

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Region 8 Main Office

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December 27, 2021

Jane Forbes
Sr. Environmental Specialist
City of Rochester
Division of Environmental Quality
30 Church Street, Room 300B
Rochester, NY 14614

Re: Site Management
Periodic Review Report Response Letter
1200 East Main Street
Site No.: B00129
City of Rochester Monroe (C)

Dear Ms. Forbes:

The Department has reviewed your Periodic Review Report and IC/EC Certification for following period: June 11, 2020 to June 11, 2021.

The Department hereby accepts the Periodic Review Report.

The Department requests that the groundwater sampling logs for the Site have the depth to groundwater and the intake depth indicated on all logs completed.

The frequency of Periodic Reviews for this site is triennial, your next PRR is due on September 1, 2024. You will receive a reminder letter and updated certification form 75-days prior to the due date. Regardless of receipt or not, of the reminder notice, the next PRR including the signed certification form, is still due on the date specified above.

If you have any questions, concerns, need additional forms, or need further assistance with the Site, please feel free to contact me at 585-226-5354 or via e-mail at charlotte.theobald@dec.ny.gov.

Sincerely,



Charlotte Theobald
Project Manager
Assistant Engineer

ec:

Anne Spaulding (City of Rochester)

Joseph Biondolillo (City of Rochester)

Justin Deming (NYSDOH)

Melissa Doroski (NYSDOH)

David Pratt (NYSDEC)

Todd Caffoe (NYSDEC)



BERGMANN
ARCHITECTS ENGINEERS PLANNERS

PERIODIC REVIEW REPORT

June 11, 2020 – June 11, 2021

1200 East Main Street ERP – NYSDEC Site Number B00129

City of Rochester, Monroe County, New York



Bergmann

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Project Number: 014681.02

September 22nd, 2021



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List of Acronyms

AOC	Area of Concern
AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
DO	Dissolved Oxygen
DUSR	Data Usability Summary Report
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
FER	Final Engineering Report
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
LNAPL	Light Non-Aqueous Phase Liquid
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
ORP	Oxygen Reduction Potential
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act



List of Acronyms (contd.)

RI/FS	Remedial Investigation/Feasibility
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program
VEGE	Vacuum Enhanced Groundwater Extraction



EXECUTIVE SUMMARY

1200 East Main Street Site #B00129, herein referred to as the "Site," is located at 1200 East Main Street in the City of Rochester, Monroe County, New York. The Site is a 0.62-acre vacant parcel and is bounded by residential properties to the north, a vacant lot to the east, East Main Street to the south, and a commercial building to the west (Figures 1 and 2).

The City of Rochester (City) is the current owner of the Site and entered into a State Assistance Contract (SAC) on July 23, 2007 to remediate the Site (Contract Number: C303409). Previous environmental assessments and two (2) phases of a subsurface investigation conducted by Bergmann indicated the presence of impacted soil and groundwater at the Site. A detailed summary of investigation findings is provided in the Site Investigation/ Remedial Alternatives Report (Bergmann, September 29, 2005).

The Site was remediated in accordance with the Remedy selected by the New York State Department of Environmental Conservation (NYSDEC) and detailed in the Record of Decision (ROD), dated March 31, 2006. The factors considered during the selection of the Remedy are those listed in 6NYCRR Part 375 1.8(f). The Remedy was performed during four (4) project phases as discussed in the ROD and Final Engineering Report (FER) (Bergmann, November 2018).

The selected Remedy, as discussed in the ROD, broadly includes the following: 1) Source Removal and Groundwater Treatment; 2) Institutional Controls; 3) Engineering Controls; and 4) Groundwater monitoring.

A summary of Remedial Actions completed at the Site is provided in the FER. The effectiveness of the remedial program, as outlined in the Site Management Plan (SMP), is monitored through quarterly groundwater sampling and an annual Site Inspection which are presented in the annual PRR. Post-remedial groundwater data from this Reporting Period (June 11, 2020 – June 11, 2021) indicates Volatile Organic Compounds (VOC) concentrations in exceedance of 6 NYCRR Part 703.5 Class GA Ambient Groundwater Quality Standards at select monitoring wells. However, an overall declining trend, with minor fluctuation, of Total VOC concentration was observed in the data during this Reporting Period and since initiation of groundwater monitoring in 2016. SVOCs were non-detect during the Reporting Period. Refer to the attached Tables 1 – 4 and Contaminant Trend Charts 1 – 6.

The City of Rochester Division of Environmental Quality (DEQ) petitioned the NYSDEC to deactivate the Oxygen Injection System/Soil Vapor Extraction (SVE) System, an Engineering Control (EC), in 2019 to assess the potential for constituent rebound at the Site. NYSDEC approval for deactivation of the systems was received and removal was completed in May 2019. The data indicates that deactivation of the Oxygen Injection System/SVE System did not result in a rebound in VOCs during this Reporting Period. The data suggests that no additional treatment of the Site's groundwater is recommended at this time.

A Change of Use Notification was also submitted to the NYSDEC by the City of Rochester on April 1, 2020. The requested Change of Use involved redevelopment of the Site and adjoining parcels to the east into a new public safety office for the City of Rochester Police Department. The redevelopment involves physical alterations, re-zoning, property line combinations, and other administrative changes that require the review and approval of the NYSDEC. In addition, the City of Rochester also petitioned decommissioning of the existing groundwater monitoring wells and a reduction in sampling frequency.

The City of Rochester received a Change of Use approval letter from the NYSDEC, dated June 17, 2020. The approval is contingent on several factors including but not limited to SMP and Excavation Work Plan implementation. The approval letter acknowledged the requested decommissioning of eleven (11) on-Site



groundwater monitoring wells, but the NYSDEC did not accept that request in its entirety. The NYSDEC was amenable to a reduction in the number of groundwater monitoring wells as well as reducing the sampling frequency from quarterly to annually for at least two (2) years. The following monitoring wells were approved for decommissioning pursuant to NYSDEC Commissioner's Policy (CP)-43: Groundwater Monitoring Well Decommissioning Policy – MW-2, MW-4, MW-9R, MW-10, MW-15R, and MW-16. Annual groundwater monitoring will continue at MW-1, MW-3, MW-7R, MW-8, and MW-11; therefore, these wells will be either protected during Site development or re-installed post-redevelopment/construction. Change of Use documentation is provided in Appendix G. It is noted that no redevelopment has occurred at the Site during this Reporting Period. The reduced sampling frequency from quarterly to annually was completed at MW-1, MW-3, MW-7R, MW-8, and MW-11 during this Reporting Period, as approved by the NYSDEC.

