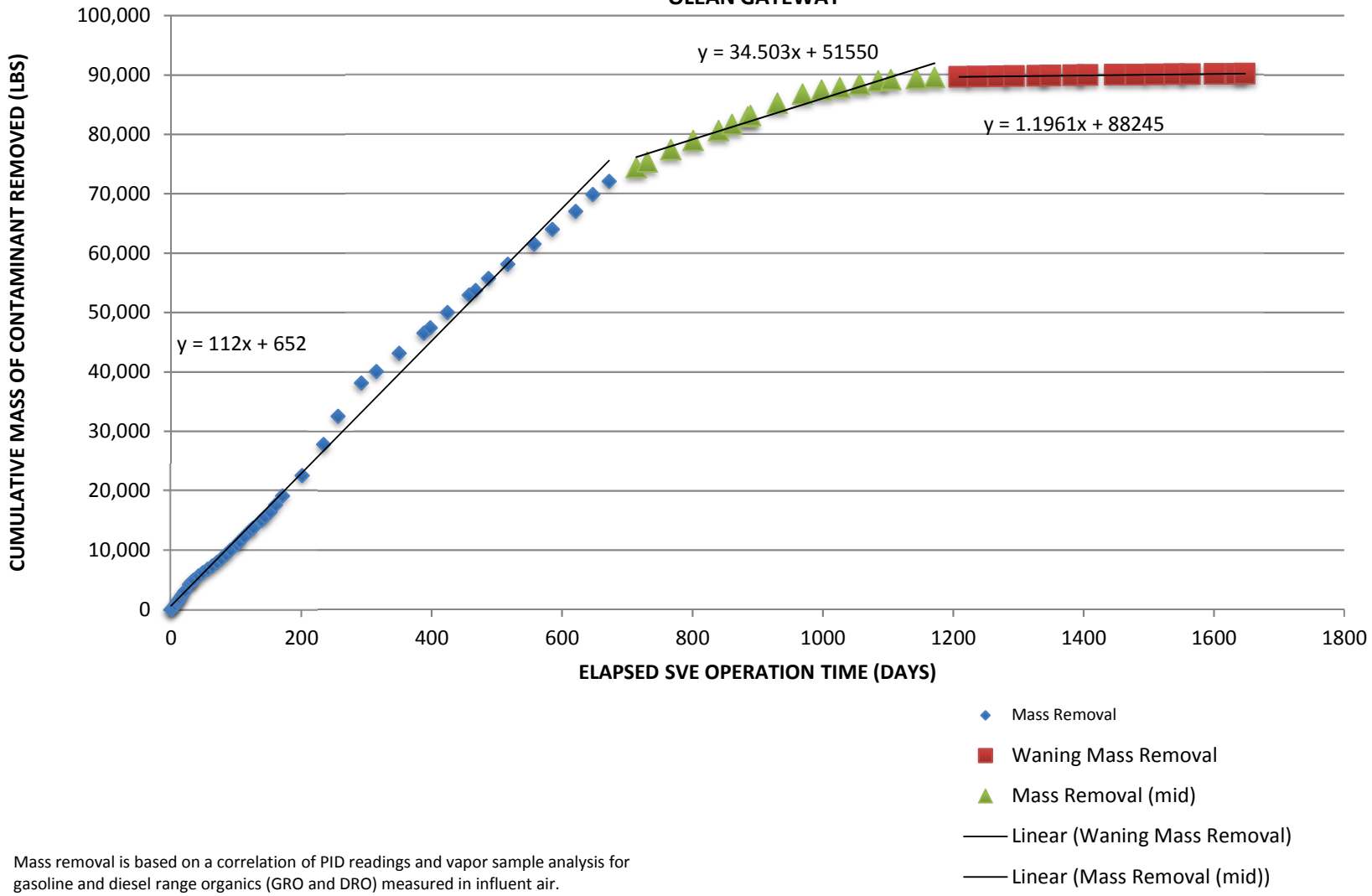
BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table D-1
Summary of VOC Mass Removal: 3-SVE-1 System

BCP Parcel 3
Olean, New York

Date	Elapsed Time (days)	SVE Operation Time (days)	Time	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration[1] (mg/m^3)	Vacuum (in of H_2O)	Air Velocity (ft/min)	Pipe Diameter (in)	Air Flow Rate		Volume of Air Processed Since Previous Reading (CF)	Rate of VOC Removal (lb/day)	VOCs Removed Since Last Monitoring Period (lb)	Total VOC Removal to Date (lb)	Notes
										(ACFM)	(SCFM)					
2/23/18	1099	1095.2		2.2	NA	6	84.0	2400	6	471	411	678584	0.0	0.8	9,020	
3/15/18	1119	1118.6		5.6	2.1	16	78.0	2400	6	471	411	678584	0.0	0.5	9,020	
4/23/18	1158	1157.6		1.9	0.2	5	74.0	2400	6	471	411	678584	0.0	0.7	9,021	
5/21/18	1186	1185.6		3.1	0.1	9	74.0	2400	6	471	411	678584	0.0	0.3	9,021	
6/28/18	1224	1223.6		0.2	0	1	78.0	2400	6	471	411	678584	0.0	0.3	9,022	
7/26/18	1252	1251.6		0.2	0	1	78.0	2400	6	471	411	678584	0.0	0.0	9,022	
8/27/18	1284	1283.6		0.7	0.1	2	78.0	2400	6	471	411	678584	0.0	0.1	9,022	
9/20/18	1308	1307.6		0.7	0.1	2	78.0	2400	6	471	411	678584	0.0	0.1	9,022	
10/26/18	1344	1343.6		1	0.4	3	76.0	2400	6	471	411	678584	0.0	0.1	9,022	
11/15/18	1364	1363.6		0.8	0.2	2	78.0	2400	6	471	411	678584	0.0	0.1	9,022	
12/20/18	1399	1398.6		2.4	0.9	7	76.0	2400	6	471	411	678584	0.0	0.2	9,022	
1/11/19	1421	1445.7		1.4	0.1	4	44.0	2400	6	471	411	678584	0.0	0.3	9,023	
2/22/19	1463	1487.7		4.1	0.3	12	38.0	2400	6	471	411	678584	0.0	0.3	9,023	
3/26/19	1495	1519.7		3.7	0.2	11	36.0	2400	6	471	411	678584	0.0	0.4	9,023	Raked biofilter March 1, 15, 22
4/24/19	1524	1548.7		4.4	0.4	13	36.0	2400	6	471	411	678584	0.0	0.5	9,024	Raked biofilter April 5, 19
5/24/19	1554	1578.7		3.2	0.3	9	32.0	2400	6	471	411	678584	0.0	0.5	9,024	Raked biofilter May 13, 17, 31
6/17/19	1578	1602.7		3.4	0.2	10	33.0	2400	6	471	411	678584	0.0	0.4	9,025	Raked biofilter June 14, 28
7/25/19	1616	1640.7		2.7	0.1	8	53.0	2400	6	471	411	678584	0.0	0.5	9,025	Raked biofilter July 12, 26
8/27/19	1649	1673.7		6.1	0.1	18	47.0	2400	6	471	411	678584	0.0	0.5	9,026	Raked biofilter August 9, 23
9/9/19	1662	1686.7		7	0.1	20	49.0	2400	6	471	411	678584	0.1	0.6	9,026	Raked biofilter September 9

CHART 3-SVE-2
CUMULATIVE MASS REMOVAL VERSUS TIME
