The Verterre Group
Environmental Scientists and Field Services

Phase (check one)	Type (check one)
☐ Site Investigation ☐ Corrective Action Feasibility Investigation ☐ Corrective Action Plan ☐ Corrective Action Summary Report ✓ Operations & Monitoring Report	☐ Work Scope ✓ Technical Report ☐ PCF Reimbursement Request ☐ General Correspondence

June 2019
GROUNDWATER MONITORING RESULTS
Pearl Street Mobil

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Date Submitted: August 7, 2019

I certify under penalty of perjury that I am an environmental professional and that all content contained within this deliverable is to the best of my knowledge true and correct.

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The Verterre Group
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EXECUTIVE SUMMARY

This report has been prepared by The Verterre Group (Verterre) to present results of the groundwater monitoring activities conducted at Pearl Street Mobil located at 281 Pearl Street in Burlington, Vermont (the Site).

Monitor wells MW-8S, MW-8D, MW-14, MW-103, MW-104 and MW-105 were sampled for volatile organic compounds (VOCs) by USEPA Method 8260 on June 7 and 11, 2019. VOCs were reported above the Vermont Groundwater Enforcement Standard (VGES) in MW-8D, MW-14, MW-103 and MW-105.

VOCs were reported above the method detection limits (MDLs) but below the VGES in MW-8S and MW-104.

Chlorinated compounds were not reported above the MDLs in any of the sampled wells. Groundwater was interpreted to flow to the southwest at the time of sampling.

During the development of the conceptual site model, Verterre has not identified any data gaps which require further site characterization. Several investigations have been conducted on and off site. Only low-level petroleum contamination is present in the groundwater at this site (MW-8D, MW-14, MW-103 and MW-105). Contaminant concentrations in these wells is stable but not decreasing.

The USTs at this Site are going to be removed in 2019, there may be a possibility of performing a limited soil excavation at that time.

Verterre recommends the on-site wells be sampled again in 2020 for VOCs via US EPA Method 8260. Verterre recommends that MW-8S, MW-8D, MW-14, MW-103, MW-104 and MW-105 be sampled at that time.

1.0 INTRODUCTION

This report has been prepared by The Verterre Group (Verterre) to present results of the groundwater monitoring activities conducted at Pearl Street Mobil located at 281 Pearl Street in Burlington, Vermont (the Site). A SITE Location Map is provided as **Figure 1** and a SITE Plan is presented as **Figure 2**.

2.0 BACKGROUND

The Site is located on the Southside of Pearl Street in a largely residential/light commercial section of Burlington. The 0.27-acre property is owned by Sisters & Brothers Investment Group, LLP. It is listed as Parcel ID 045-2-048-000 and operates as Pearl Street Auto (Facility ID 1490).

The property has three gasoline underground storage tanks (UST) installed in 1988 (1-4,000 gallon, 1-8,000 gallon and 1-10,000 gallon). Additionally, there is a 400-gallon heating oil UST. The gasoline USTs are located northeast of the building and the heating oil tank is located directly east of the building. In 2014, Stone Environmental noted that waste oil was previously stored in 55-gallon drums within a small fenced enclosure directly adjacent to the southwest corner of the Site building. In 2014, the fenced enclosure was being used to store worn out tires and there was no evidence of waste oil storage. During Verterre's 2016 investigation a 275-gallon used oil aboveground storage tank (AST) was noted in this enclosure area.

Three historic gasoline underground storage tanks (USTs) were present in the southeast corner of the Property based on Sanborn fire insurance maps from 1942 and 1950; the previous map, from 1926, shows no development at the Site.

The Site consists of one 1,800 square foot building which is a combination maintenance garage and reception area located on the southwest corner of the site. The building is located on top of a concrete slab foundation. The remainder of the site is paved and is used for fueling vehicles and parking.

A 150-foot (±) section of the brick constructed ravine sewer, which drained in a southwesterly direction beneath the western portion of the Site and the property to the north, was reportedly abandoned in the 1980s by filling the sewer with concrete. The effectiveness of this closure in preventing migration of storm water or groundwater within the sewer is uncertain; the abandoned portion of the ravine sewer and the backfill material may serve as a preferential pathway to contaminants. Starting shortly after 1850, the ravine was in-filled with various undifferentiated fill to allow for easy passage across the City. The ravine sewer formerly discharged sewage to Lake Champlain at roughly the location of the City of Burlington Waste Water Treatment Plant (WWTP), located on Railway Lane adjacent the Burlington Rail Yard. The ravine sewer remains in service approximately 150 feet down gradient of the Site, although now delivering sewage to the WWTP. At the Site, the sewer line is about 25 feet below ground surface (bgs) and about 10 feet bgs at the southern end of the apartment complex located at 267 Pearl Street. Prior to abandonment, the on-Site sewer was connected to this section of the Ravine sewer.

In March of 2000, Griffin oversaw the inspection and replacement of sumps, piping and vapor recovery system for the gasoline UST system. During excavation work, volatile organic compound (VOC) concentrations measured with a portable photoionization detector (PID) ranged from non-detect throughout most of the excavation to 40 ppmv near the north dispenser island. During this work a 500-gallon waste oil UST formerly located to the west of the building was permanently closed. PID readings screened from the waste oil tank cavity ranged from non- detect to 53 parts per million by volume (ppmv).

Griffin completed an Initial Site Investigation in January of 2001. During this investigation five (5) monitor wells (MW-1 through MW-5) were installed, groundwater was sampled, groundwater flow direction was determined and the five cubic yards of petroleum contaminated soil generated during the piping upgrade was thin spread on site. TPH in the five (5) wells ranged from 0.4 to 3.75 mg/l. MTBE was only reported in MW-2 at a concentration of 33.1 µg/l. The highest PID reading was 138 ppmv in MW-1 which was located on the west side of the building.

Following the investigation Griffin completed groundwater monitoring in 2002 and 2003. MTBE was not reported above the MDLs in any of these subsequent sampling events. Only low-level VOCs were ever reported during these sampling events. In 2008, Verterre completed a final round of groundwater sampling, no VOC compounds were reported above their respective Vermont Groundwater Enforcement Standards (VGES) so the monitor wells were closed and the site given a Sites Management Activity Complete (SMAC) designation.

In November 2011, petroleum odors and sheens were observed on the wastewater combined sewer overflow influent within the Headwater Building at the City of Burlington's main WWTP located on Railway Lane; the occurrence was subsequently reported to the VT DEC WMD Spills Program. Since that time, odors and sheens at the influent have been intermittent and of varied intensity. The WMD and Burlington's Department of Public Works (DPW) set out to identify the source(s) of the petroleum. The WMD identified 281 Pearl Street, which is a former active Vermont Hazardous Site (former SMS #2000-2755) and current motor fuel service station, as a possible source. Stone completed a site investigation (SI) in May 2012.

During the SI, five soil borings were advanced on-Site and two off-Site to assess the degree and extent of contamination in soil and groundwater relating to potential releases from former and current Site fuel and waste oil USTs. On-Site soil borings were advanced using a track-mounted Geoprobe® unit utilizing a DT 325 Dual Tube Sampler. Off-Site soil borings were advanced via a 3 ¼-inch diameter stainless steel bucket hand auger. Soil borings were screened for the possible presence of VOCs using a PID. Groundwater monitoring wells were constructed within all soil borings, with the exception of SB-6, with the screened interval straddling the water table. Monitoring wells were developed and subsequently sampled, and the new Site wells were surveyed.

To assess potential impact to the sanitary sewer, Stone collected two water samples from the municipal combined sanitary and storm sewer from a catch basin and a manhole. Upon opening the catch basin and manhole covers and prior to sample collection the headspace was monitored with a PID for approximately two minutes. In addition, headspace of a footing drain sump of the apartment building

west of the Site, at 267 Pearl Street, was screened with a PID in response to a tenant approaching Stone personnel during field activities and indicating fuel-like odors had been observed in groundwater seeping out of the ground in the backyard of the apartment complex for a few years. The tenant indicated the sump was installed to divert groundwater; it discharges from a pipe onto the ground surface in the vicinity of the catch basin. Elevated PID readings (>10 ppm v/v), visual, and/or olfactory evidence of petroleum contamination was observed in soil borings MW-8S, MW-8D, and MW-9. Results of PID headspace screening performed on soil from the soil borings ranged from 0.0 to 3,720 ppm v/v at 35 feet bgs at MW-8D, where sheening was observed within the 30 to 35-foot interval. Total trimethylbenzenes (TMBs) were detected in Site monitoring wells MW-8S and MW-8D at concentrations exceeding relative VGES. Naphthalene was detected in MW-8S at a concentration exceeding its relative VGES. Toluene was the only other target VOC detected above the laboratory detection limit (MW-9), at a concentration below its relative VGES. Total petroleum hydrocarbons (TPH) for diesel range organics (DRO) were detected at concentrations ranging from 1.0 to 2.0 mg/L in groundwater samples collected from MW-8S, MW-8D, and MW-9. Hydrogeological data collected suggests the direction of groundwater flow on the Site is to the west/southwest toward Lake Champlain. No VOCs were detected above the laboratory detection limit in either of the two water samples collected from the municipal sewer system. TPH DRO was detected at a concentration of 4 mg/L in the sample collected from the manhole.

VOCs were not detected with a PID during sump headspace screening of the apartment complex sump.

In 2014, Stone performed a second site investigation. This SI included the completion of seven soil borings, which were subsequently constructed as groundwater monitoring wells, collection of soil samples for volatile organic compound (VOC), metals, total petroleum hydrocarbons, (TPH), polychlorinated biphenyl (PCB), and semi-volatile organic compound (SVOC) analyses, collection of groundwater samples for VOC analysis, screening and sampling of soil gas for VOC analysis, and an assessment of groundwater in the municipal storm water system and footing drain of an apartment building west of the Site for the presence of VOCs.

Sheening and residual product was visually observed in MW-14 between 25 and 26 feet below ground surface (bgs) and in MW-16 between 26.5 and 28.4 feet bgs. The highest photoionization detector (PID) responses occurred within these intervals. 1,2,4-trimethylbenzene was detected in soil at MW-14 at a concentration in excess of the United States Environmental Protection Agency (US EPA) Regional Screening Level (RSL) for residential soils. 1,3,5-trimethylbenzene, isopropylbenzene, m,p-xylenes, and naphthalene were detected in Site soils at concentrations below their respective RSLs. These contaminants were detected in Site groundwater. The presence of these heavier weight molecular compounds, such as trimethylbenzenes and naphthalene, and lack of other VOCs indicates that gasoline or waste oil contamination is weathered. Risk of exposure to weathered petroleum contaminated soils is low as these soils are 25 feet bgs or deeper. Risk of exposure to contaminated groundwater is low as buildings in the vicinity of the project are serviced by municipal water and concentrations of contaminants in groundwater are below VGES.

Several metals were detected above laboratory reporting limits in shallow soils in the vicinity of the former waste oil storage area. Antimony and arsenic were the only metals detected at concentrations in

excess of their respective US EPA RSLs for residential soils. Arsenic was detected in two samples at concentrations in excess of RSLs for industrial soil; however, these results may reflect naturally occurring background levels for soils in the State of Vermont. Unidentified hydrocarbons were identified in shallow soils near the former waste oil storage area. PCB Aroclor 1260 was identified in these soils at a concentration below its RSL for residential soils. Several SVOCS were detected at concentrations above residential and industrial RSLs in soil samples collected from MW-13, mostly occurring in the sample from 16 feet bgs. Since the Site is paved, there is a low risk of exposure to metals and SVOC contamination to current Site users. If Site redevelopment involves intrusive activities in this area (south of MW-8D) proper precautions should be taken to avoid exposure and these soils will need to be handled according to federal, state, and local guidelines.