The implemented remedies are effective, protective and are progressing towards the Remedial Action Objectives (RAOs) to eliminate or reduce to the extent practicable 1) Exposures of persons at or around the Site to VOCs and SVOCs in soil and groundwater; 2) The release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and 3) The release of contaminants from subsurface soil and groundwater into indoor air through soil vapor. The Institutional Controls (ICs) outlined in the Monitoring and Sampling Plan were fully in place and effective during this Reporting Period.

Based on the NYSDEC-approved Change of Use and EC change, a revision to the SMP and resubmission to the NYSDEC for review and approval is required. The revised SMP is being prepared concurrently with this PRR. In addition, an active Sub-Slab Depressurization System (SSDS) will need to be installed in any new structures built as part of Site redevelopment, as specified in the SMP. The Institutional Control/Engineering Control (IC/EC) Form has been completed as required by the SMP and is included as Appendix D.

1.0 PERIODIC REVIEW REPORT

This Periodic Review Report (PRR) was prepared by Bergmann, on behalf of the City of Rochester, in accordance with the requirements set forth in the NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation, dated May 2010. The Reporting Period for this PRR is from June 11, 2020 to June 11, 2021. The following items are included in this PRR:

- Identification, assessment, and certification of all ICs/ECs required by the Remedy for the Site;
- Results of the Site inspection and sampling events including applicable inspection forms and other records generated for the Site during the Reporting Period;
- A summary of any discharge monitoring data and/or information generated during the Reporting Period with comments and conclusions;
- Data summary tables of groundwater Contaminants of Concern by media;
- Laboratory analytical results and the required laboratory data deliverables for each sample collected during the Reporting Period have been and will continue to be submitted electronically in a NYSDEC-approved EQUS format; and
- Summary of monitoring well decommissioning activities as approved by the NYSDEC.
- A Site evaluation, which includes the following:
 - I. The compliance of the Remedy with the requirements of the Site-specific Record of Decision (ROD) including ICs/ECs;



- II. The operation and the effectiveness of each treatment unit, including identification of any needed repairs or modifications;
- III. Any new conclusions or observations regarding Site contamination based on inspection or lab data generated during the monitoring events;
- IV. Recommendations regarding any necessary changes to the Remedy and/or SMP; and
- V. The overall performance and effectiveness of the Remedy to date.

2.0 SITE OVERVIEW

The Site is located at 1200 East Main Street in the City of Rochester, Monroe County, New York; near the northwest intersection of East Main and Laura Street. Refer to Figure 1 – Site Location Map. The Site is approximately 0.622-acres and is bounded by residential properties to the north, a vacant lot to the east, East Main Street to the south, and a commercial building to the west. The boundaries of the Site are more fully described in the metes and bounds description of the Environmental Easement as provided in the SMP. The owner of the Site at the issuance of this PRR is the City of Rochester.

Prior to issuance of the ROD, Site Investigation and Interim Remedial Measures (IRM) were completed, as listed below.

Phase I Environmental Site Assessment (ESA) (Bergmann, October 24, 2005)

Phase I Environmental Site Assessment (ESA) was completed for 1200 East Main Street Rochester, New York on behalf of the City of Rochester. The ESA revealed evidence of Recognized Environmental Conditions (RECs) in connection with the Site as noted below:

- Historical activities associated with the Site and its operation as a gas station for approximately 60 years. The Site was currently undergoing remedial activities.
- The Auto Zone property located to the west of the Subject Property and a waste oil tank and remediation activities associated with it.

Remedial Site Investigation – Site Investigation/Remedial Alternatives Report (Bergmann, September 29, 2005)

The Site Investigation was conducted from June 2002 to October 2004 to determine the nature and extent of contamination at the Site. Based on site investigation results, the Contaminants of Concern (COCs) at the Site were determined to be petroleum-related VOCs, petroleum-related SVOCs, metals (arsenic lead, mercury, and silver), and Polychlorinated Biphenyls (PCBs). PCBs, primarily Aroclor 1242, were detected in one (1) off-Site surface soil sample.

Tank and Soil Removal and Building Demolition (June 2000)

Five (5) single-walled steel Underground Storage Tanks (USTs) and associated piping and dispenser pumps were removed and disposed off-site to a permitted facility. The gasoline and diesel USTs consisted of one (1) 3,000-gallon tank, two (2) 4,000-gallon tanks, and two (2) 6,000-gallon tanks. Approximately 700 gallons of gasoline were removed from the USTs and disposed of off-site and approximately 412.5 tons of petroleum contaminated soils were excavated and disposed off-Site at a permitted landfill facility. Confirmatory soil sampling indicated evidence of petroleum impacts remaining in the excavations.

Building Demolition (January 2003)

In January 2003, the City of Rochester demolished the on-Site building. In June 2003, a previously unknown 275-gallon single-walled steel UST was encountered at the Site. Analytical results of sludge remaining in the tank



indicated that it contained residual gasoline. The UST was removed and disposed at an off-site permitted disposal facility as well as two (2) 55-gallon drums of sludge/rinse water generated as part of the removal. No soils were removed from the Site in association with this tank removal. Confirmatory samples indicated chrysene above the Site SCOs and no VOCs exceeding the SCOs.

Sub-Slab Depressurization System (SSDS) (May 2004)

In May 2004, a Sub-Slab Depressurization System (SSDS) was installed at a two (2) family privately owned residential building located adjacent to the east of the Site (1214/1216 East Main Street) to address Soil Vapor Intrusion (SVI). The building was demolished in 2016.