SVE SYSTEM
OLEAN GATEWAY



Mass removal is based on a correlation of PID readings and vapor sample analysis for gasoline and diesel range organics (GRO and DRO) measured in influent air.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table D-2
Summary of VOC Mass Removal: 3-SVE-2 System

BCP Parcel 3
Olean, New York

Date	Elapsed Time (days)	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration[1] (mg/m^3)	Vacuum (in of H_2O)	Air Velocity (ft/min)	Pipe Diameter (in)	Air Flow Rate		Volume of Air Processed Since Previous Reading	Rate of VOC Removal (lb/day)	VOCs Removed Since Last Monitoring Period (lb)	Total VOC Removal to Date (lb)	Notes
									(ACFM)	(SCFM)	(CF)				
01/05/15	0	0	0	0	0	28.0	3000	6	589	515	0	0.0			Set-up/start-up between 1/5-3/6/15
03/06/15	0	0	695	75	3157	28.0	3000	6	589	515	0	0.0	0.0	0	
03/09/15	3	3	735	120	3339	30.0	3000	6	589	515	2108943	154.6	219.8	220	
03/11/15	5	5	765	140	3475	30.0	3000	6	589	515	1460038	160.9	310.6	530	
03/13/15	7	7	750	140	3407	32.0	3000	6	589	515	1483213	157.8	318.7	849	
03/16/15	10	10	680	160	3089	34.0	3000	6	589	515	2232544	143.0	452.8	1,302	
03/18/15	12	12	580	100	2635	35.0	4000	6	785	687	1967317	162.7	304.1	1,606	
03/20/15	14	14	575	100	2612	34.0	4000	6	785	687	1977617	161.3	324.0	1,930	
03/23/15	17	17	540	90	2453	35.0	4000	6	785	687	2987026	151.5	472.4	2,402	
03/25/15	19	19	560	70	2544	35.0	4000	6	785	687	2303787	157.1	359.4	2,762	
03/27/15	21	21	665	75	3021	35.0	4000	6	785	687	1857449	186.5	322.7	3,084	
04/03/15	28	28	500	105	2271	32.0	4000	6	785	687	7024661	140.2	1160.7	4,245	
04/06/15	31	31	365	30	1658	32.0	4000	6	785	687	2945825	102.4	361.4	4,607	
04/09/15	34	34	345	45	1567	33.0	4000	6	785	687	2657423	96.8	267.6	4,874	
04/10/15	35	35	370	100	1681	33.0	4000	6	785	687	1009409	103.8	102.4	4,977	
04/17/15	42	42	300	35	1363	31.0	4000	6	785	687	7230662	84.1	687.1	5,664	
04/24/15	49	49	300	40	1363	31.0	4000	6	785	687	6602357	84.1	561.8	6,225	
05/01/15	56	56	285	40	1295	30.0	4000	6	785	687	7240962	79.9	600.8	6,826	
05/08/15	63	63	250	55	1136	30.0	4000	6	785	687	6890759	70.1	522.9	7,349	
05/15/15	70	70	330	60	1499	30.0	4000	6	785	687	6942260	92.6	571.1	7,920	
05/22/15	77	77	325	40	1476	30.0	4000	6	785	687	6952560	91.2	645.9	8,566	