No VOCs were detected above laboratory reporting limits in liquid samples collected from the foundation drain sump of the 267 Pearl Street property or in a nearby catch basin indicating these receptors are not being impacted by Site groundwater contamination.

Tetrachloroethene (PCE), chloroform, and naphthalene were detected in soil gas samples at concentrations exceeding VT DEC Investigation and Remediation of Contaminated Properties Procedures (IROCPP) Vapor Intrusion Screening Values (VISV) for shallow soil gas. PCE was detected at 29 µg/m3 in a soil gas sample collected at basement level directly adjacent to the dentist office (273 Pearl Street). The source of naphthalene contamination in soil gas is likely the weathered petroleum contamination observed in Site soil and groundwater. The source of PCE and chloroform contamination in soil gas is unknown.

Stone made the following conclusions: A historical records review should be completed to identify commercial operations that could have potentially used and released PCE to the environment. Occupants of this building may be at risk to contaminated indoor air through vapor intrusion. An indoor air and soil gas assessment should be conducted at this property to assess the impact of PCE and naphthalene to indoor air. This assessment should be coupled with an assessment of sub-slab soil gas and indoor air sampling at both 267 Pearl Street and 11 Hungerford Terrace to better assess whether these properties are being adversely affected by vapor intrusion. Additional groundwater monitoring to evaluate whether target VOC concentrations are stable or vary seasonably with fluctuations in the water table should be conducted in the spring season. If redevelopment of the Site involves intrusive activities in the vicinity of the former waste oil storage area soils containing metals and SVOC contamination must be properly managed according to federal, state, and local regulations.

Verterre advanced a total of eight (8) on-Site soil borings on February 22-23, 2016 using Cascade Drilling's Geoprobe®. These borings were advanced to depths ranging between 23-35 feet bgs. After evaluating each soil boring for soil strata, water table indicators, and VOCs, permanent monitoring wells were installed within five (5) of the soil borings (MW-101 through MW-105).

Verterre collected soil samples from four (4) of the soil borings on February 22, 2016. Soils from SB-104 (25-29', SB-105 (25-30'), SB-106 (24.5-30') and SB-108 (20-25') were analyzed for VOCs by US EPA Method 8260 and TPH.

Soil Gas samples were collected for TO-15 on February 22, 2016 from SG-101, SG-102, SG-103, SG-104, SG-105 and SG-106. VOC results were compared to the shallow soil gas and deep soil gas standards. 1,3 butadiene exceeded the shallow and deep soil gas limits in all the samples. Tetrachloroethene (PCE) was reported above the MDL but below the shallow gas standard of 5.7 µg/m3 in SG-101, SG-102 and SG-105. PCE exceeded the shallow gas standard in SG-106 (45 µg/m3). SG-106 was located near the northwestern corner of the property raising the possibility that the PCE is migrating onto the property from an off-site source. PCE was reported above the MDL on the western side of the property. PCE was not reported above the MDL in any of the soil gas points located on the eastern side of the property (SG-103 and SG-104). The only PCE detected above the MDLs in Stone's 2014 investigation was in SG-9 (29 µg/m3). SG-9 was located on the eastern side of 273 Pearl (the Lavoie Dental office). This soil gas point would be directly downgradient of SG-101. The elevated PCE so close to the foundation of 273 Pearl indicates that vapor intrusion of this compound may be occurring.

The 2014 investigation conducted by Stone reported chloroform above the MDL in all 5 of their soil gas points (SG-1, SG-4, SG-7, SG-9 and SG-13) and above the shallow soil gas standards in all points except SG-4. In the 2016 investigation, chloroform was not reported above the MDLs in any of the soil gas points with the exception of a low-level concentration in SG-102 (1.5 µg/m3). This result is well below the shallow soil standard. These results indicate that the 281 Pearl Street property is likely not the source of the chloroform.

Verterre performed a vapor monitoring study at the site in December 2016. Because of the difficulty obtaining access agreements the off-site vapor monitoring points were advanced in the Right of Way. VP-1, VP-2, VP-3, VP-4, VP-5, VP-6 and VP-7 were installed and sampled on December 6, 2016. VP-8, VP-9 and VP-10 were installed and sampled on December 7, 2016. All soil gas points were advanced to depths greater than 5'-5.5 bgs in an attempt to be at similar elevations performed by Stone in their 2014 investigation. These depths are comparable to basement levels of basements where vapor intrusion is likely to occur.

VOC results were compared to the shallow soil gas. 1,3 butadiene exceeded the shallow gas limits in VP-3, VP-4, VP-5 and VP-6. Chloroform exceeded the shallow gas limit in VP-3. Chlorinated compounds were not reported above the MDLs in any of the samples. The chloroform result for VP-3 (21 µg/m3) was the highest chloroform reported to date; potentially indicating that the source of the chloroform contamination is upgradient. Although, chloroform was widely used as an anesthetic it is also believed to be naturally produced by fungi in soil.

On December 1, 2016, 8 hour summa canisters were placed in the basements of 267 Pearl Street and 11 Hungerford Terrace. The canister at 267 Pearl was placed in the basement of Apartment A3 in a utility closet at the edge of a crawl space. Methylene chloride and chloroform were reported above the Target Indoor Air limit in this sample.

The canister at 11 Hungerford Terrace was placed in the basement of the building near a sump pump. The basement was completely empty, but the sump pump did have some standing water in it. Low level benzene was reported above the Target Indoor Air limit.

This study was undertaken due to the presence of PCE in a shallow vapor boring (SG-106) advanced by Verterre at the 281 Pearl Street property. The location of the boring indicated that the source of the PCE was possibly upgradient and may be affecting upgradient properties. PCE was not reported above the MDLs in any of the upgradient vapor points. At this time the source of the PCE has not been identified.

The chloroform result for VP-3 (21 µg/m3) was the highest chloroform reported to date; potentially indicating that the source of the chloroform contamination is upgradient. Although, chloroform was widely used as an anesthetic it is also believed to be naturally produced by fungi in soil. VP-3 was proximate to the sewer line of 272 Pearl Street.

Additional soil borings were scheduled for June of 2017 with Cascade Drillers. These borings were to be conducted in the right of way near private residences located north of the site across Pearl Street. These borings would potentially have answered the question of PCE migration onto the subject site. Access agreements could not be obtained for the residences. Without access to the properties the sewer laterals and water lines could not be accurately traced. Cascade stated that their regulations required pre-clearing of borings where sewer laterals were not marked out. They also would not drill within 5' of gas lines and 10' of power lines (above or below ground). Digsafe and the gas company only require 18" setback. The drilling was cancelled and has not been re-scheduled.

3.0 COLLECTION OF GROUNDWATER SAMPLES

Verterre performed groundwater sampling for VOCs at this SITE on June 7, 2019. Samples were collected from monitoring wells MW-8S, MW-8D, MW-103, MW-104 and MW-105. MW-14 was sampled on June 11, 2019. Prior to sampling, depth to groundwater measurements were collected from all monitoring wells.

To allow for a representative groundwater sample, each well was purged of three (3) volumes of water with a dedicated bailer. Purge water from the wells was discharged directly to the ground surface. Sampling at each monitoring well was conducted with dedicated bailers.

Quality assurance/Quality control (QA/QC) samples incorporated into this sampling round included one (1) duplicate sample taken from monitor well MW-103 and one (1) field blank. Samples collected from monitoring wells were analyzed via US EPA Method 8021 for volatile organic compounds VOCs. Absolute Resource Laboratories performed all laboratory analyses for this round of groundwater sampling.

4.0 RESULTS OF SAMPLING ACTIVITIES

4.1 Groundwater Flow Direction

Verterre personnel measured groundwater levels on SITE on June 7, 2019. Depth to water ranged from 16.41 ft below top of casing (btoc) in both MW-104 to 21.95 ft btoc in MW-8S. A summary of

groundwater elevation data is presented in **Table 1**. A Groundwater Contour Plan is presented as **Figure 3**.

Groundwater was interpreted to flow to the southwest at the time of sampling. A hydraulic gradient of 0.12 feet per foot was calculated between MW-104 and MW-103.

4.2 Groundwater Analytical Results

The June 2019 groundwater sampling results are summarized in **Table 2** and the complete analytical laboratory report is provided as **Attachment 1**. A Contaminant Distribution Plan, showing the VOCs with concentrations above the Vermont Groundwater Enforcement Standard (VGES) is presented as **Figure 4**.

Target Compound	Maximum Concentration Reported (µg/l)	VGES (µg/l)	Location reported in September 2018 Sampling
Total VOCs	494	NA	Maximum: MW-8D MW-8S, MW-14, MW-103, MW-104 and MW-105 also had VOCs reported above MDL
Benzene	5	5	Maximum: MW-105 (**at the VGES**) Benzene not reported above the MDL in any other sampled well; however the reporting limit in MW-14 was elevated above the VGES due to laboratory dilution
Toluene	ND	1,000	Toluene not reported above the MDL in any sampled well
Ethylbenzene	6	700	Ethylbenzene was reported above the MDL but *below the VGES* in MW-103 Ethylbenzene not reported above the MDL in any other sampled well
Total Xylenes	41	10,000	Maximum: MW-103 - *below the VGES* Total Xylenes reported above the MDL but *below the VGES* in MW-8D, MW-104 and MW-105 Total Xylenes not reported above the MDL in any other sampled well
MTBE	17	11	Maximum: MW-105 (**above the VGES**) MTBE reported above the MDL but *below the VGES* in MW-103 MTBE was not reported above the MDL in any other sampled well

Target Compound	Maximum Concentration Reported (µg/l)	VGES (µg/l)	Location reported in September 2018 Sampling
Trimethylbenzenes (124 and 135)	380	23	Maximum: MW-8D (**above VGES**) Also reported **above the VGES** in MW-14, MW-103 and MW-105 Trimethylbenzenes reported above the MDL but *below the VGES* in MW-8S and MW-104
Naphthalene	11	0.5	Maximum: MW-103 (**above VGES**) Also reported **above the VGES** in MW-8D and MW-105 Naphthalene was not reported above the MDL in any sampled well.

MDL- method detection limit

The samples were analyzed for VOCs by US EPA Method 8260. Some additional petroleum compounds that do not have VGES were reported above the MDLs in the samples. No non-petroleum (ie chlorinated compounds) were reported above the MDLs in any of the sampled monitor wells.

4.3 QA/QC Results

The Relative Percent Difference (RPD) for total COCs in the sample collected from MW-103 and its duplicate was 64%. The RPD for MTBE could not be calculated due to the concentration reported below the MDL. Typically, an RPD of up to 25% is considered to be an acceptable correlation between duplicate samples. The laboratory reported a matrix interference (which had a hydrocarbon signature) in both MW-103 and its duplicate. This interference likely was the reason for the poor reproducibility.

Prior to acceptance in this report the laboratory data was evaluated for the following parameters:

- correct sample ID's;
- analysis date within method specified holding time;
- correct reporting limits;
- acceptable detection limit multipliers;
- acceptable matrix spike (MS) and matrix spike duplicate (MSD) recoveries, where applicable;
- acceptable RPD between the MS and MSD, or the sample and duplicate where applicable; and,
- acceptable surrogate recoveries.

No target analytes were reported above the MDL in the Field Blank.

Based on Verterre's QA/QC evaluation, the data was found to be acceptable.

5.0 CONCEPTUAL SITE MODEL

1) Source of the release

The source of the petroleum release is likely the former USTs and piping. However, elevated PID readings were observed in boring SB-106 (MW-104) located on the eastern side of the sewer line (**Figure 2**). This well is the most upgradient monitor well. Based on these observations it is possible that petroleum contamination is following the sewer line and migrating onto the 281 Pearl Street property from on-off site source. Since the laboratory has identified the TPH in a soil sample collected from this boring as resembling kerosene it is possible that a contributing source is a failed upgradient heating oil tank.