Remedy Implementation

The factors considered during the selection of the Remedy are those listed in 6 NYCRR Part 375-

1.8. The selected Remedy, as stated in the ROD, for the Site includes:

- A remedial design program to provide the details necessary to implement the remedial program;
- Removal and off-Site disposal of free-phase product from existing groundwater monitoring wells at the Site;
- Removal and off-Site disposal of contaminated overburden soils in source areas at the Site;
- Treatment of dissolved-phase contaminants in groundwater via a direct oxygen injection system or air sparging system;
- Installation of a soil vapor extraction system to recover contaminants that are volatilized into soil gas by the oxygen injection or air sparging system;
- Continued operation and maintenance of the existing sub-slab ventilation system in the basement of the adjacent 1214/1216 East Main Street building to prevent Site-related contaminants from entering the structure;
- Development of a Site Management Plan to address residual contamination and any use restrictions;
- Imposition of Institutional Controls in the form of an Environmental Easement;
- Periodic certification of the Institutional and Engineering Controls; and
- An Operation, Maintenance, and Monitoring program to track remedial progress and confirm its effectiveness.

The selected Site Soil Cleanup Objectives (SCOs) are Commercial Use (including Industrial Use) therefore, remedial confirmatory analytical results were compared to 6 NYCRR Part 375-6.8(a) Unrestricted Use and Part 375-6.8(b) Commercial Use and Industrial Use. Cleanup objectives for groundwater are 6 NYCRR Part 703.5 Class GA Ambient Groundwater Quality Standards and Guidance Values.

Several Remedial Actions (RAs) were completed from 2006 to 2016 in accordance with the ROD. The FER provides a comprehensive summary of the RAs listed below.

- Impacted Surface and Source Area Soil Removal Phase;
- Backfill Characterization from Off-Site Source at 1315 South Plymouth Avenue;
- Contaminant Reduction Action In-Situ Chemical Oxidation (ISCO);
- Source Area Soil Removal Activities;



- Vacuum Enhanced Groundwater Extraction, Oxygen Injection System, Soil Vapor Extraction System Operation; and
- April 2016 Baseline groundwater sampling data was collected prior to the startup of the VEGE system (April 2016).

Note: Remediation Systems Status Reports, dated May- August 2016, September 2016 and October-November 2016 were submitted to NYSDEC and included in the FER.

After completion of the remedial work, some petroleum impacted materials remain as residual contamination left at this Site, which is referred to as “remaining contamination”. Institutional and Engineering Controls (ICs/ECs) have been incorporated into the Remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC on March 25, 2016, and recorded with the Monroe County Clerk, requires compliance with the SMP and all ECs/ICs.

ICs are required in the form of an Environmental Easement that includes a) limiting the use and development of the Site to Commercial or Industrial Use; b) compliance with the approved SMP; c) restriction on the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or the Monroe County Health Department (MCHD); and d) Site owner or remedial party to complete and submit an annual certification of ICs/ECs.

Long-term management of the residual impacts, as required by the ROD, includes the following plans for ECs:

- Operation and Maintenance of the Oxygen Injection System and Soil Vapor Extraction System;
- Operation and Maintenance of the Sub-Slab Depressurization System (SSDS) at 1214/1216 East Main Street;
- Groundwater Monitoring; and
- Reporting.

In March 2020, an EC modification was approved by the NYSDEC and included the deactivation and removal of the Oxygen Injection System/SVE System and its associated trailer. The purpose of the system removal was to evaluate the potential for constituent concentration rebound in groundwater.

Refer to Appendix F for a brief summary letter completed by Matrix Environmental Technologies, Inc. It is noted that no injection wells and soil vapor extraction trenches were removed as part of the system deactivation.

A Change of Use Notification was submitted to the NYSDEC during by the City of Rochester on April 1, 2020. The requested Change of Use involved redevelopment of the Site and adjoining parcels to the east into a new public safety office for the City of Rochester Police Department. The City of Rochester petitioned decommissioning of existing groundwater monitoring wells and reduced sample frequency.

The City of Rochester received a Change of Use approval letter from the NYSDEC, dated June 17, 2020. The approval letter acknowledged the requested decommissioning of eleven (11) on-Site groundwater monitoring wells, but the NYSDEC did not accept that request in its entirety. The NYSDEC was amenable to a reduction in the number of groundwater monitoring wells as well as reducing the sampling frequency from quarterly to annually for at least two (2) years. The following monitoring wells were approved for decommissioning pursuant to CP-43: MW-2, MW-4, MW-9R, MW-10, MW-15R, and MW-16. Annual groundwater monitoring will continue at MW-1, MW-3, MW-7R, MW-8, and MW-11; therefore, these wells were sampled during this Reporting Period



and will be protected during any future redevelopment project. Refer to Appendix G for Change of Use documentation.

Monitoring wells MW-2, MW-4, MW-9R, MW-10, MW-15R, and MW-16 were decommissioned by LaBella Associates on May 19 – 20, 2021. Decommissioning was completed in accordance with NYSDEC Commissioner Policy (CP)-43. The Monitoring Well Decommissioning Summary which includes decommissioning log is provided in Appendix E.

3.0 REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

Post-remedial groundwater sampling indicates that VOCs persist at the Site but at over declining concentrations. One (1) atypical constituent finding appeared during this Reporting Period at MW-7R. The concentration of Methyl tert-butyl Ether (MTBE) increased from Non-Detect in February 2020 to 499.0 µg/L in September 2020. MTBE was not detected at other monitoring wells sampled in September 2020. No additional significant and/or atypical constituent fluctuations in groundwater have occurred since the May 2019 deactivation of the oxygen injection system and SVE system, as approved by the NYSDEC.

As approved by the NYSDEC, one (1) annual post-remedial groundwater sampling event occurred within this Reporting Period (June 11, 2020 – June 11, 2021) on September 2, 2020.