05/29/15	84	84	390	20	1772	32.0	4000	6	785	687	6877026	109.4	697.4	9,263	
06/05/15	91	91	360	50	1635	32.0	4000	6	785	687	6976593	101.0	742.1	10,005	
06/15/15	101	101	330	40	1499	36.0	4300	6	844	738	10352877	99.5	976.3	10,982	
06/19/15	105	105	400	45	1817	36.0	4300	6	844	738	4473329	120.6	463.1	11,445	
06/26/15	112	112	370	40	1681	34.0	4300	6	844	738	7396494	111.6	807.7	12,253	
07/06/15	122	122	370	45	1681	36.0	4300	6	844	738	10718272	111.6	1124.9	13,377	
07/10/15	126	126	295	40	1340	36.0	4300	6	844	738	4185441	88.9	394.7	13,772	
07/23/15	139	139	350	40	1590	30.0	4300	6	844	738	13552857	105.5	1239.8	15,012	
07/28/15	144	144	370	50	1681	34.0	4300	6	844	738	5425572	111.6	554.0	15,566	
08/05/15	152	152	360	40	1635	34.0	4300	6	844	738	8488990	108.5	878.9	16,445	
08/13/15	160	160	560	30	2544	34.0	4300	6	844	738	8695678	168.8	1134.6	17,580	
08/24/15	171	171	400	50	1817	32.0	4300	6	844	738	11471209	120.6	1561.8	19,141	
09/23/15	201	201	350	50	1590	32.0	4300	6	844	738	32188035	105.5	3423.8	22,565	
10/26/15	234	234	700	50	3180	32.0	4300	6	844	738	35044764	211.1	5218.8	27,784	
11/17/15	256	256	740	40	3362	33.0	4300	6	844	738	23318886	223.1	4762.4	32,546	
12/23/15	292	292	390	50	1772	34.0	3200	6	628	549	28461205	87.5	5588.1	38,135	
01/15/16	315	315	370	36	1681	34.0	3200	6	628	549	18177597	83.0	1959.3	40,094	
02/19/16	350	350	410	25	1863	34.0	3200	6	628	549	27538317	92.0	3046.4	43,140	
03/28/16	388	388	390	20	1772	35.0	3200	6	628	549	30158660	87.5	3421.8	46,562	
04/07/16	398	398	410	20	1863	34.0	3200	6	628	549	7795107	92.0	884.4	47,447	
05/03/16	424	424	360	25	1635	34.0	4250	6	834	730	27359611	107.3	2594.8	50,041	
06/06/16	457	457	210	10	954	32.0	4500	6	884	773	37335247	66.3	2912.3	52,954	
06/15/16	467	467	305	20	1386	40.0	4500	6	884	773	10776468	96.2	787.1	53,741	
07/05/16	487	487	335	35	1522	40.0	4500	6	884	773	21946914	105.7	1992.1	55,733	
08/04/16	517	517	250	40	1136	40.0	3200	6	628	549	23681964	56.1	2422.0	58,155	
09/13/16	557	557	500	18	2271	40.0	3200	6	628	549	31641873	112.2	3365.7	61,521	
10/11/16	585	585	290	45	1317	41.0	3200	6	628	549	22347073	65.1	2503.8	64,024	
11/16/16	621	621	460	50	2090	42.0	3200	6	628	549	28411765	103.2	3022.2	67,047	
12/12/16	647	647	519	40	2358	44.0	3200	6	628	549	20550737	116.5	2853.4	69,900	