Vapor testing at the site has also indicated that off-site sources of contamination are possible. The chloroform result for VP-3 (21 µg/m3) was the highest chloroform reported to date; potentially indicating that the source of the chloroform contamination is upgradient. Although, chloroform was widely used as an anesthetic it is also believed to be naturally produced by fungi in soil. VP-3 was proximate to the sewer line of 272 Pearl Street (located north of the site).

From 2001 until 2008 the property underwent groundwater monitoring. Five wells were installed on the property in 2001 by Griffin. During the installation of these wells the highest PID noted was 138 ppmv (MW-1 – located in the southwestern portion of the property- see Attachment 2). Only low-level VOCs were reported in the wells during the groundwater monitoring time period.

In Stone's 2012 Site investigation, elevated PID readings (>10 ppm v/v), visual, and/or olfactory evidence of petroleum contamination were observed in soil borings MW-8S, MW-8D, and MW-9. Results of PID headspace screening performed on soil from the soil borings ranged from 0.0 to 3,720 ppm v/v at 35 feet bgs at MW-8D, where sheening was observed within the 30 to 35-foot interval.

Based on PID data, there is a large discrepancy between the soil contamination noted in 2001 and the soil contamination noted in 2012. The source of this discrepancy is unknown. Based on the Site hydrogeology, observed contaminant distribution, and the high degree of contaminant weathering (i.e. depletion of lighter molecular weight VOCs), and the soil TPH data the soil contamination is likely associated with an old co-mingled petroleum release and does not appear to be related to releases from the existing site heating oil and gasoline UST systems (including fuel dispensers).

2) The characteristics of engineered structures, subsurface infrastructure, tanks and containers present or known or suspected to have been present at the site, from which or through which the suspected contaminants may have been released, transported or may impact a sensitive receptor.

The on-Site water and sewer utilities are not likely impacted by the plume since they are likely above the water table, which is generally greater than 15 feet bgs across the Site. Analytical results from sewage samples collected from the "headwaters" (by Stone in 2014) of the active section of the Ravine sewer further to the southwest and non-detect concentrations within groundwater along the axis of the

ravine (MW-18 and MW-19) suggest this sensitive receptor also was not impacted by the plume. Footing drains for the building located on 267 Pearl Street are not impacted as suggested by VOC screening with a PID and non-detect results from the aqueous sample collected from this footing drain system.

A 150-foot (±) section of the brick constructed ravine sewer, which drained in a southwesterly direction beneath the western portion of the Site and the property to the north, was reportedly abandoned in the 1980s by filling the sewer with concrete. The effectiveness of this closure in preventing migration of storm water or groundwater within the sewer is uncertain; the abandoned portion of the ravine sewer and the backfill material may serve as a preferential pathway to contaminants. Starting shortly after 1850, the ravine was in-filled with various undifferentiated fill to allow for easy passage across the City. The ravine sewer formerly discharged sewage to Lake Champlain at roughly the location of the City of Burlington Waste Water Treatment Plant (WWTP), located on Railway Lane adjacent the Burlington Rail Yard. The ravine sewer remains in service approximately 150 feet down gradient of the Site, although now delivering sewage to the WWTP. At the Site, the sewer line is about 25 feet below ground surface (bgs) and about 10 feet bgs at the southern end of the apartment complex located at 267 Pearl Street. Prior to abandonment, the on-Site sewer was connected to this section of the Ravine sewer.

Contamination from on and off-site sources may be following the Ravine sewer line.

3) Historical land uses

The Site is located on the Southside of Pearl Street in a largely residential/light commercial section of Burlington. The 0.27-acre property is owned by Sisters & Brothers Investment Group, LLP. It is listed as Parcel ID 045-2-048-000 and operates as Pearl Street Auto (Facility ID 1490). Sanborn maps indicate the property was developed between 1926 and 1942. In 1926, the site is undeveloped. Sanborn maps from 1942 and 1950 show three historic gasoline underground storage tanks (USTs) were present in the southeast corner of the Property. The Site consists of one 1,800 square foot building which is a combination maintenance garage and reception area located on the southwest corner of the site. The building is located on top of a concrete slab foundation. The remainder of the site is paved and is used for fueling vehicles and parking.

4) Sources and Contaminants

No mass estimates have been calculated for the amount of petroleum released at this site. Free product has not been detected to date in any of the wells.

The monitor wells have been sampled by Verterre since 2012 for VOCs by US EPA method 8260. Chlorinated compounds have not been reported above the method detection limits in any of the groundwater monitoring samples collected by Verterre.

The current and historical USTs at the site are shown in the following table:

Tank ID	Tank Status	CAT	Capacity	Year Installed	Year Removed	Pulled Condition	Compartment ID	Compartment Substance	Compartment Capacity
1988-1-M	ACTIVE	1	4000	1988			A	Gasoline	4000
1988-3	ACTIVE	1	10000	1988			A	Gasoline	8000
1988-2-M	ACTIVE	1	8000	1988			A	Gasoline	10000
-1-1	ACTIVE		400	-1-1			A	Fuel Oil #2 or #4	400
-1-5-R	PULLED	1	500	-1-5	2000	FAIR	A	Used Oil	500
1962-1-R	PULLED	1	3000	1962	1988	POOR	A	Gasoline	3000
1962-2-R	PULLED	1	3000	1962	1988	POOR	A	Gasoline	3000
1962-3-R	PULLED	1	3000	1962	1988	POOR	A	Gasoline	3000
1962-4-R	PULLED	1	3000	1962	1988	POOR	A	Gasoline	3000
1962-5-R	PULLED	1	3000	1962	1988		A	Gasoline	3000

5) Geology

A summary of the predominant geological units encountered during drilling activities indicated that the SITE is constructed of primarily sands and gravels atop fill material that consists of ash, brick and other debris atop silts and clays.

6) Hydrogeology

Depth to groundwater ranges from 16 to 25 feet below the top of casing (BTOC). Groundwater flow has been interpreted to be to the southwest.

7) Contaminant fate and transport

Due to the depth of groundwater and the depth of the Ravine Sewer at the Site it is plausible that the Ravine Sewer is a conduit for vapor, groundwater and soil contamination migrating to and from the site.

Chlorinated VOCs have not been reported above the laboratory reporting limits in any groundwater samples. Low level PCE has been reported in some vapor samples – the source is unknown.

8) Receptor study and evaluation

The Site and surrounding area are on town water and town sewer. The on-site groundwater contamination is minimal.

Lake Champlain is the closest water body and it is located approximately 3,918 feet west of the site.

9) Potential exposure pathways from all potentially impacted media

Off-site properties were evaluated in 2016 for vapor intrusion. This study was undertaken due to the presence of PCE in a shallow vapor boring (SG-106) advanced by Verterre at the 281 Pearl Street property. The location of the boring indicated that the source of the PCE was possibly upgradient and may be affecting upgradient properties. PCE was not reported above the MDLs in any of the upgradient vapor points. At this time the source of the PCE has not been identified.

10) CSM Analysis
Verterre prepared this conceptual site model after reviewing data present in Verterre's project files, and historic site plans. Additionally, known site geology have been incorporated into this plan. Corrective action objectives for this site have been limited to annual groundwater monitoring and soil vapor investigations.

During the development of the conceptual site model, Verterre has not identified any data gaps which require further site characterization. Several investigations have been conducted on and off site. Only low-level petroleum contamination is present in the groundwater at this site (MW-14 and MW-105). Contaminant concentrations in both these wells is stable but not decreasing.

The USTs at this Site are going to be removed in 2019, there may be a possibility of performing a limited soil excavation at that time.

6.0 SUMMARY AND CONCLUSIONS

Based on the information and analytical data obtained during this investigation, Verterre concludes the following:

- Monitor wells MW-8S, MW-8D, MW-14, MW-103, MW-104 and MW-105 were sampled for VOCs by USEPA Method 8260 on June 7 and 11, 2019.
- VOCs were reported above the VGES in MW-8D, MW-14, MW-103 and MW-105.
- VOCs were reported above the MDLS but below the VGES in MW-8S and MW-104.
- Chlorinated compounds were not reported above the MDLs in any of the sampled wells.
- Groundwater was interpreted to flow to the southwest at the time of sampling.

7.0 RECOMMENDATIONS

During the development of the conceptual site model, Verterre has not identified any data gaps which require further site characterization. Several investigations have been conducted on and off site. Only low-level petroleum contamination is present in the groundwater at this site (MW-8D, MW-14, MW-103 and MW-105). Contaminant concentrations in these wells is stable but not decreasing.

The USTs at this Site are going to be removed in 2019, there may be a possibility of performing a limited soil excavation at that time.

Verterre recommends the on-site wells be sampled again in 2020 for VOCs via US EPA Method 8260. Verterre recommends that MW-8S, MW-8D, MW-14, MW-103, MW-104 and MW-105 be sampled at that time.

8.0 SOPs Referenced

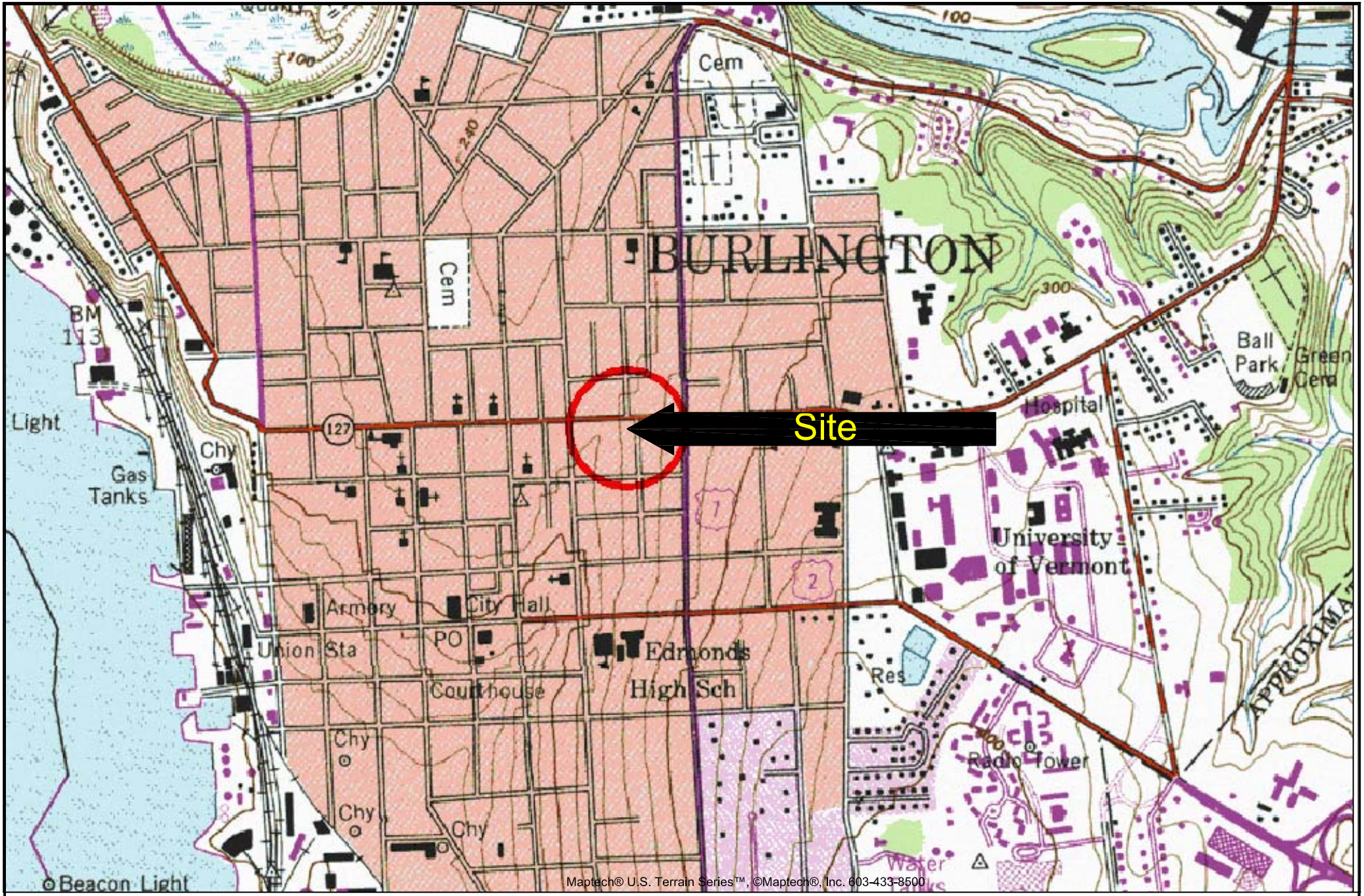
The following SOPs were referenced for this project:

SOP Identification	Name
SOP 2018 03	Field Notebook
SOP 2018 04	Sample packaging
SOP 2018 05	Groundwater Level Measurement
SOP 2018 08	Groundwater Sampling

Figures

The Verterre Group

Environmental Scientists and Field Services



SOURCE: USGS 7.5' Minute Topographic Map Series Burlington, Vermont Quadrangle. Created 1948, revised/inspected 1987.