Sampling was completed at MW-1, MW-3, MW-7R, MW-8, and MW-11 as required by the NYSDEC. Quality Assurance/Quality Control (QA/QC) samples including a MS, MSD, Blind Duplicate, and Trip Blank were also included in the analysis. Sampling logs are provided in Appendix B. MW-1, MW-3, and MW-11 were submitted for analysis of TCL VOCs by EPA Method 8260 and TCL SVOCs by EPA Method 8270. MW-8 and MW-7R were analyzed for TCL VOCs by EPA Method 8260. Analysis was completed at a certified NYSDOH Environmental Laboratory Approval Program (ELAP) laboratory, Paradigm Environmental, Inc. It is noted that MW-1, MW-3, MW-8, MW-11 had low recharge rates during the sampling event (September 2, 2020) and to obtain the required quantity of groundwater for analysis, no parameter readings were taken during sampling. Please refer to the attached sampling logs in Appendix B.

Tables 1 and 2 summarize analytical VOC and SVOC detections and concentration exceedances of Part 703.5 Class GA Ambient Groundwater Quality Standard during this Reporting Period. Tables 3 and 4 indicate concentrations, including exceedances, of Total VOCs and Total Benzene since initiation of the groundwater monitoring in 2016. The Laboratory Analytical Report for this Reporting Period is provided in Appendix C.

Contaminant Trend Charts 1 – 4 display data to show overall trends for Total VOC and Benzene concentration in monitoring wells with contaminant detections during this Reporting Period.

Figure 3 illustrates constituent exceedances and groundwater contour lines for the sampling quarter of this Reporting Period, which is the third quarter (September 2, 2020). It is noted that the decommissioned wells are distinguished in this figure for reference.

The following summarizes the analytical findings for this Reporting Period. Refer to the attached tables, charts, and figures that illustrate the findings in detail.

VOCs

- MW-1 (Source Area) – No exceedances occurred in the September 2020 sampling event. Benzene concentrations declined from 5.3 µg/L to 0.9 µg/L, below the Part 703.5 standard. The concentrations of



Cyclohexane, Ethylbenzene, Isopropyl benzene, m,p-Xylene, Methylcyclohexane, and o-Xylene declined to concentrations beneath the corresponding Part 703.5 standard. Total VOCs reduced from 254.5 µg/L in February 2020 to 22.7 µg/L in September 2020.

- MW-3 (Source Area) – One (1) low-level exceedance occurred in Benzene at 1.3 µg/L which is a reduction from the previous sampling event (2.1 µg/L). No additional constituent detections occurred in September 2020 (this Reporting Period's sampling event).
- MW-7R (Source Area) – The Total VOC increased during this Reporting Period primarily due to Methyl tert-butyl Ether (MTBE) which was detected at a concentration of 499.0 µg/L. MTBE was non-detect in February 2020 and previously at concentration of 48.7 µg/L and 34.2 µg/L prior to February 2020. Previous exceedances of Ethylbenzene and m,p-Xylene reported in February 2020 became non-detect in September 2020.
- MW-8 (Cross-gradient) – No detections occurred during this Reporting Period sampling event in September 2020, consistent with the February 2020 event.
- MW-11 (Downgradient) – The Total VOC declined from 9.0 µg/L in February 2020 to 0.7 µg/L in September 2020. No exceedances occurred in September 2020 (this Reporting Period's sampling event).

Historic VOC Concentration and Benzene

An overall trend of declining concentrations of Total VOCs and Total Benzene has occurred since initiation of groundwater monitoring at the Site in November 2016 to September 2020. Only one (1) slight Benzene exceedance occurred during this Reporting Period. Refer to the attached Charts 1 – 4.

SVOCs

No SVOCs were detected during this Reporting Period. SVOCs have not been detected in samples since May 2019 and have not rebounded since the oxygen injection system/SVE System was deactivated in 2019.

Conclusion

The data indicate that VOCs and SVOCs concentrations remain stable and/or are continuing to decline. Based on review of data, the isolated elevated concentration of MTBE at MW-7R is likely due to residual contamination impacted by seasonal variation in groundwater levels. As indicated by groundwater level data (depth to groundwater) from February 2020 and September 2020 sampling logs, there was an approximate two (2) foot difference (15.4' bgs in February 2020 and 17.0' bgs in September 2020). The atypical MTBE concentration at MW-7R will be evaluated further in the next sampling event.

The deactivation of the oxygen injection system/SVE System which occurred in the previous PRR Reporting Period has not resulted in a rebound in VOC concentrations. Continued concentration reductions in Total VOCs, occurred at most monitoring wells with the exception of MW-7R which had a data outlier in MTBE. Data from the next sampling event will provide more insight into this detection.

The Remedy is effective in achieving Remedial Action Objectives (RAOs). In addition, deactivation of the Oxygen Injection System/SVE System in May 2019 does not appear to affect the petroleum-related VOC degradation trend as indicated by the data at source area monitoring wells. A continued decline in VOCs in groundwater will also be facilitated by natural attenuation.



4.0 INSTITUTIONAL CONTROLS/ENGINEERING CONTROL PLAN COMPLIANCE

As required by the Environmental Easement, ICs/ECs are required to protect human health and the environment from remaining contamination in subsurface soil and groundwater at the Site.

Institutional Controls

A series of ICs are required by the ROD to: 1) implement, maintain and monitor Engineering Control systems; 2) prevent future exposure to remaining contamination; and, 3) limit the use and development of the Site to restricted commercial or industrial uses only. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under the SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. These ICs are:

- The property may be used for restricted commercial or industrial uses;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or MCHD render it safe for use as drinking water or for industrial purpose, and the user must first notify and obtain written approval to do so from the NYSDEC;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the Remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the Remedy shall be performed as defined in this SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure #9 of the SMP, and any potential impacts that are identified must be monitored or mitigated;
- If parcel 1214-1216 East Main Street is developed in the future, a SVI evaluation should be completed; and



- Vegetable gardens and farming on the Site are prohibited.

IC performance measures include IC changes or lack thereof to the Site that occur during the Reporting Period. As approved by the NYSDEC, monitoring well decommissioning and reduced monitoring well sampling frequency was implemented during this Reporting Period and the SMP is currently being revised to reflect these approved modifications. The revised SMP is being submitted concurrently with this PRR for NYSDEC review and approval. The ICs at the Site were not modified during this Reporting Period. No permits or unauthorized uses were issued to the Site during this reporting period.