01/06/17	672	672	270	20	1227	44.0	3200	6	628	549	19825611	60.6	2218.5	72,118	
02/17/17	714	714	245	15	1113	46.0	2800	6	550	481	28941189	48.1	2272.2	74,391	
03/06/17	731	731	320	20	1454	46.0	2800	6	550	481	11766821	62.8	942.9	75,334	
04/11/17	767	767	265	20	1204	50.0	2800	6	550	481	24946815	52.0	2069.8	77,403	
05/15/17	801	801	200	8	909	50.0	2800	6	550	481	23519223	39.3	1551.1	78,954	
06/23/17	840	840	230	20	1045	52.0	2800	6	550	481	27138674	45.2	1655.1	80,609	
07/14/17	861	861	285	15	1295	52.0	2800	6	550	481	14362444	56.0	1049.0	81,659	
08/07/17	885	885	263	23	1195	52.0	2800	6	550	481	16676874	51.6	1296.1	82,955	
08/11/17	889	889	268	18	1217	52.0	2800	6	550	481	2768664	52.6	208.5	83,163	
09/21/17	930	930	242	19	1099	50.0	2800	6	550	481	28590300	47.5	2068.0	85,231	
10/30/17	969	969	168	12.8	763	60.0	2800	6	550	481	26797398	33.0	1558.2	86,789	
11/28/17	998	998	68.7	39.4	312	58.0	2800	6	550	481	20087233	13.5	674.3	87,464	
12/26/17	1026	1026	72	68.7	327	58.0	2800	6	550	481	19395067	14.1	387.0	87,851	
01/25/18	1056	1056	111.8	38.4	508	58.0	2800	6	550	481	20786609	22.0	541.9	88,393	
02/23/18	1085	1085	101.7	NA	462	60.0	2800	6	550	481	20065603	20.0	607.6	89,000	
03/15/18	1104	1104	13.8	5.2	63	58.0	2800	6	550	481	13475606	2.7	220.7	89,221	
04/23/18	1143	1143	34.2	2.3	155	64.0	2800	6	550	481	26994473	6.7	183.8	89,405	
05/21/18	1171	1171	22.4	2.7	102	62.0	2800	6	550	481	19380647	4.4	155.6	89,560	
06/28/18	1209	1209	7.4	3	34	64.0	2800	6	550	481	26302307	1.5	111.2	89,671	

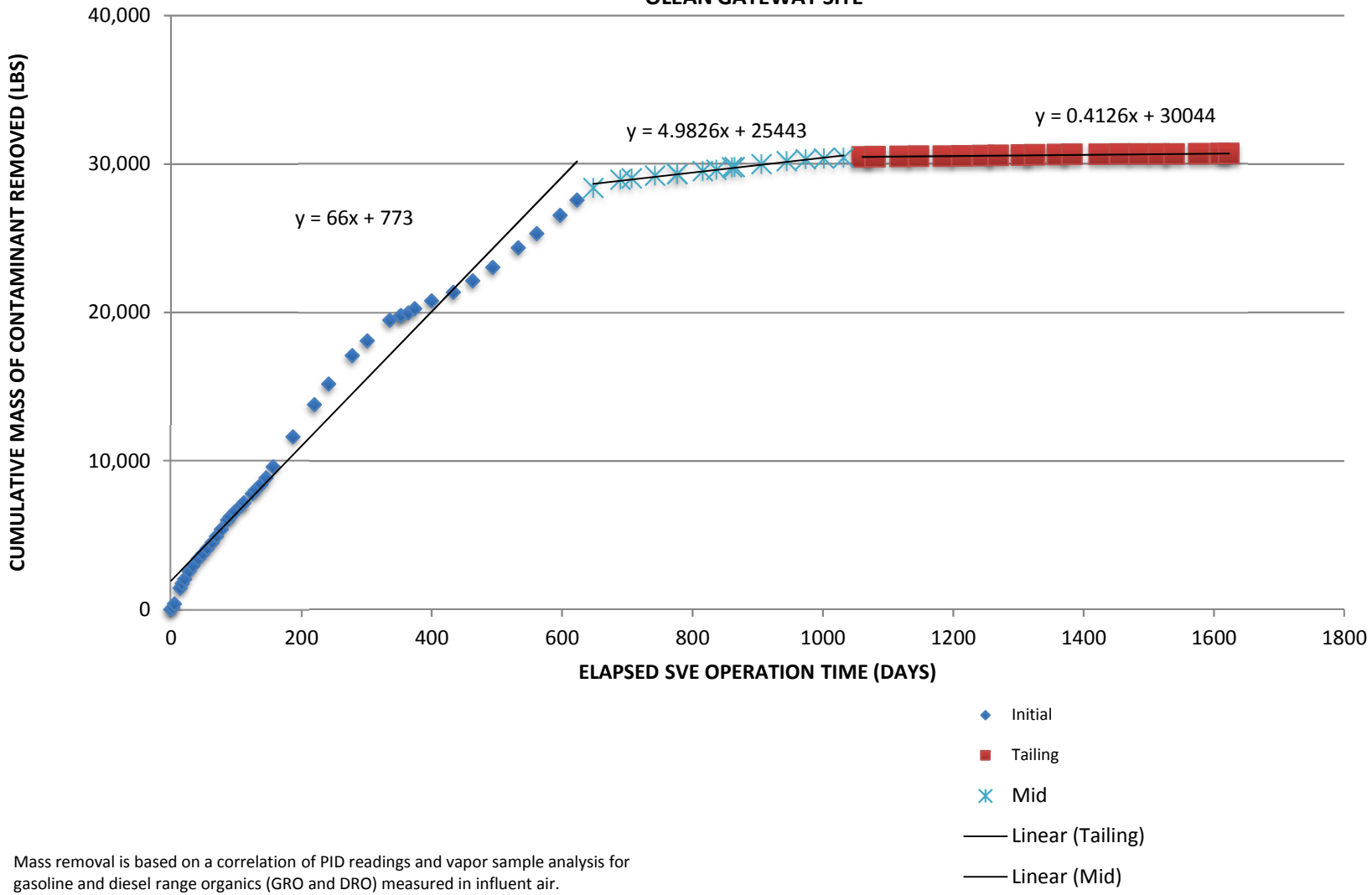
BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table D-2
Summary of VOC Mass Removal: 3-SVE-2 System

BCP Parcel 3
Olean, New York

Date	Elapsed Time (days)	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration[1] (mg/m^3)	Vacuum (in of H_2O)	Air Velocity (ft/min)	Pipe Diameter (in)	Air Flow Rate		Volume of Air Processed Since Previous Reading	Rate of VOC Removal (lb/day)	VOCs Removed Since Last Monitoring Period (lb)	Total VOC Removal to Date (lb)	Notes
									(ACFM)	(SCFM)	(CF)				
07/26/18	1237	1237	4.7	2.1	21	48.0	2800	3	137	120	4845162	0.2	23.6	89,695	
08/27/18	1269	1269	40	11.2	182	48.0	2800	3	137	120	5537328	2.0	35.1	89,730	
09/20/18	1293	1293	45.3	16.7	206	54.0	2800	3	137	120	4152996	2.2	50.2	89,780	
10/26/18	1329	1329	34.8	3.4	158	60.0	2800	3	137	120	6229494	1.7	70.8	89,851	