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Fs1:/project/15025/Site Location Map.dwg

N
W E
S

Project #15025	DRAWN BY: *ESC* CHECKED BY: *MER* APPROVED BY: *MER* DATE: 06/05/08 SCALE: N.T.S.	**The Verterre Group.** 77 Vermont Avenue Colchester, Vermont 05446 (802) 654-8663	**FIGURE 1** **SITE LOCATION MAP** Pearl St. Mobil 281 Pearl Street Burlington, Vermont

N
W E
S

Approximate location of abandoned 18" Ravine Sewer.

Pearl Street

SG-105
SG-106
SB-102
SB-103
MW-104/ SB-106
MW-101/ SB-101
SG-107
SG-103
Sign Post
Hungerford Terrace
MW-102/ SB-104
Pump Islands
SB-107
Current USTs Location
7 Pearl Street
273 Pearl Street
MW-17
MW-16
MW-103/ SB-105
VP-8
Gas
Internet
SG-101
SG-102
MW-105/ SB-108
Former USTs Location
MW-8S
MW-8D
Pearl Street Mobil
SG-104
MW-14
Waste Oil AST Location
VP-10
VP-9
Gas
11 Hungerford

LEGEND

Monitoring Well

Soil Gas Point

20 0 10 20 40

SCALE
1":20'

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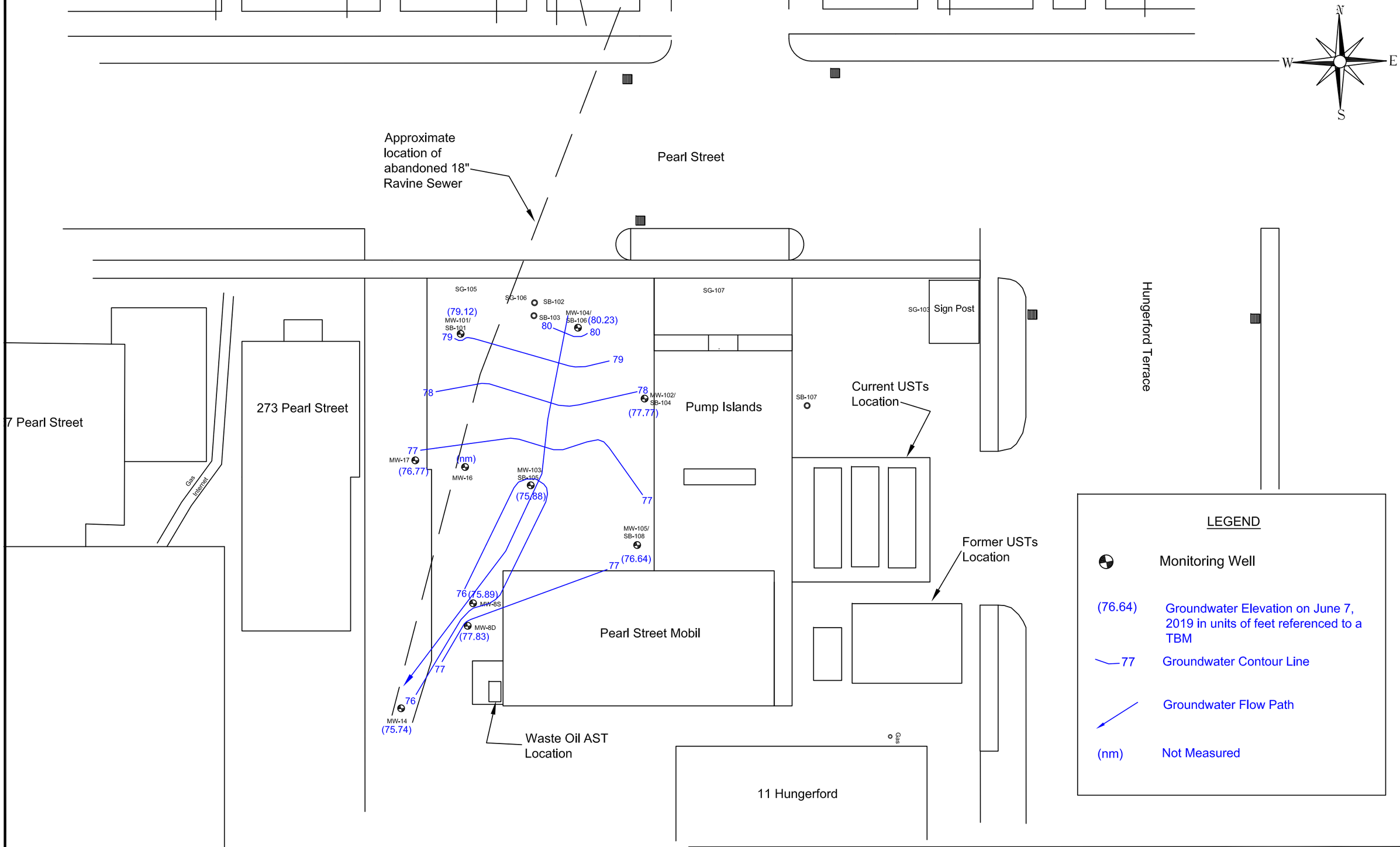
Environmental Scientists and Field Services

FS1:\project\15025\Site Plan.dwg

PROJECT NO. 15025		
CHECKED BY:	MR	THE VERTERRE GROUP 77 Vermont Avenue COLCHESTER, VERMONT (802) 654-8663
APPROVED BY:	MR	
DRAWN BY:	SRC	
SCALE:	1:20	
REVISED:	04/05/16	

FIGURE 2
SITE PLAN
Pearl Street Mobil
281 Pearl Street
Burlington, Vermont

Figure 2A: Aerial Site Plan



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FS1:\project\15025\Site Plan.dwg

PROJECT NO. 15025	
CHECKED BY:	MR
APPROVED BY:	MR
DRAWN BY:	SRC
SCALE:	1:20
REVISED:	04/05/16

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FIGURE 3
GROUNDWATER CONTOUR PLAN
June 7, 2019
Pearl Street Mobil
Burlington, Vermont

MW-103	
Trimethylbenzenes	214
Naphthalene	11

MW-105	
Benzene	5
MTBE	17
Trimethylbenzenes	70
Naphthalene	8

MW-8D	
Trimethylbenzenes	380
Naphthalene	6

MW-14	
Trimethylbenzenes	367

Approximate location of abandoned 18" Ravine Sewer

Pearl Street

Hungerford Terrace

7 Pearl Street

273 Pearl Street

11 Hungerford

Pearl Street Mobil

Pump Islands

Current USTs Location

Former USTs Location

Waste Oil AST Location

Sign Post

SG-105 SG-106 SG-107 SG-103

SB-102 SB-103 SB-107

MW-101/ SB-101 (ns)

MW-104/ SB-106 (<VGES)

MW-102/ SB-104 (ns)

MW-17 (ns)

MW-16 (ns)

MW-103/ SB-105

MW-105/ SB-108

(<VGES) MW-8S

MW-8D

MW-14

Gas

Internet

Gas

LEGEND

- Monitoring Well
- Soil Gas Point
- (380) Concentration of specific contaminants of concern above their respective VGES measured in units of ug/l on June 7, 2019 & June 11, 2019.
- (<VGES) Less than VGES but greater than MDL
- (ns) Not sampled

20 0 10 20 40

SCALE 1":20'

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FS1:\project\15025\Site Plan.dwg

PROJECT NO. 15025	
CHECKED BY:	MR
APPROVED BY:	MR
DRAWN BY:	SRC
SCALE:	1:20
REVISED:	04/05/16

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FIGURE 4
Contaminants of Concern
June 7 & 11, 2019
Pearl Street Mobil
Burlington, Vermont

Tables

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Table 1
SUMMARY OF GROUNDWATER ELEVATIONS
281 Pearl Street
SMS# 2012-4286
Verterre Project Number: 15025
281 Pearl Street, Burlington, Vermont
June 7, 2019

well Identification	top of PVC casing elevation (feet)	depth to water (feet)	depth of well (feet)	thickness of water table in well (feet)	product thickness (feet)	LNAPL correction factor	corrected depth to water (feet)	Water Table Elev. (feet)
MW-8S	97.84	21.95	28.00	6.05	0.00	0.00	21.95	75.89
MW-8D	97.85	20.02	34.42	14.40	0.00	0.00	20.02	77.83
MW-14	93.97	18.23	27.30	9.07	0.00	0.00	18.23	75.74
MW-16	97.20	NM	28.85	NM	NM	NM	NM	NM
MW-17	95.86	19.09	25.39	6.30	0.00	0.00	19.09	76.77
MW-101	96.86	17.74	30.00	12.26	0.00	0.00	17.74	79.12
MW-102	96.97	19.20	28.86	9.66	0.00	0.00	19.20	77.77
MW-103	97.39	21.51	28.65	7.14	0.00	0.00	21.51	75.88
MW-104	96.64	16.41	31.95	15.54	0.00	0.00	16.41	80.23
MW-105	98.12	21.48	34.80	13.32	0.00	0.00	21.48	76.64

Average depth to water is 19.51 feet.

Notes:

1. Elevation data are referenced to a TBM and are in units of feet.
2. Measurements recorded are referenced to a marking on top of PVC riser for each well. Units are in feet.
3. Depth to fluid measurements were obtained using a Solinst Interface Probe.
NM = Not Measured

Table 2
Summary of Volatile Organic Compounds (VOCs)
281 Pearl Street
SMS# 2012-4286
Verterre Project Number: 15025
281 Pearl Street, Burlington, Vermont
June 7, 2019 & June 11, 2019

Compound	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Trimethylbenzenes (135 & 124)	Naphthalene	Isopropyl benzene	n-Propyl benzene	sec Butyl Benzene	4 Isopropyl toluene	Total COC
Sample ID	**Concentration (ug/L)**											
MW-8S	<2	<2	<2	<4	<2	9	<5	<2	<2	<2	<2	9
MW-8D	<2	<2	<2	7	<2	***380***	***6***	19	43	13	26	494
MW-14	<10	<10	<10	<20	<10	***367***	***<25***	17	34	<10	<10	418
MW-16	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
MW-17	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
MW-101	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
MW-102	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
MW-103	<2	<2	6	41	2	***214***	***11***	15	32	10	12	343
MW-104	<2	<2	<2	6	<2	22	<5	3	3	<2	<2	34
MW-105	***5***	<2	<2	36	***17***	***70***	***8***	8	13	2	<2	159
DUP-1	<10	<10	<10	23	<10	***132***	<25	<10	21	<10	<10	176
Field Blank	<2	<2	<2	<4	<2	<4	<5	<2	<2	<2	<2	nd
VGES	5.0	1,000	700	10,000	11	23	0.5	ne	ne	ne	ne	ne

Relative Percent Difference

RPD for total COCs between MW-103 and DUP-1 was 64.3%
RPD for total MTBE between MW-103 and DUP-1 was not calculated because both values were less than 5X MDl

Notes:

1. VGES - Vermont Groundwater Enforcement Standard.
2. ne - VGES not established.
3. **Bold** and *Italic* numbers indicate concentrations or reporting limits that are at or exceed the VGES.
4. DUP-1 Duplicate sample collected for Quality Assurance/Quality Control.
5. All samples were analyzed for VOC's via US EPA Method 8260B.
6. ns - not sampled, nt - not tested, COC - contaminants of concern, nd - not detected.