Engineering Controls (ECs)

Oxygen Injection System and Soil Vapor Extraction System

Approval from the NYSDEC to deactivate the Oxygen Injection System/Soil Vapor Extraction System was received in March 2019. The purpose of the deactivation was to evaluate the rebound potential for contaminants of concern, including petroleum-related VOCs and SVOCs, at the Site.

The Oxygen Injection System and soil vapor extraction trench were a temporary control and the quality and integrity of this systems were inspected per the O&M Plan presented as Appendix 4 of the SMP. The location of the former oxygen injection system and soil vapor extraction trench are shown on Figure 12 of the SMP. Site visits for routine O&M and optimization of the oxygen injection and soil vapor extraction systems were completed once per month prior to deactivation and removal. Equipment inspection and maintenance was completed quarterly, or more frequently as needed.

A modification to the well design (Vacuum Enhanced Groundwater Extraction (VEGE)) and schedule of system operations was proposed in the April 27, 2016 addendum to the Remedial Action Work Plan (RAWP) so that nine (9) separate wells were installed for the VEGE system and twelve (12) separate wells installed for the oxygen injection system. The modification allowed for (1) the VEGE wells to intercept the top of the water table with the potential to increase LNAPL and VOC vapor recovery during the initial months of operation and; (2) a decrease in the amount of time required for active remediation by expediting conversion between the two (2) remediation methods.

The oxygen injection system was checked once per month by a qualified technician to record operating parameters and perform routine maintenance. Once each month the technician collected performance data which includes DO and ORP readings at each injection point and designated monitoring wells. Detailed Performance Monitoring Goals are documented in Section 5.2.2. of the SMP.

Sub-Slab Depressurization System (SSDS)

The former off-Site SSDS located at 1214/1216 East Main Street was destroyed when the residential building was demolished in December 2016. The PRR will be revised accordingly when the Site and/or 1214/1216 East Main Street parcel is redeveloped to include any Engineering Control requirements at that time.

Conclusion

EC/ICs were fully in place and effective during this Reporting Period. No deficiencies were present and therefore, no corrective measures are recommended.

The Site Inspection Form is included in Appendix A and was completed by the City of Rochester on May 20, 2021. As documented in the Site Inspection Form, no ECs were changed or removed during this Reporting Period. The surface of the Site was temporarily penetrated during this Reporting Period during monitoring well decommissioning in May 2021. The surface was fully restored with grass upon completion of the



decommissioning working. It is noted that a Soil Cover System is not an EC for the Site. Refer to Box 4 of the IC/EC Certification Form provided in Appendix D.

Documentation with respect to the decommissioning of the Oxygen Injection System/SVE System is provided as Appendix F and the decommissioning the monitoring wells (as approved by the NYSDEC) is included in Appendix E. No structures had been constructed on Site. The required IC/EC certification has been completed as a component of this report and a copy is included as Appendix D.

5.0 MONITORING PLAN COMPLIANCE REPORT

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the Remedy to reduce remaining contamination and be effective and protective of public health and the environment.

This Monitoring Plan may only be revised with the approval of the NYSDEC. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the Site are included in the SMP (Quality Assurance and Quality Control Plan in Appendix #5 and Quality Assurance Project Plan (QAPP) provided in Appendix #6 of the SMP).

Monitoring/Inspection Schedule

Monitoring Program	Frequency ¹	Matrix	Analysis ⁴
Groundwater Monitoring	Annual	Groundwater	TCL VOCs by EPA Method 8260 TCL SVOCs by EPA Method 8270
Site Inspection	Annual ²	N/A	N/A
SSDS ³	TBD	Soil Vapor/Air	TBD

1-The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

2-Site Inspections will be completed in the event of an emergency (e.g., natural disaster) that may compromise the integrity of ECs.

3-SSDS Monitoring/Inspection Schedule will be revised accordingly when the Site and/or 1214/1216 East Main Street parcel are redeveloped.

Post-Remediation Groundwater Monitoring and Sampling

This Reporting Period reflects the first annual sampling (rotating quarterly) event since the NYSDEC approved the modified sampling program in 2020. The sampling program is summarized below.

Sampling Location	Analytical Parameters		Schedule
	TCL VOCs	TCL SVOCs	
Monitoring Well MW-1	X	X	Annual
Monitoring Well MW-3	X	X	Annual
Monitoring Well MW-7R	X	X	Annual
Monitoring Well MW-8	X	X	Annual
Monitoring Well MW-11	X	X	Annual
Monitoring Well MW-12 (off-Site)	X	X	At Request of NYSDEC
Monitoring Well MW-13 (off-Site)	X	X	At Request of NYSDEC
Monitoring Well MW-14 (off-Site)	X	X	At Request of NYSDEC



The network of monitoring wells had been installed to monitor upgradient, on-Site, and downgradient groundwater conditions at the Site. In 2020, the NYSDEC approved monitoring well decommissioning of all wells except MW-1, MW-3, MW-7R, MW-8, and MW-11. The well decommissioning occurred in May 2020 in accordance with CP-43 with oversight by LaBella Associates. Documentation is provided in Appendix E.

During this Reporting Period, the remaining on-site monitoring wells were sampled in September 2020. Groundwater samples were collected using low-flow sampling techniques pursuant to the SMP and in accordance with Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. During groundwater purging, water quality parameters were not obtained due to the low recharge rates in MW-1, MW-3, MW-8, and MW-11. Parameters were collected from MW-7R as noted in the sampling logs. In addition, SVOC was not analyzed in MW-7R and MW-8 due to the low recharge rate. Water quality indicator parameters recorded under conditions with optimal recharge rate include the following: Depth to Groundwater; Temperature, pH, Dissolved Oxygen, Specific Conductance, Oxidation Reduction Potential, and Turbidity. QA/QC samples were also collected during this Reporting Period which included a MS and MSD from MW-3 and Blink Duplicate from MW-1. A trip blank was also included in this sampling round.

The samples were relinquished under Chain of Custody procedures to Paradigm Environmental, a NYSDOH ELAP-certified laboratory.