11/15/18	1349	1349	16.8	2.8	76	58.0	2800	3	137	120	3460830	0.8	25.3	89,876	
12/20/18	1384	1384	38.4	4.7	174	60.0	2800	3	137	120	6056452	1.9	47.4	89,924	
01/11/19	1406	1406	30	2.7	136	54.0	2800	3	137	120	3806913	1.5	36.9	89,961	
02/22/19	1448	1448	18.2	3.6	83	48.0	2800	3	137	120	7267743	0.9	49.7	90,010	
03/26/19	1480	1480	24.3	3	110	46.0	2800	3	137	120	5537328	1.2	33.4	90,044	Raked biofilter March 1, 15, 22
04/24/19	1509	1509	13.9	1.1	63	38.0	2800	3	137	120	5018203	0.7	27.2	90,071	Raked biofilter April 5, 19
05/24/19	1539	1539	17.6	2	80	34.0	2800	3	137	120	5191245	0.9	23.2	90,094	Raked biofilter May 13, 17, 31
06/17/19	1563	1563	15.4	1.3	70	55.0	2800	3	137	120	4152996	0.8	19.4	90,114	Raked biofilter June 14, 28
07/25/19	1601	1601	15.9	1.2	72	53.0	2800	3	137	120	6575577	0.8	29.2	90,143	Raked biofilter July 12, 26
08/27/19	1634	1634	16.4	0.3	75	51.0	2800	3	137	120	5710369	0.8	26.2	90,169	Raked biofilter August 9, 23
09/09/19	1647	1647	23.6	0.3	107	50.0	2800	3	137	120	2249539	1.2	12.8	90,182	Raked biofilter September 9

CHART 3-SVE-3
CUMULATIVE MASS REMOVAL VERSUS TIME
SVE SYSTEM
OLEAN GATEWAY SITE



Mass removal is based on a correlation of PID readings and vapor sample analysis for gasoline and diesel range organics (GRO and DRO) measured in influent air.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table D-3
Summary of VOC Mass Removal: 3-SVE-3 System

BCP Parcel 3
Olean, New York

Date	Elapsed Time (days)	SVE Operation Time (days)	Influent (Untreated) PID Reading (ppm)	Effluent PID Reading Biofilter (ppm)	Corrected Influent Concentration[1] (mg/m^3)	Vacuum (in of H_2O)	Ambient Pressure		Air Velocity (ft/min)	Pipe Diameter (in)	Air Flow Rate		Volume of Air Processed Since Previous Reading (CF)	Rate of VOC Removal (lb/day)	VOCs Removed Since Last Monitoring Period (lb)	Total VOC Removal to Date (lb)	Notes
							(in Hg)	(Pa)			(ACFM)	(SCFM)					
02/04/15	0	0	600	160	1800	20.0	29.92	101321	3000	6	589	526	0	0.0			System set-up/start-up from 2/4-3/20
03/20/15	0	0.0	470	110	1410	24.0	29.92	101321	4000	6	785	701	0	0.0	0.0	0	
03/23/15	3	2.7	500	80	1500	24.0	29.92	101321	4000	6	785	701	2714761	94.6	127.1	127	
03/25/15	5	5.0	635	80	1905	24.0	29.92	101321	4000	6	785	701	2357002	120.1	250.5	378	