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Appendix A

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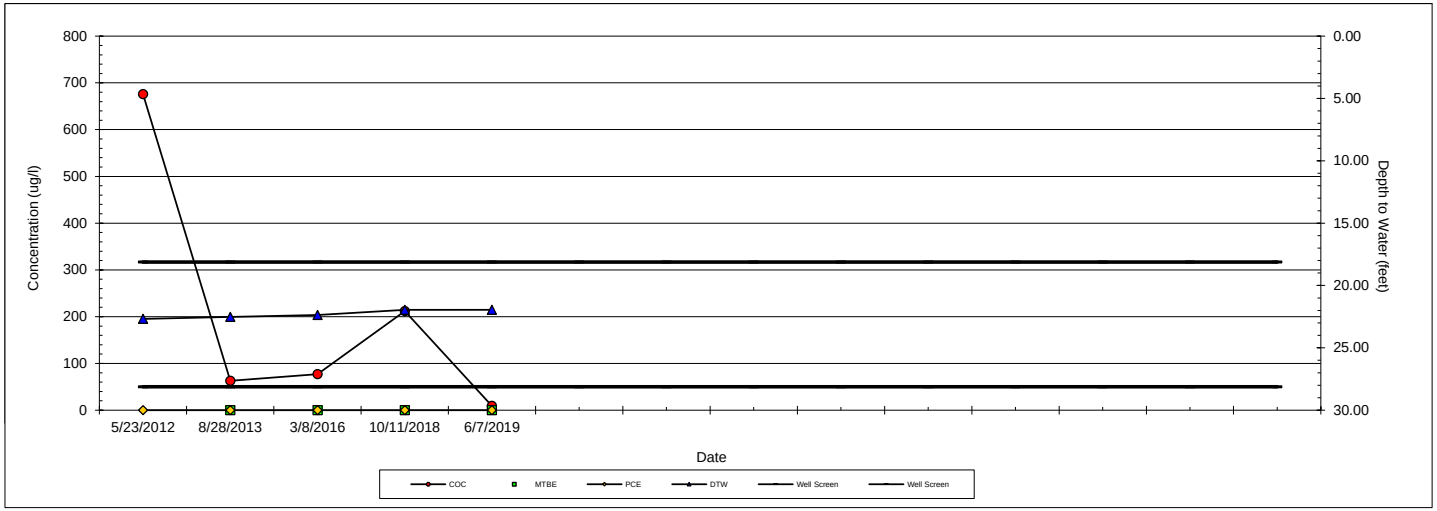
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-8S



	5/23/2012	8/28/2013	3/8/2016	10/11/2018	6/7/2019									
Benzene	<5	<2	<2	<2	<2									
Toluene	<5	<2	<2	<2	<2									
Ethylbenzene	<5	<2	<2	<2	<2									
Total Xylenes	<10	<6	<4	4	<4									
PCE	**<5**	**<2**	**<2**	**<2**	**<2**									
MTBE	**<10**	**<2**	**<2**	**<2**	**<2**									
TMBs	653	58	57	151	9									
Naphthalene	23	<2	<5	<5	<5									
COC	**676**	**63**	**77**	**212**	**9**									
DTW	**22.68**	**22.52**	**22.36**	**21.96**	**21.95**									

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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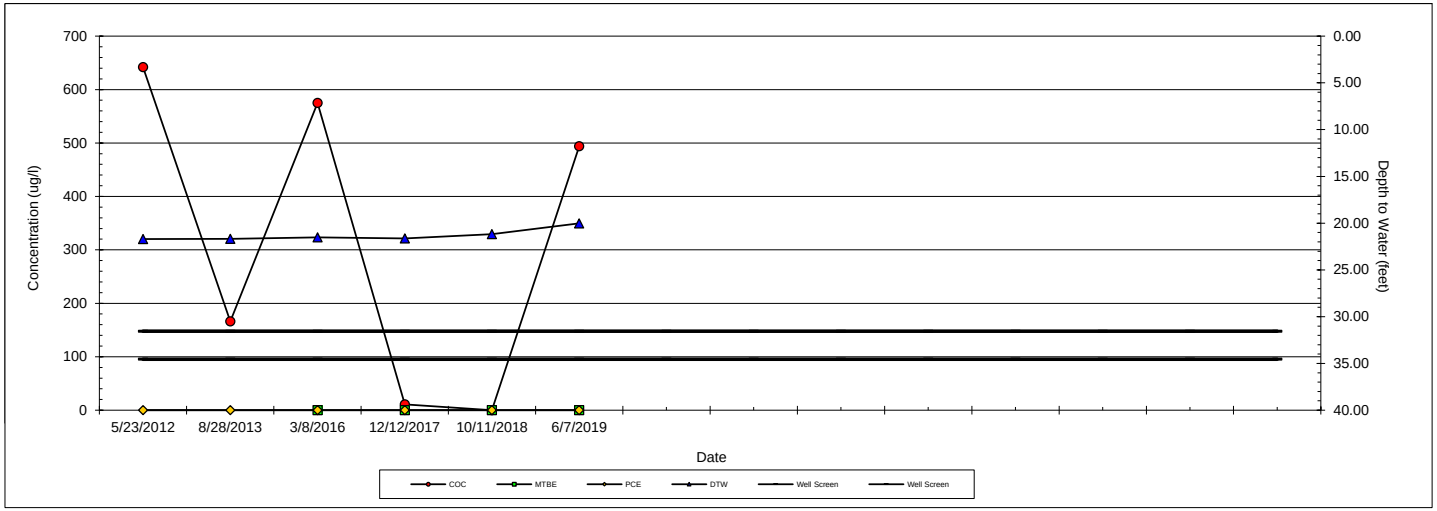
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-8D



	5/23/2012	8/28/2013	3/8/2016	12/12/2017	10/11/2018	6/7/2019								
Benzene	<5	<2	<2	<2	<2	<2								
Toluene	<5	<2	<2	<2	<2	<2								
Ethylbenzene	<5	<2	<2	<2	<2	<2								
Total Xylenes	<10	4	<4	<4	<4	7								
PCE	**<5**	**<2**	**<2**	**nt**	**<2**	**<2**								
MTBE	**<10**	**<2**	**<2**	**<2**	**<2**	**<2**								
TMBs	642	133	490	11	<4	380								
Naphthalene	<10	<2	<5	<5	<5	6								
COC	**642**	**166**	**575**	**11**	**nd**	**494**								
DTW	**21.70**	**21.67**	**21.53**	**21.63**	**21.18**	**20.02**								

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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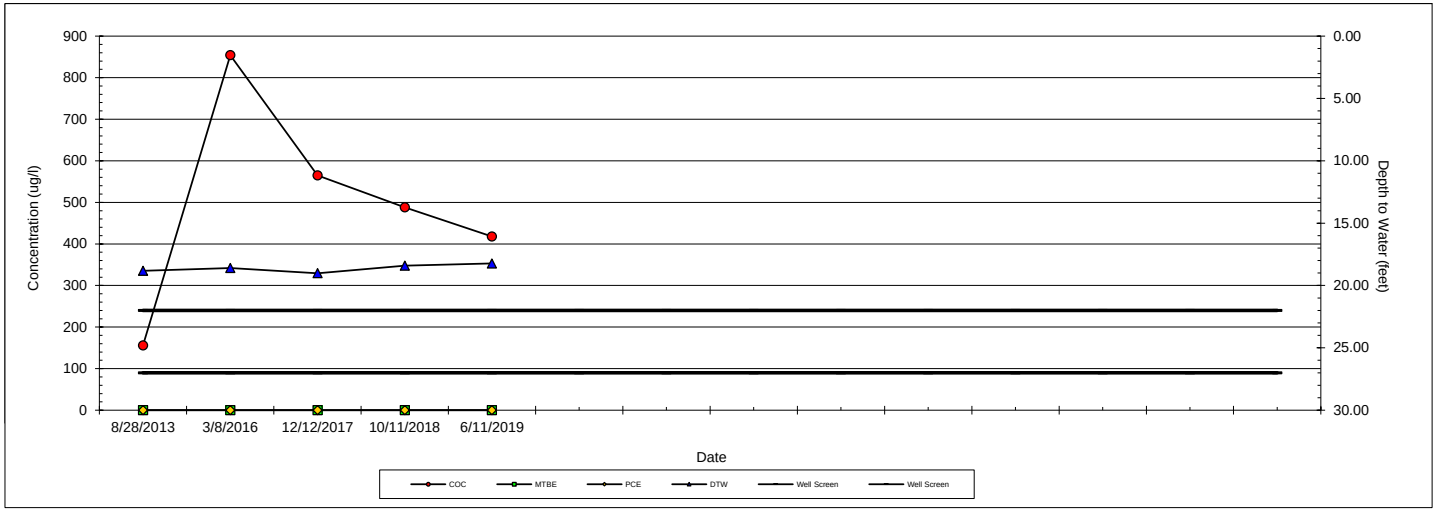
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-14



	8/28/2013	3/8/2016	12/12/2017	10/11/2018	6/11/2019									
Benzene	<2	<2	<10	<10	<10									
Toluene	<2	<2	<10	<10	<10									
Ethylbenzene	<2	3	<10	<10	<10									
Total Xylenes	13	21	15	10	<20									
PCE	**<2**	**<2**	**nt**	**<10**	**<10**									
MTBE	**<2**	**<2**	**<10**	**<10**	**<10**									
TMBs	129	690	550	420	367									
Naphthalene	2	16	<25	<25	<25									
COC	**156**	**854**	**565**	**488**	**418**									
DTW	**18.83**	**18.60**	**19.02**	**18.41**	**18.23**									

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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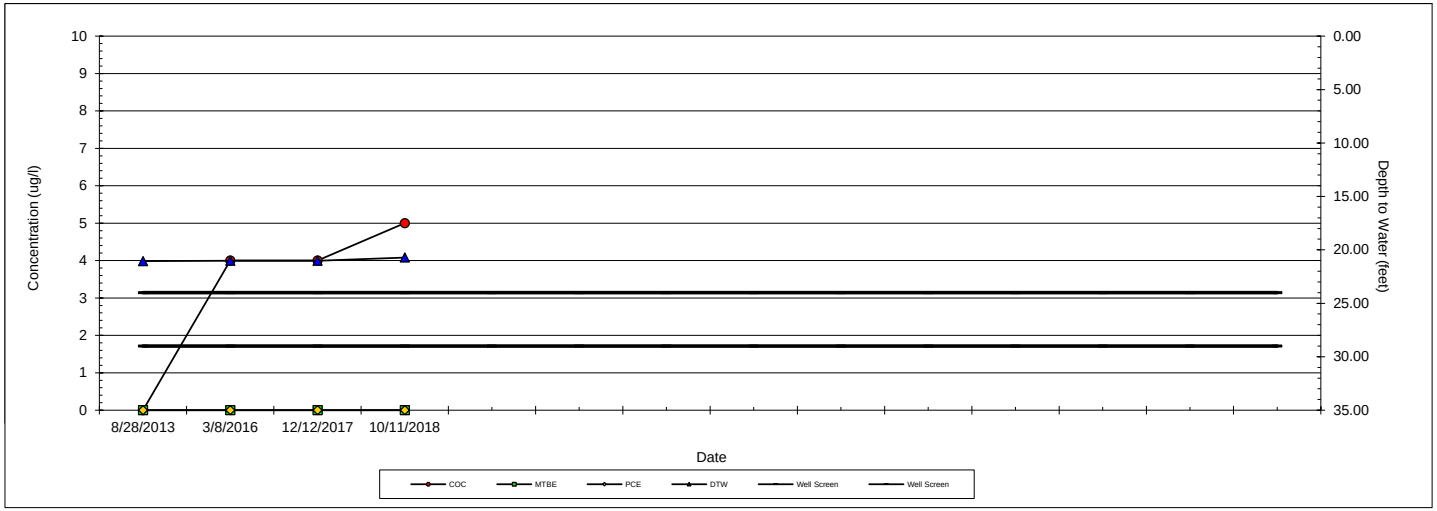
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-16