VOC and SVOC groundwater analytical data, including applicable Part 703.5 standard exceedances, are summarized in Tables 1 and 2 and in Figure 3. Total VOC and Total Benzene Concentrations are summarized in Tables 3 and 4 and also displayed in Contaminant Trend Charts 1 – 4. Figure 3 provides a groundwater contour for the sampling event during this Reporting Period based on Depth to Water (DTW) field measurements at each well. A summary of the analytical results for the September 2020 sampling event within this Reporting Period is provided below. As noted above, SVOCs were not evaluated at MW-7R and MW-8 due the low recharge rate of the wells. Refer to the attached tables, charts, and figures for additional details and representation of data.

September 2020

VOCs

Part 703.5 concentration exceedances in VOCs occurred at Source Area wells: MW-3 and MW-7R. No VOCs were detected in exceedances of Part 703.5 at MW-1, MW-8, and MW-11. It is noted that detections of VOCs occurred in MW-1 and MW-11 at concentrations below Part 703.5 standards. Refer to the attached analytical data.

SVOCs

No SVOCs were detected in exceedance of Part 703.5 in the monitoring wells analyzed for SVOCs which include MW-1, MW-3, and MW-11. It is noted that MW-8 and MW-7R were not sampled for SVOCs due to insufficient recharging of the well. Refer to the attached analytical data.

Conclusion

VOC concentrations in exceedance of the applicable standard/guidance value persist, but at relatively stable and low concentrations. One (1) data outlier occurred at MW-7R and is a detection of MTBE at a concentration of 499.0 µg/L. This reported concentration is significantly greater than previous detected concentrations of MTBE at MW-7R and other monitoring wells at the Site. No documentation, including the DUSR, indicated that this finding was a laboratory error. The isolated concentration of MTBE at MW-7R is likely due to residual contamination impacted by fluctuating groundwater levels as indicated by sampling log depth to groundwater data. The next sampling event will provide more information on this finding and/or if this finding is related to deactivation of the Oxygen Injection System/SVE system.



An overall trend of declining concentrations of VOC concentrations has been observed and continued during this Reporting Period. With the exception of MTBE detected at MW-7R, no rebound in VOC concentrations appears to have resulted from deactivation of the Oxygen Injection System/SVE System. Refer to the attached tables and Contaminant Trend Charts 1 – 4.

Approximate Total VOC percent reductions during this Reporting include the following:

- 91% reduction at MW-1
- 73% reduction at MW-3
- 92% reduction at MW-11

No VOC detections and/or minimal detections occurred at MW-8, consistent with previous sampling events.

The most significant fluctuation in Total VOC concentration occurred at MW-7R during this Reporting Period due to the concentration of MTBE. The remainder of the monitoring wells, including MW-1, MW-3, and MW-11 showed a decrease in Total VOC concentration. Benzene concentrations appear to remain stable and/or a slight decrease from February 2020. The only Benzene exceedance occurred at MW-3 at a slight exceedance (1.3 µg/L) above the standard 1.0 µg/L. SVOC detections have not occurred since May 2019. Continued decline in Total VOCs is anticipated due to natural attenuation.

The Groundwater Monitoring Program is compliant with the NYSDEC-approved change in sampling frequency and monitoring wells sampled. The SMP is being revised to reflect the NYSDEC-approved changes.

6.0 CONCLUSIONS AND RECOMMENDATIONS

SMP Compliance

The requirements and regulations set forth in the SMP for ICs were adhered to during this reporting period. This includes the following:

- Land Use Restriction – The Site is vacant and has met the requirements of this restriction in this Reporting Period.
- Groundwater Use Restriction – The Site is vacant, and no groundwater is used; therefore the requirement is met during this Reporting Period.
- Site Management Plan (SMP) – The Site is currently in compliance with all components of the Site-specific SMP, the SMP is being revised to reflect Department-approved site changes, and all requirements have been met during this reporting period.

The requirements set forth in the SMP for all ECs were met during this Reporting Period.

Performance and Effectiveness

An evaluation of the components of the SMP during this Reporting Period indicates that, as of the end date of this report, the IC/EC controls were protective of human health and the environment. VOC concentrations in groundwater samples have overall been reduced with some fluctuation between sampling events. Implementation of the monitoring plan sufficiently complied with performance of the Remedy.

Recommendations for Future PRR

It is recommended that the next PRR incorporate all items associated with the revised SMP. The revised SMP is being resubmitted to the NYSDEC to reflect the EC change and Change of Use approval including groundwater sampling program changes. The SMP will also be revised upon completion of any Site redevelopment and all



elements of the SMP will be implemented during construction. This includes but is not limited to SSDS operation and maintenance in any new structures associated with redevelopment.

It is recommended that the next PRR be submitted approximately one (1) year from issuance of this document and/or as specified by the NYSDEC. Groundwater sampling will be completed once during the upcoming Reporting Period and is anticipated to be completed in the upcoming winter season. The atypical concentration of MTBE at MW-7R will be re-evaluated during this next Reporting Period.



TABLES

Table 1.
Groundwater Sample Results
1200 East Main Street
City of Rochester
Monroe County, NY

Table 1 - TCL VOC Groundwater Sample Results

Detected Parameters ¹	NYS Groundwater Standard Class GA ²	MW-1					MW-3				
		Date Sampled:	May-19	Aug-19	Nov-19	Feb-20	Sep-20	May-19	Aug-19	Nov-19	Feb-20
EPA 8260 - Volatile Organics											
Acetone	50*	ND	34.7	ND	ND	14.5	ND	ND	ND	ND	ND
Benzene	1	7.3	ND	4.3	5.3	0.9 J	2.4	2.0	6.9	2.1	1.3
Bromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	-	31.8	ND	39.0	70.9	5.9 J	ND	2.0	ND	ND	ND
Dibromochloromethane	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	73.8	1.1	14.0	84.0	ND	2.0	ND	3.2	ND	ND
Freon 113	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	4.0	ND	4.2	6.5	ND	4.2	25.5	5.7	2.5	ND
m,p-Xylene	5	41.1	ND	10.1	48.5	ND	ND	ND	2.6	ND	ND
Methyl acetate	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl Ether	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	-	8.8	ND	12	29.4	1.3 J	ND	ND	11.7	ND	ND
Naphthalene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	5	5.0	ND	3.7	7.6	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	1.4	ND	ND	2.3	ND	ND	ND	1.1	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	-	173.2	35.8	87.3	254.5	22.7	8.6	29.5	31.2	4.6	1.3

1 - All values presented in micrograms per liter (ug/L)

2 - NYS Ambient Groundwater Standard (6 NYCRR Part 703.5)

	Detected above 6 NYCRR Part 703.5 Class GA Ambient Groundwater Quality Standard or Guidance Value
NS	Not Sampled

* - NYSDEC Guidance Value

J - Result estimated between quantitation limit and half the quantitation limit

< - Analyzed for but not detected at or above the quantitation limit.