04/03/15	14	13.9	630	100	1890	24.0	29.92	101321	4000	6	785	701	9007116	119.2	1066.9	1,444	
04/06/15	17	17.0	400	30	1200	25.0	29.92	101321	4000	6	785	701	3072521	75.7	296.3	1,741	
04/10/15	21	20.7	450	60	1350	26.0	29.92	101321	4000	6	785	701	3745950	85.1	298.1	2,039	
04/17/15	28	28.0	340	60	1020	26.0	29.92	101321	4000	6	785	701	7386677	64.3	546.4	2,585	
04/23/15	34	33.7	310	50	930	26.0	29.92	101321	4000	6	785	701	5734671	58.6	349.0	2,934	
05/01/15	42	42.0	285	20	855	26.0	29.92	101321	4000	6	785	701	8407343	53.9	468.4	3,403	
05/08/15	49	49.0	245	70	735	26.0	29.92	101321	4000	6	785	701	7049962	46.3	349.9	3,753	
05/15/15	56	56.0	310	30	930	26.0	29.92	101321	4000	6	785	701	7081529	58.6	368.0	4,121	
05/22/15	63	63.0	285	20	855	26.0	29.92	101321	4000	6	785	701	7102574	53.9	395.7	4,516	
05/29/15	70	69.9	350	30	1050	26.0	29.92	101321	4000	6	785	701	6979813	66.2	415.0	4,931	
06/05/15	77	77.0	350	40	1050	26.0	29.92	101321	4000	6	785	701	7162200	66.2	469.4	5,401	
06/15/15	87	86.9	320	20	960	30.0	29.92	101321	3800	6	746	666	9436427	57.5	608.3	6,009	
06/19/15	91	91.0	300	30	900	32.0	29.92	101321	3800	6	746	666	3958501	53.9	229.8	6,239	
06/26/15	98	98.0	220	30	660	32.0	29.92	101321	3800	6	746	666	6697464	39.5	326.1	6,565	
07/06/15	108	108.0	275	30	825	32.0	29.92	101321	3800	6	746	666	9656343	49.4	447.6	7,013	
07/10/15	112	112.0	220	30	660	34.0	29.92	101321	3800	6	746	666	3778569	39.5	175.1	7,188	
07/23/15	125	124.7	300	25	900	30.0	29.92	101321	3800	6	746	666	12235367	53.9	595.8	7,784	
07/28/15	130	129.8	275	3	825	30.0	29.92	101321	3800	6	746	666	4898145	49.4	263.7	8,047	
08/05/15	138	138.0	220	30	660	32.0	29.92	101321	3800	6	746	666	7837032	39.5	363.2	8,410	
08/13/15	146	146.0	400	40	1200	32.0	29.92	101321	3800	6	746	666	7677093	71.9	445.7	8,856	
08/24/15	157	156.8	380	35	1140	32.0	29.92	101321	3800	6	746	666	10356078	68.3	756.4	9,613	
09/23/15	187	187.1	360	30	1080	34.0	29.92	101321	3800	6	746	666	29078989	64.7	2014.9	11,627	
10/26/15	220	220.0	370	45	1110	38.0	29.92	101321	3800	6	746	666	31618027	66.5	2161.2	13,789	
11/17/15	242	242.0	340	45	1020	31.0	29.92	101321	3800	6	746	666	21052028	61.1	1399.6	15,188	
12/23/15	278	277.9	396	20	1188	32.0	29.92	101321	2400	6	471	421	21806479	44.9	1907.8	17,096	
01/15/16	301	300.9	280	20	840	32.0	29.92	101321	3100	6	609	544	17989504	41.1	988.1	18,084	