	8/28/2013	3/8/2016	12/12/2017	10/11/2018										
Benzene	<2	<2	<2	<2										
Toluene	<2	<2	<2	<2										
Ethylbenzene	<2	<2	<2	<2										
Total Xylenes	<4	<4	<4	<4										
PCE	**<2**	**<2**	**nt**	**<2**										
MTBE	**<2**	**<2**	**<2**	**<2**										
TMBs	<4	4	4	5										
Naphthalene	<2	<5	<5	<5										
COC	**nd**	**4**	**4**	**5**										
DTW	**21.05**	**21.02**	**21.02**	**20.72**										

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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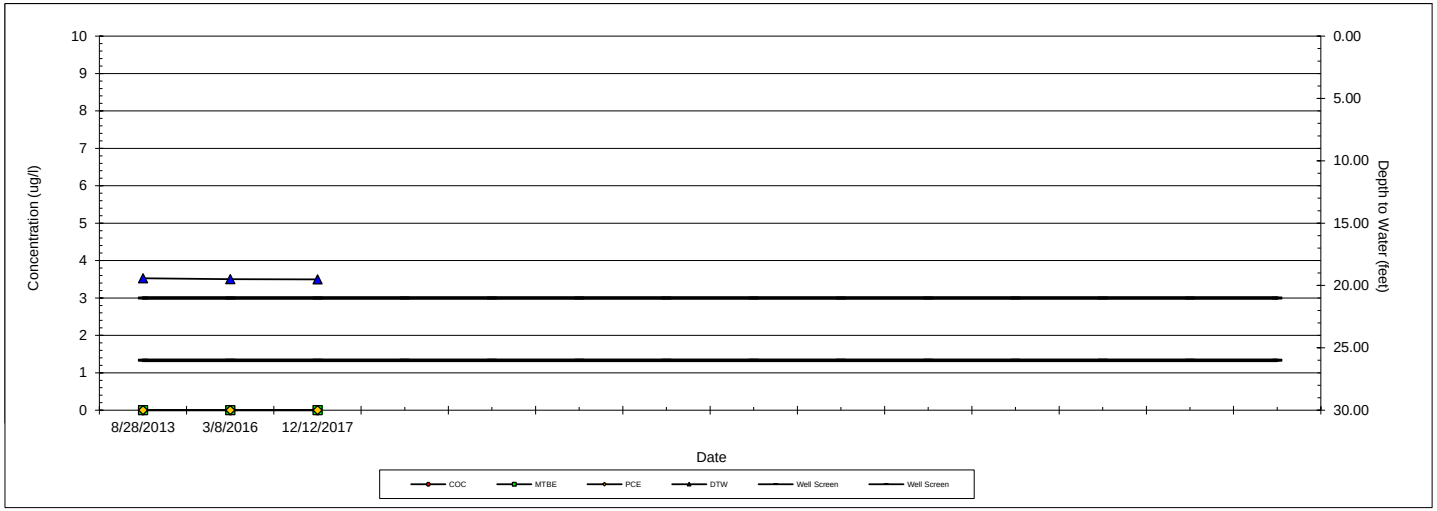
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-17



	8/28/2013	3/8/2016	12/12/2017											
Benzene	<2	<2	<2											
Toluene	<2	<2	<2											
Ethylbenzene	<2	<2	<2											
Total Xylenes	<4	<4	<4											
PCE	**<2**	**<2**	**nt**											
MTBE	**<2**	**<2**	**<2**											
TMBs	<4	<4	<4											
Naphthalene	<2	<2	<2											
COC	**nd**	**nd**	**nd**											
DTW	**19.42**	**19.50**	**19.51**											

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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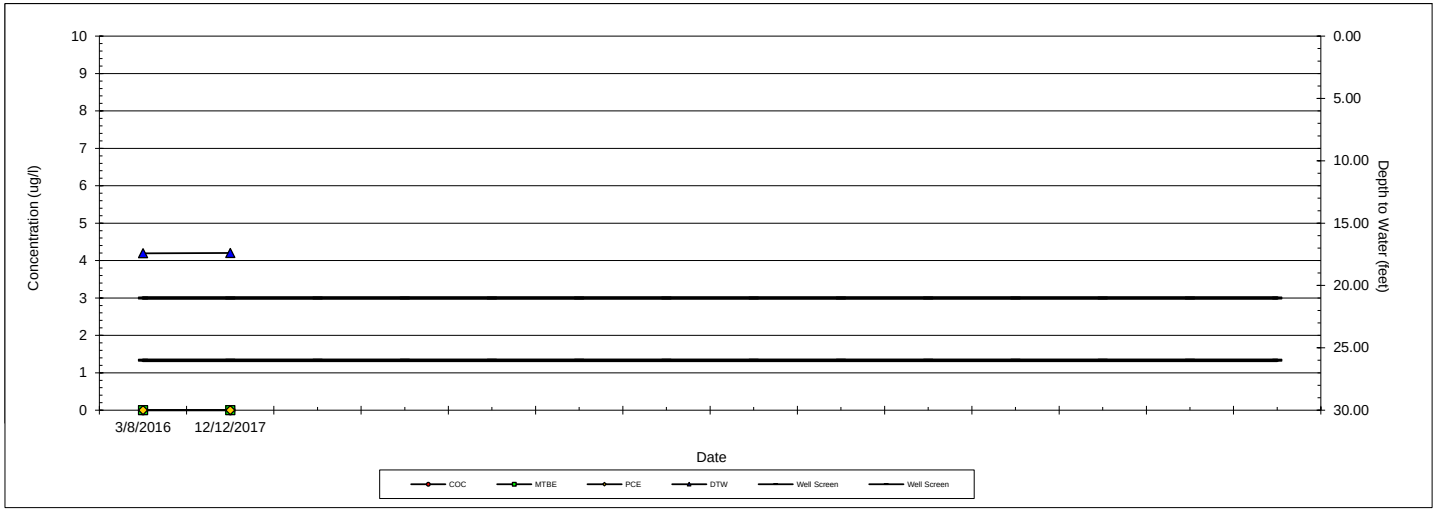
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-101



	3/8/2016	12/12/2017												
Benzene	<2	<2												
Toluene	<2	<2												
Ethylbenzene	<2	<2												
Total Xylenes	<4	<4												
PCE	**<2**	**nt**												
MTBE	**<2**	**<2**												
TMBs	<4	<4												
Naphthalene	<5	<5												
COC	**nd**	**nd**												
DTW	**17.42**	**17.39**												

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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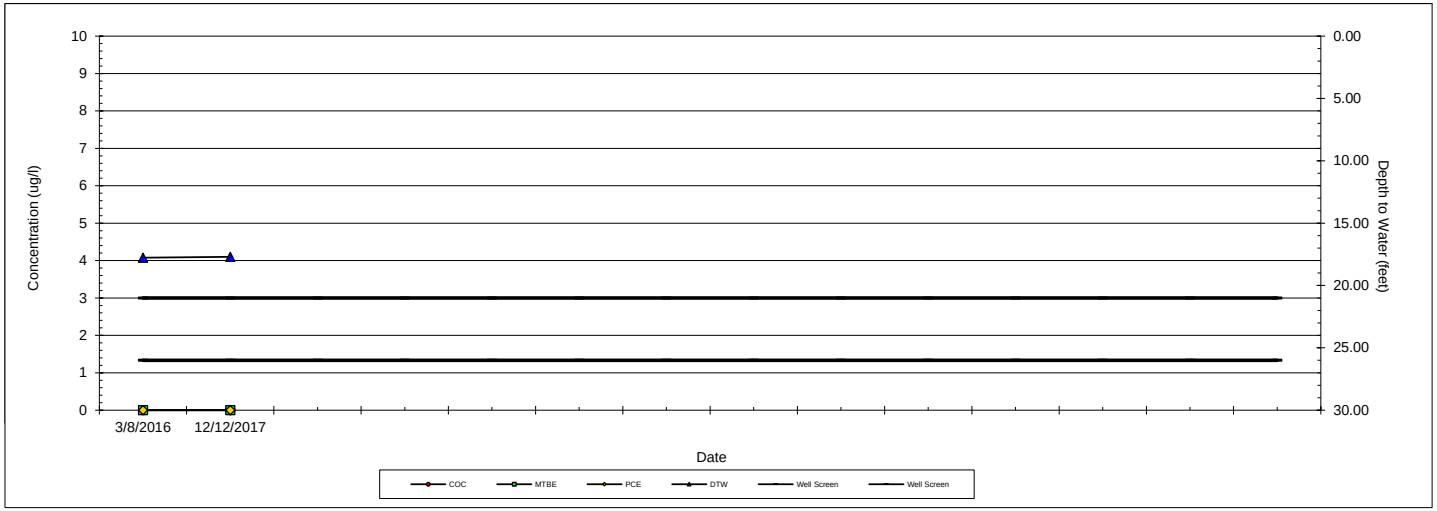
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-102



	3/8/2016	12/12/2017												
Benzene	<2	<2												
Toluene	<2	<2												
Ethylbenzene	<2	<2												
Total Xylenes	<4	<4												
PCE	**<2**	**nt**												
MTBE	**<2**	**<2**												
TMBs	<4	<4												
Naphthalene	<5	<5												
COC	**nd**	**nd**												
DTW	**17.77**	**17.70**												

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

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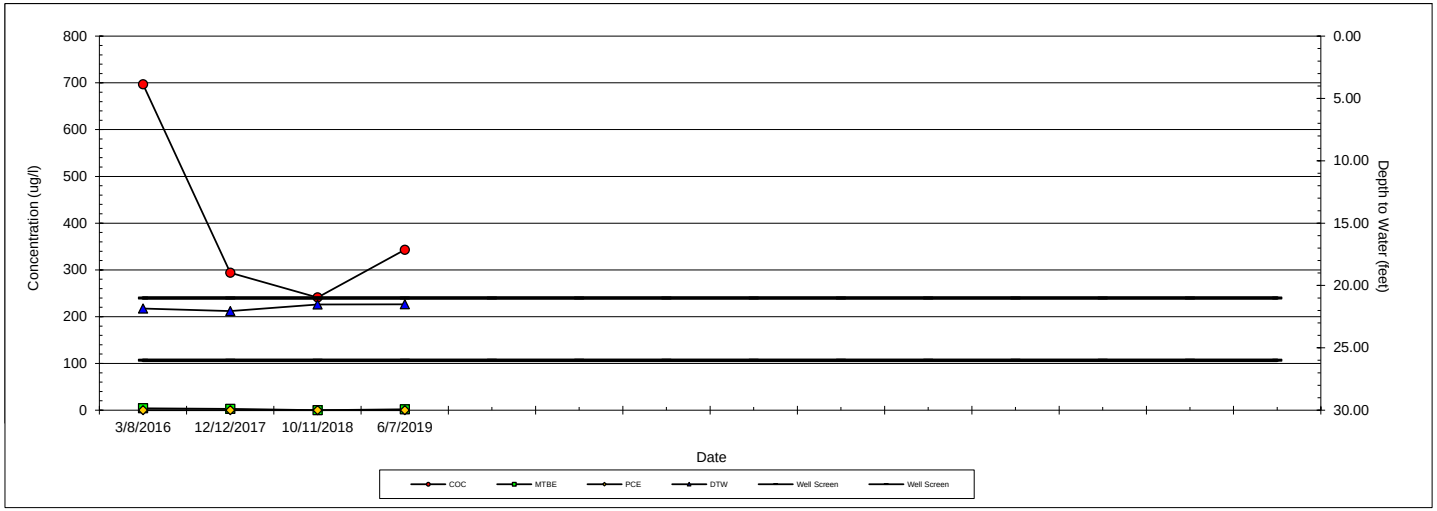
Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-103