Lab Reports: 191889, 193715, 195546, 200801, 204166

Table 1.
Groundwater Sample Results
1200 East Main Street
City of Rochester
Monroe County, NY

Table 1 - TCL VOC Groundwater Sample Results

Detected Parameters ¹	NYS Groundwater Standard Class GA ²	MW-7R					MW-8					MW-11				
		Date Sampled:	May-19	Aug-19	Nov-19	Feb-20	Sep-20	May-19	Aug-19	Nov-19	Feb-20	Sep-20	May-19	Aug-19	Nov-19	Feb-20
EPA 8260 - Volatile Organics																
Acetone	50*	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Benzene	1	2.7	ND	1.9	6.7	ND	1.1	NS	NS	ND	ND	ND	1.4	0.9	0.8	0.7 J
Bromochloromethane	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Bromodichloromethane	50*	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Bromoform	50	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Bromomethane	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Carbon disulfide	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Chloroethane	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Chloroform	7	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Chloromethane	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
cis-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Cyclohexane	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Dibromochloromethane	50*	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Ethylbenzene	5	26.9	ND	ND	21.4	ND	ND	NS	NS	ND	ND	4.7	13.0	10.2	5.4	ND
Freon 113	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Isopropylbenzene	5	2.4	ND	ND	2.3	ND	ND	NS	NS	ND						
m,p-Xylene	5	28.8	ND	ND	5.1	ND	ND	NS	NS	ND	ND	2.6	6.4	6.3	ND	ND
Methyl acetate	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Methyl tert-butyl Ether	10	ND	48.7	34.2	ND	499	1.6	NS	NS	ND						
Methylcyclohexane	-	1.5	ND	ND	2.8	ND	ND	NS	NS	ND						
Naphthalene	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
o-Xylene	5	3.2	ND	ND	1.6	ND	ND	NS	NS	ND						
p-Isopropyltoluene	-	ND	ND	ND	ND	ND	ND	NS	NS	ND						
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Styrene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Toluene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
trans-1,3-Dichloropropene	0.4	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Trichloroethene	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	NS	NS	ND						
Total VOCs	-	67.9	48.7	36.1	39.9	499	2.68	NS	NS	0	0	7.3	20.8	17.4	6.2	0.7

1 - All values presented in micrograms per liter (µg/L)

2 - NYS Ambient Groundwater Standard (6 NYCRR Part 703.5)

NS	Detected above 6 NYCRR Part 703.5 Class GA Ambient Groundwater Quality Standard or Guidance Value
NS	Not Sampled

* - NYSDEC Guidance Value

J - Result estimated between quantitation limit and half the quantitation limit

< - Analyzed for but not detected at or above the quantitation limit.

Lab Reports: 191889, 193715, 195546, 200801, 204166

Periodic Review Report June 11, 2020 - June 11, 2021
 Groundwater Analytical Results
 1200 East Main St. ERP #B-00129-8
 City of Rochester
 Monroe County, NY

Table 2 - SVOC (Acid/Base Neutrals) Groundwater Sample Results

Detected Parameters ¹	NYS Groundwater Standard Class GA ²	MW-1					MW-3					MW-7R				
		Date Sampled:	May-19	Aug-19	Nov-19	Feb-20	Sep-20	May-19	Aug-19	Nov-19	Feb-20	Sep-20	May-19	Aug-19	Nov-19	Feb-20
EPA 8270- Semi-Volatile Organics																
1,1-Biphenyl	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
1,2,4,5-Tetrachlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
1,3-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
2,2-Oxybis (1-chloropropane)	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
2,4-Dinitrotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
2,6-Dinitrotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
2-Chloronaphthalene	10*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
2-Methylnaphthalene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
2-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
3,3'-Dichlorobenzidine	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
3-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
4-Bromophenyl phenyl ether	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
4-Chloroaniline	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
4-Chlorophenyl phenyl ether	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
4-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Acenaphthene	20*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Acenaphthylene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Acetophenone	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Anthracene	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Atrazine	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzaldehyde	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzo (a) anthracene	0.002*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzo (a) pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzo (b) fluoranthene	0.002*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzo (g,h,i) perylene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzo (k) fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Bis (2-chloroethoxy) methane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Bis (2-chloroethyl) ether	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Bis (2-ethylhexyl) phthalate	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Butylbenzylphthalate	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Caprolactam	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Carbazole	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Chrysene	0.002*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Dibenz (a,h) anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Dibenzofuran	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Diethyl phthalate	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Dimethyl phthalate	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Di-n-butylphthalate	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Di-n-octylphthalate	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Fluoranthene	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Fluorene	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Hexachlorobenzene	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Hexachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Indeno (1,2,3-cd) pyrene	0.002*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Isophorone	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Naphthalene	10*	8.1 J	ND	ND	ND	ND	NS									
Nitrobenzene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
N-Nitroso-di-n-propylamine	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
N-Nitrosodiphenylamine	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Phenanthrene	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Pyrene	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Total	-	8.1	0	0	0	0	0	0	0	0	0	19.6	0	0	0	NS

1 - All values presented in micrograms per liter (ug/L)

2 - NYS Ambient Groundwater Standard (6 NYCRR Part 703.5)

*-Parameter detected above 6 NYCRR Part 703.5 Class GA Ambient Groundwater Quality Standard or applicable Guidance Value

NS Not Sampled

* - NYSDEC Guidance Value

J- Result estimated between quantitation limit and half the quantitation limit

< - Analyzed for but not detected at or above the quantitation limit.