02/19/16	336	335.8	265	10	795	32.0	29.92	101321	3100	6	609	544	27269674	38.9	1391.6	19,476	
03/07/16	352	352.3			0		29.92	101321	3100	6	609	544	12949833	0.0	321.3	19,797	System down; Replace blower
03/17/16	362	352.3			0		29.92	101321	3100	6	609	544	0	0.0	321.3	19,797	
03/28/16	374	363.9	200	15	600	38.0	29.92	101321	3100	6	609	544	9051836	29.3	169.5	19,967	
04/07/16	384	373.7	210	20	630	38.0	29.92	101321	3100	6	609	544	7714447	30.8	296.2	20,263	
05/03/16	410	399.8	65	10	195	38.0	29.92	101321	3200	6	628	561	21044663	9.8	529.0	20,792	
06/06/16	443	433.3	160	5	480	40.0	29.92	101321	3200	6	628	561	27105525	24.2	571.1	21,363	
07/05/16	473	462.7	190	35	570	38.0	29.92	101321	3200	6	628	561	23788887	28.8	779.6	22,142	
08/05/16	504	493.8	195	30	585	36.0	29.92	101321	3200	6	628	561	25068402	29.5	903.7	23,046	
09/13/16	543	532.7	250	15	750	40.0	29.92	101321	3200	6	628	561	31449144	37.8	1310.4	24,357	
10/11/16	571	560.9	200	20	600	40.0	29.92	101321	3200	6	628	561	22829250	30.3	961.9	25,319	
11/16/16	607	596.9	250	15	750	42.0	29.92	101321	3200	6	628	561	29058470	37.8	1224.4	26,543	
12/12/16	633	622.8	280	10	840	43.0	29.92	101321	3200	6	628	561	20943648	42.4	1039.4	27,582	
01/06/17	658	647.9	140	15	420	43.0	29.92	101321	3200	6	628	561	20303891	21.2	798.5	28,381	
02/17/17	700	689.7	60	10	180	42.0	29.92	101321	2000	6	393	351	21107797	5.7	561.3	28,942	
03/06/17	717	706.7	70	10	210	44.0	29.92	101321	2000	6	393	351	8586222	6.6	104.5	29,047	
04/11/17	753	742.7	36	5	108	46.0	29.92	101321	2000	6	393	351	18193111	3.4	180.6	29,227	
05/15/17	787	776.7	30	3	90	36.0	29.92	101321	2000	6	393	351	17161922	2.8	106.1	29,333	
05/15/17	787	776.7	50	3	150	50.0	29.92	101321	2000	6	393	351	5261	4.7	0.0	29,333	
06/23/17	826	815.9	49	2	147	50.0	29.92	101321	2000	6	393	351	19787244	4.6	183.4	29,517	
07/14/17	847	836.7	59	4	177	50.0	29.92	101321	2000	6	393	351	10490764	5.6	106.1	29,623	
08/07/17	871	860.7	80	8.8	240	42.0	29.92	101321	2000	6	393	351	12142770	7.6	158.0	29,781	
08/11/17	875	864.7	44	7	132	43.0	29.92	101321	2000	6	393	351	2025549	4.2	23.5	29,804	
09/21/17	916	906.0	53	6.8	159	42.0	29.92	101321	2000	6	393	351	20849999	5.0	189.4	29,994	
10/30/17	955	944.7	60	14.9	180	40.0	29.92	101321	2000	6	393	351	19550492	5.7	206.9	30,201	