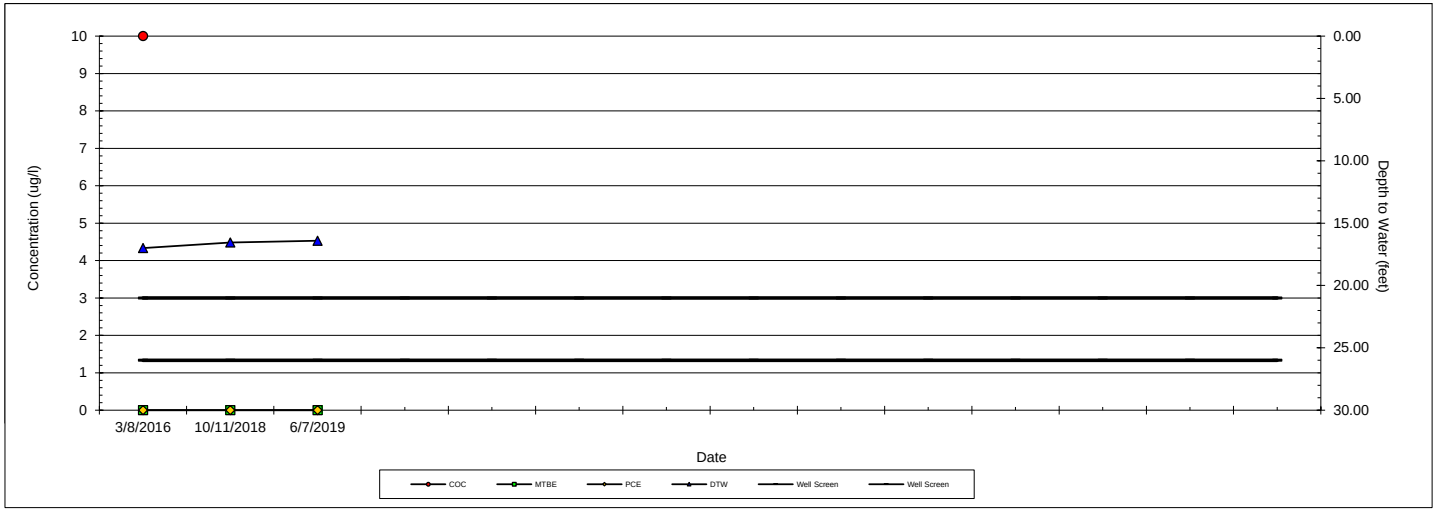
	3/8/2016	12/12/2017	10/11/2018	6/7/2019										
Benzene	<2	2	<10	<2										
Toluene	<2	<2	<10	<2										
Ethylbenzene	13	9	<10	6										
Total Xylenes	73	48	32	41										
PCE	**<2**	**nt**	**<10**	**<2**										
MTBE	**4**	**3**	**<10**	**2**										
TMBs	475	219	171	214										
Naphthalene	16	13	<25	11										
COC	**697**	**294**	**241**	**343**										
DTW	**21.85**	**22.05**	**21.53**	**21.51**										

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

The Verterre Group
Environmental Scientists and Field Services

Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-104



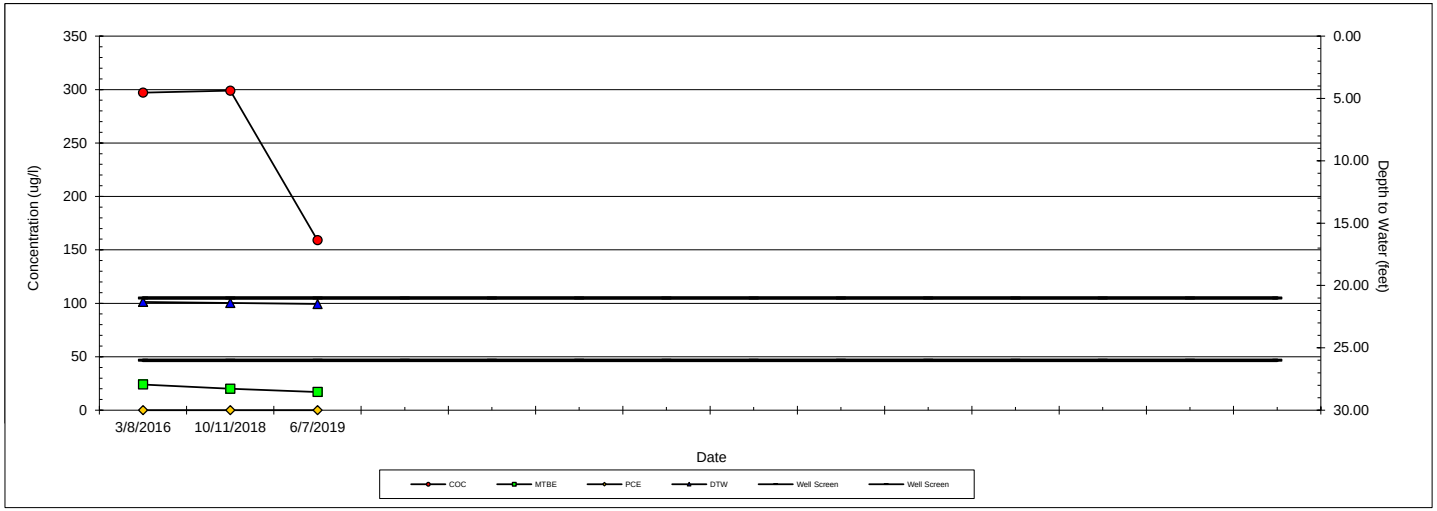
	3/8/2016	10/11/2018	6/7/2019											
Benzene	<2	<2	<2											
Toluene	<2	<2	<2											
Ethylbenzene	<2	<2	<2											
Total Xylenes	5	13	6											
PCE	**<2**	**<2**	**<2**											
MTBE	**<2**	**<2**	**<2**											
TMBs	5	39	22											
Naphthalene	<5	5	<5											
COC	**10**	**70**	**34**											
DTW	**17.00**	**16.55**	**16.41**											

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

The Verterre Group
Environmental Scientists and Field Services

Groundwater Quality and Elevation Trend Analysis
281 Pearl Street
MW-105



	3/8/2016	10/11/2018	6/7/2019											
Benzene	8	8	5											
Toluene	<2	<2	<2											
Ethylbenzene	5	4	<2											
Total Xylenes	76	84	36											
PCE	**<2**	**<2**	**<2**											
MTBE	**24**	**20**	**17**											
TMBs	134	123	70											
Naphthalene	15	19	8											
COC	**297**	**299**	**159**											
DTW	**21.32**	**21.41**	**21.48**											

Notes:

1. *Samples tested using EPA Method 8260.*
2. *Concentrations are in units of ug/l or parts per billion (ppb).*
3. *DTW - Depth to water measured using a Solinst interface probe as referenced to the top of PVC riser.*
4. *nd - Compound not detected above method detection limit. Summation in spreadsheet yields 0; however, actual concentration may be between zero and the method detection limit.*
   nt = not tested
   ns - not sampled
   fp - free product
5. *COC - Contaminants of Concern*
6. *COC total may include compounds that are not listed in this table.*
7. *TMBs - includes 135 & 125 Trimethylbenzenes*

The Verterre Group
Environmental Scientists and Field Services

Attachment 1

The Verterre Group

Environmental Scientists and Field Services

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Martha Roy
The Verterre Group
77 Vermont Avenue
Colchester, VT 05446

PO Number: None
Job ID: 48991
Date Received: 6/11/19

Project: 281 Pearl St. 15025

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

JLowe (for)

Jennifer Lowe
Laboratory Manager

Date of Approval: 6/25/2019
Total number of pages: 19

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-002
Sample ID: MW-8S
Matrix: Water
Sampled: 6/7/19 12:44

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
chloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
bromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
chloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
acetone	< 50	50	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
chloroform	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
benzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
bromodichloromethane	< 1	1	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
toluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
tetrachloroethene = PCE	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
ethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
m&p-xylenes	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-002
Sample ID: MW-8S
Matrix: Water
Sampled: 6/7/19 12:44

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
o-xylene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
styrene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
bromoform	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
isopropylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
n-propylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,3,5-trimethylbenzene	**2**	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2,4-trimethylbenzene	**7**	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
sec-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
4-isopropyltoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
naphthalene	< 5	5	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**95**	78-114	%	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
toluene-D8 SUR	**101**	88-110	%	1	AJD		1901553	6/14/19	17:45	SW5030C8260C
4-bromofluorobenzene SUR	**101**	86-115	%	1	AJD		1901553	6/14/19	17:45	SW5030C8260C

Absolute Resource associates

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-001
Sample ID: MW-8D
Matrix: Water
Sampled: 6/7/19 12:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
chloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
bromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
chloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
acetone	< 50	50	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
chloroform	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
benzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
bromodichloromethane	< 1	1	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
toluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
ethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
m&p-xylenes	**7**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-001
Sample ID: MW-8D
Matrix: Water
Sampled: 6/7/19 12:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
o-xylene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
styrene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
bromoform	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
isopropylbenzene	**19**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
n-propylbenzene	**43**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,3,5-trimethylbenzene	**100**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2,4-trimethylbenzene	**280**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
sec-butylbenzene	**13**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
4-isopropyltoluene	**26**	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
naphthalene	**6**	5	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**89**	78-114	%	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
toluene-D8 SUR	**107**	88-110	%	1	AJD		1901553	6/14/19	12:02	SW5030C8260C
4-bromofluorobenzene SUR	**102**	86-115	%	1	AJD		1901553	6/14/19	12:02	SW5030C8260C

Absolute Resource associates

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-003
Sample ID: MW-103
Matrix: Water
Sampled: 6/7/19 12:57

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
chloromethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
bromomethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
chloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
acetone	< 50	50	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
methyl t-butyl ether (MTBE)	**2**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
chloroform	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
benzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
bromodichloromethane	< 1	1	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
toluene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
ethylbenzene	**6**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
m&p-xylenes	**41**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-003
Sample ID: MW-103
Matrix: Water
Sampled: 6/7/19 12:57

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
o-xylene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
styrene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
bromoform	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
isopropylbenzene	**15**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
n-propylbenzene	**32**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,3,5-trimethylbenzene	**34**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2,4-trimethylbenzene	**180**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
sec-butylbenzene	**10**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
4-isopropyltoluene	**12**	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
naphthalene	**11**	5	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
toluene-D8 SUR	**119** *	88-110	%	1	AJD		1901579	6/17/19	17:54	SW5030C8260C
4-bromofluorobenzene SUR	**106**	86-115	%	1	AJD		1901579	6/17/19	17:54	SW5030C8260C