11/28/17	984	973.8	27.2	22.7	82	45.0	29.92	101321	2000	6	393	351	14710219	2.6	120.1	30,321	
12/26/17	1012	1001.8	18.4	21.3	55	42.0	29.92	101321	2000	6	393	351	14142013	1.7	60.4	30,381	
01/25/18	1042	1031.9	17.3	15.1	52	44.0	29.92	101321	2000	6	393	351	15173202	1.6	50.7	30,432	
02/23/18	1071	1060.8	7.3	NA	22	42.0	29.92	101321	2000	6	393	351	14606750	0.7	33.6	30,466	
03/15/18	1090	1080.3	6.5	0.7	19	42.0	29.92	101321	2000	6	393	351	9847148	0.6	12.7	30,478	
04/23/18	1129	1119.3	5.2	0.5	16	44.0	29.92	101321	2000	6	393	351	19697804	0.5	21.6	30,500	
05/21/18	1157	1147.3	2.9	2.3	9	44.0	29.92	101321	2000	6	393	351	14142013	0.3	10.7	30,511	
06/28/18	1195	1185.3	5.4	1.6	16	44.0	29.92	101321	2000	6	393	351	19192732	0.5	14.9	30,525	
07/26/18	1223	1213.3	3.8	1.7	11	46.0	29.92	101321	2000	6	393	351	14142013	0.4	12.2	30,538	
08/27/18	1255	1245.3	10	3	30	46.0	29.92	101321	2000	6	393	351	16174080	0.9	20.9	30,559	
09/20/18	1279	1269.3	6.2	1.7	19	42.0	29.92	101321	2000	6	393	351	12130560	0.6	18.4	30,577	
10/26/18	1315	1305.3	4.7	2.1	14	42.0	29.92	101321	2000	6	393	351	18195840	0.4	18.6	30,596	
11/15/18	1335	1325.3	5.8	3	17	42.0	29.92	101321	2000	6	393	351	10108800	0.5	9.9	30,605	
12/20/18	1370	1360.3	10.2	2.5	31	42.0	29.92	101321	2000	6	393	351	17690400	1.0	26.5	30,632	
01/11/19	1392	1382.3	1	0.1	3	44.0	29.92	101321	2000	6	393	351	11119680	0.1	11.7	30,644	
02/22/19	1434	1424.3	2.4	0.3	7	38.0	29.92	101321	2000	6	393	351	21228480	0.2	6.8	30,650	
03/26/19	1466	1456.3	1.2	0.1	4	32.0	29.92	101321	2000	6	393	351	16174080	0.1	5.5	30,656	Raked biofilter March 1, 15, 22
04/24/19	1495	1485.3	1	0	3	40.0	29.92	101321	2000	6	393	351	14657760	0.1	3.0	30,659	Raked biofilter April 5, 19
05/24/19	1525	1515.3	1.8	0	5	36.0	29.92	101321	2000	6	393	351	15163200	0.2	4.0	30,663	Raked biofilter May 13, 17, 31
06/17/19	1549	1539.3	1.2	0	4	34.0	29.92	101321	2000	6	393	351	12130560	0.1	3.4	30,666	Raked biofilter June 14, 28
07/25/19	1587	1577.3	5.1	0	15	34.0	29.92	101321	2000	6	393	351	19206720	0.5	11.3	30,678	Raked biofilter July 12, 26
08/27/19	1620	1610.3	5.3	0.1	16	35.0	29.92	101321	2000	3	98	351	16679520	0.5	16.2	30,694	Raked biofilter August 9, 23
09/09/19	1633	1623.3	4.4	0.1	13	35.0	29.92	101321	2000	3	98	351	6570720	0.4	6.0	30,700	Raked biofilter September 9