**** The surrogate showed recovery outside the acceptance limits. Matrix interference suspected. No additional sample remains for re-analysis.***

Absolute Resource associates

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-004
Sample ID: MW-104
Matrix: Water
Sampled: 6/7/19 13:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
chloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
bromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
chloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
acetone	< 50	50	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
chloroform	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
benzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
bromodichloromethane	< 1	1	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
toluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
ethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
m&p-xylenes	**6**	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-004
Sample ID: MW-104
Matrix: Water
Sampled: 6/7/19 13:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
o-xylene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
styrene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
bromoform	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
isopropylbenzene	**3**	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
n-propylbenzene	**3**	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,3,5-trimethylbenzene	**4**	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2,4-trimethylbenzene	**18**	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
sec-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
4-isopropyltoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
naphthalene	< 5	5	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**93**	78-114	%	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
toluene-D8 SUR	**103**	88-110	%	1	AJD		1901553	6/14/19	17:18	SW5030C8260C
4-bromofluorobenzene SUR	**101**	86-115	%	1	AJD		1901553	6/14/19	17:18	SW5030C8260C

Absolute Resource associates

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-005
Sample ID: MW-105
Matrix: Water
Sampled: 6/7/19 13:28

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
chloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
bromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
chloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
acetone	< 50	50	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
methyl t-butyl ether (MTBE)	**17**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
chloroform	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
benzene	**5**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
bromodichloromethane	< 1	1	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
toluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
ethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
m&p-xylenes	**36**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-005
Sample ID: MW-105
Matrix: Water
Sampled: 6/7/19 13:28

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
o-xylene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
styrene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
bromoform	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
isopropylbenzene	**8**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
n-propylbenzene	**13**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,3,5-trimethylbenzene	**8**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2,4-trimethylbenzene	**62**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
sec-butylbenzene	**2**	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
4-isopropyltoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
naphthalene	**8**	5	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
toluene-D8 SUR	**105**	88-110	%	1	AJD		1901553	6/14/19	18:11	SW5030C8260C
4-bromofluorobenzene SUR	**102**	86-115	%	1	AJD		1901553	6/14/19	18:11	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-006
Sample ID: DUP-1
Matrix: Water
Sampled: 6/7/19 14:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
chloromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
vinyl chloride	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
bromomethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
chloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
trichlorofluoromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
diethyl ether	< 25	25	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
acetone	< 250	250	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1-dichloroethene	< 5	5	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
methylene chloride	< 25	25	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
carbon disulfide	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
methyl t-butyl ether (MTBE)	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
trans-1,2-dichloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1-dichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
2-butanone (MEK)	< 50	50	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
2,2-dichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
cis-1,2-dichloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
chloroform	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
bromochloromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
tetrahydrofuran (THF)	< 50	50	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1,1-trichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1-dichloropropene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
carbon tetrachloride	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2-dichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
benzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
trichloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2-dichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
bromodichloromethane	< 3	3	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
dibromomethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 50	50	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
cis-1,3-dichloropropene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
toluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
trans-1,3-dichloropropene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
2-hexanone	< 50	50	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1,2-trichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,3-dichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
tetrachloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
dibromochloromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2-dibromoethane (EDB)	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
chlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1,1,2-tetrachloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
ethylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
m&p-xylenes	**23**	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-006
Sample ID: DUP-1
Matrix: Water
Sampled: 6/7/19 14:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
o-xylene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
styrene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
bromoform	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
isopropylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,1,2,2-tetrachloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2,3-trichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
n-propylbenzene	**21**	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
bromobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,3,5-trimethylbenzene	**22**	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
2-chlorotoluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
4-chlorotoluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
tert-butylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2,4-trimethylbenzene	**110**	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
sec-butylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,3-dichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
4-isopropyltoluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,4-dichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2-dichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
n-butylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2,4-trichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
hexachlorobutadiene	< 2.5	2.5	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
naphthalene	< 25	25	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
1,2,3-trichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**96**	78-114	%	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
toluene-D8 SUR	**106**	88-110	%	5	AJD		1901579	6/17/19	20:33	SW5030C8260C
4-bromofluorobenzene SUR	**100**	86-115	%	5	AJD		1901579	6/17/19	20:33	SW5030C8260C

Note: Dilution was required due to hydrocarbon interference in the sample.

Absolute Resource associates

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-007
Sample ID: FB
Matrix: Water
Sampled: 6/7/19 12:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
chloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
bromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
chloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
diethyl ether	< 5	5	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
acetone	< 50	50	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
carbon disulfide	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
methyl t-butyl ether (MTBE)	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
2-butanone (MEK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
2,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
chloroform	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
bromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
tetrahydrofuran (THF)	< 10	10	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
benzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
bromodichloromethane	< 1	1	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
dibromomethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 10	10	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
toluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
2-hexanone	< 10	10	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,3-dichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2-dibromoethane (EDB)	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1,1,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
ethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
m&p-xylenes	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-007
Sample ID: FB
Matrix: Water
Sampled: 6/7/19 12:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
o-xylene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
styrene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
bromoform	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
isopropylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2,3-trichloropropane	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
n-propylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
bromobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,3,5-trimethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
2-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
4-chlorotoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
tert-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2,4-trimethylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
sec-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,3-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
4-isopropyltoluene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,4-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2-dichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
n-butylbenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2,4-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
hexachlorobutadiene	< 0.5	0.5	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
naphthalene	< 5	5	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
1,2,3-trichlorobenzene	< 2	2	ug/L	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
toluene-D8 SUR	**102**	88-110	%	1	AJD		1901553	6/14/19	11:36	SW5030C8260C
4-bromofluorobenzene SUR	**100**	86-115	%	1	AJD		1901553	6/14/19	11:36	SW5030C8260C

Absolute Resource associates

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-008
Sample ID: MW-14
Matrix: Water
Sampled: 6/11/19 11:46

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
dichlorodifluoromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
chloromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
vinyl chloride	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
bromomethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
chloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
trichlorofluoromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
diethyl ether	< 25	25	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
acetone	< 250	250	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1-dichloroethene	< 5	5	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
methylene chloride	< 25	25	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
carbon disulfide	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
methyl t-butyl ether (MTBE)	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
trans-1,2-dichloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1-dichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
2-butanone (MEK)	< 50	50	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
2,2-dichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
cis-1,2-dichloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
chloroform	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
bromochloromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
tetrahydrofuran (THF)	< 50	50	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1,1-trichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1-dichloropropene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
carbon tetrachloride	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2-dichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
benzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
trichloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2-dichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
bromodichloromethane	< 3	3	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
dibromomethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
4-methyl-2-pentanone (MIBK)	< 50	50	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
cis-1,3-dichloropropene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
toluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
trans-1,3-dichloropropene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
2-hexanone	< 50	50	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1,2-trichloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,3-dichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
tetrachloroethene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
dibromochloromethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2-dibromoethane (EDB)	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
chlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1,1,2-tetrachloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
ethylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
m&p-xylenes	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C

Project ID: 281 Pearl St. 15025
Job ID: 48991
Sample#: 48991-008
Sample ID: MW-14
Matrix: Water
Sampled: 6/11/19 11:46

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
o-xylene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
styrene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
bromoform	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
isopropylbenzene	**17**	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,1,2,2-tetrachloroethane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2,3-trichloropropane	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
n-propylbenzene	**34**	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
bromobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,3,5-trimethylbenzene	**97**	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
2-chlorotoluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
4-chlorotoluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
tert-butylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2,4-trimethylbenzene	**270**	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
sec-butylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,3-dichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
4-isopropyltoluene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,4-dichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2-dichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
n-butylbenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2-dibromo-3-chloropropane (DBCP)	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2,4-trichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
hexachlorobutadiene	< 2.5	2.5	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
naphthalene	< 25	25	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
1,2,3-trichlorobenzene	< 10	10	ug/L	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**96**	78-114	%	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
toluene-D8 SUR	**105**	88-110	%	5	AJD		1901579	6/17/19	21:00	SW5030C8260C
4-bromofluorobenzene SUR	**104**	86-115	%	5	AJD		1901579	6/17/19	21:00	SW5030C8260C

Note: Dilution was required due to hydrocarbon interference in the sample.

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

48991

mpany Name: The Verterre Group
mpany Address: 72 VT Avenue, Colchester, VT 05446
port To: Martha Ray
one #: 802-654-8665
oice to Email:
Hard Copy Invoice Required

Project Name: 281 Pearl St
Project #: 15025
Project Location: NH MA ME (VT) NY Other
Protocol: RCRA MCP SDWA NHDES NPDES OTHER
Reporting Limits: QAPP EPA DW GW-1 Other S-1
Quote # 5325 ☐ NH Reimbursement Pricing
PO #

ANALYSIS REQUEST

☐ VOC 8260 NHDES ☐ VOC 8260 MADEP ☐ VOC 8260 ☐ VOC 624 ☐ VOC BTEX ☐ MtBE, only ☐ VOC 8021VT ☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane ☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G SM5520F ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	Grab (G) or Composite (C)
	~~MW-14~~	2	✓			✓					6/7/19	12:38	PG	
899401	MW-8D											12:50		
-02	MW-8S											12:44		
-03	MW-103											12:57		
-04	MW-104											13:15		
-05	MW-105											13:28		
-06	Dup-1											14:00		
-07	FB	✓	✓			✓					✓	12:00	✓	✓

Canceled per phone call from Martha 6/11/19 G 1,9,C

TAT REQUESTED
☐ iority (24 hr)*
☐ pedited (48 hr)*
☐ andard (Business Days)
ate Needed

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS 5 Day

REPORTING INSTRUCTIONS ☐ PDF (e-mail address)
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☐ YES ☐ NO
TEMPERATURE 3 °C

CUSTODY RECORD		Date	Time		Date	Time
D-01 Revision 01/09/15	Relinquished by Sampler: Fletcher Rose	6/7/19	15:09	Received by: UPS	6/7/19	15:09
	Relinquished by: UPS	6/11/19	12:45	Received by:		
	Relinquished by:			Received by Laboratory:	6/11/19	12:45

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

~~49034~~ 48991

Company Name: The Vertex Group

Company Address: 77 Vermont Ave. Colchester, VT 05446

Report To: Martha Roy

Phone #: 802-654-8663 x11

Invoice to Email: _____

☐ Hard Copy Invoice Required

Project Name: 281 Pearl St

Project #: 15025

Project Location: NH MA ME (VT) NY Other _____

Protocol: RCRA SDWA NPDES MCP NHDES OTHER

Reporting Limits: QAPP GW-1 S-1 EPA DW Other _____

Quote # 5325 ☐ NH Reimbursement Pricing

PO # _____

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	☑ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP	☐ VOC 624 ☐ VOC BTEX ☐ MBE, only ☐ VOC 8021VT	☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane	☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:	☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint	☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB	☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB	☐ O&G 1664 ☐ Mineral O&G SM5520F	☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity	☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity	☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness	☐ Total Metals-list:	☐ Dissolved Metals-list:	☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC	☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN	☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P	☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride	☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitability/FP	☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide	Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde	Grab (G) or Composite (C)
~~49034-01~~	MW-14	2	✓			✓					6/11/19	11:45	FC	✓																							G

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS: 5 day

REPORTING INSTRUCTIONS ☐ PDF (e-mail address) _____
☐ HARD COPY REQUIRED ☐ FAX (FAX#) _____

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 6.5 °C

CUSTODY RECORD
QSD-01 Revision 01/09/15

		Date	Time		Date	Time
Relinquished by Sampler:	Hilton Case	6/11/19	12:16	Received by:	UPS	
Relinquished by:				Received by:		
Relinquished by:	UPS	6/11/19	13:36	Received by Laboratory:		6/12/19 13:30