Lab Reports: 191889, 193715, 195546, 200801, 204166

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 Monroe County, NY

Table 2 - SVOC (Acid/Base Neutrals) Groundwater Sample Result:

Detected Parameters ¹	NYS Groundwater Standard Class GA ²	MW-8					MW-11				
		Date Sampled:	May-19	Aug-19	Nov-19	Feb-20	Sep-20	May-19	Aug-19	Nov-19	Feb-20
EPA 8270- Semi-Volatile Organics											
1,1-Biphenyl	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
2,2-Oxybis (1-chloropropane)	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
2-Chloronaphthalene	10*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
2-Methylnaphthalene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
2-Nitroaniline	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
3-Nitroaniline	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
4-Chloroaniline	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
4-Nitroaniline	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Acenaphthene	20*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Acenaphthylene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Acetophenone	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Anthracene	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Atrazine	7.5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Benzaldehyde	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Benzo (a) anthracene	0.002*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Benzo (a) pyrene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Benzo (b) fluoranthene	0.002*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Bis (2-chloroethoxy) methane	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Bis (2-chloroethyl) ether	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Bis (2-ethylhexyl) phthalate	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Butylbenzylphthalate	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Caprolactam	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Carbazole	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Chrysene	0.002*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Dibenz (a,h) anthracene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Dibenzofuran	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Diethyl phthalate	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Dimethyl phthalate	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Di-n-butylphthalate	50	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Di-n-octylphthalate	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Fluoranthene	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Fluorene	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Hexachlorobenzene	0.04	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Hexachloroethane	5	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Indeno (1,2,3-cd) pyrene	0.002*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Isophorone	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Naphthalene	10*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Nitrobenzene	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	-	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Phenanthrene	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Pyrene	50*	ND	NS	NS	ND	NS	ND	ND	ND	ND	ND
Total	-	0	NS	NS	0	NS	0	0	0	0	0

1 - All values presented in micrograms per liter (ug/L)

2 - NYS Ambient Groundwater Standard (6 NYCRR Part 703.5)

-Parameter detected above 6 l

NS Not Sampled

* - NYSDEC Guidance Value

J- Result estimated between quantitation limit and half the quantitation li

< - Analyzed for but not detected at or above the quantitation limit.

Lab Reports: 191889, 193715, 195546, 200801, 204166

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Table 3: Total VOC Concentrations

Monitoring Well	MW-1	MW-2	MW-3	MW-4	MW-7R	MW-8	MW-9R	MW-10	MW-11	MW-15R	MW-16
Date	Total VOCs										
Nov-16	163.1	13.8	30.6	701.3	113.0	59.8	ND	NS	16.9	2.0	0.9
Mar-17	305.1	ND	43.5	122.5	32.4	ND	ND	ND	26.7	222.3	2.3
Aug-17	246.6	ND	29.8	32.3	21.2	ND	ND	NS	63.7	182.1	ND
Nov-17	ND	ND	5.8	8.7	15.3	ND	ND	NS	28.5	164.0	ND
Mar-18	364.5	ND	6.3	125.9	199.3	ND	ND	ND	57.0	144.7	ND
Oxygen Injection System Shut off March 2019											
May-19	173.2	ND	8.6	8.2	65.5	ND	ND	NS	7.3	83.5	ND
Aug-19	35.8	NS	29.5	3.1	48.7	ND	ND	NS	20.9	22.0	ND
Nov-19	87.4	ND	18.3	0	36.2	ND	ND	NS	17.4	12.0	ND
Feb-20	254.5	ND	4.6	28.4	39.8	ND	ND	NS	9.0	3.3	ND
Sep-20	22.7	NA	1.3	NA	499.0	ND	NA	NA	0	NA	NA

Notes:

ND (X) denotes that the compound was analyzed but not detected at or above the quantitation limit (X)

NS denotes that the well was not sampled

NA denotes that the well was decommissioned

Periodic Review Report
 Groundwater Analytical Results
 1200 East Main St. ERP #B-00129-8
 City of Rochester
 Monroe County, NY

Table 4: Benzene Concentrations

Monitoring Well	MW-1	MW-2	MW-3	MW-4	MW-7R	MW-8	MW-9R	MW-10	MW-11	MW-15R	MW-16
Date	Total Benzene										
Nov-16	0.9	<u>1.8</u>	<u>20.7</u>	<u>47.6</u>	<u>53.9</u>	ND	ND	NS	<u>2.8</u>	ND	ND
Mar-17	<u>13.0</u>	ND	<u>2.1</u>	<u>7.0</u>	0.7	ND	ND	NS	<u>2.1</u>	<u>4.8</u>	ND
Aug-17	<u>7.0</u>	ND	<u>5.7</u>	<u>1.8</u>	<u>1.1</u>	ND	ND	NS	<u>4.9</u>	<u>4.7</u>	ND
Nov-17	ND	ND	<u>1.7</u>	0.8	ND	ND	ND	NS	<u>2.3</u>	<u>4.7</u>	ND
Mar-18	<u>5.0</u>	ND	1.0	<u>7.9</u>	<u>1.8</u>	ND	ND	NS	0.6	<u>4.7</u>	ND
Oxygen Injection System Shut off March 2019											
May-19	7.3	ND	<u>2.5</u>	0.7	<u>2.7</u>	<u>1.1</u>	ND	NS	ND	<u>3.9</u>	ND
Aug-19	ND	NS	<u>2.0</u>	<u>3.1</u>	ND	NS	ND	NS	<u>1.4</u>	<u>1.7</u>	ND
Nov-19	<u>4.3</u>	ND	<u>6.9</u>	NS	<u>2.0</u>	NS	ND	NS	0.8	<u>3.1</u>	ND
Feb-20	<u>5.3</u>	ND	<u>2.1</u>	<u>4.8</u>	<u>6.7</u>	ND	ND	NS	0.8	N	ND
Sep-20	0.9	NA	<u>1.3</u>	NA	ND	ND	NA	NA	0.7	NA	NA

Notes:

ND (X) denotes that the compound was analyzed but not detected at or above the quantitation limit (X)

NS denotes that the well was not sampled

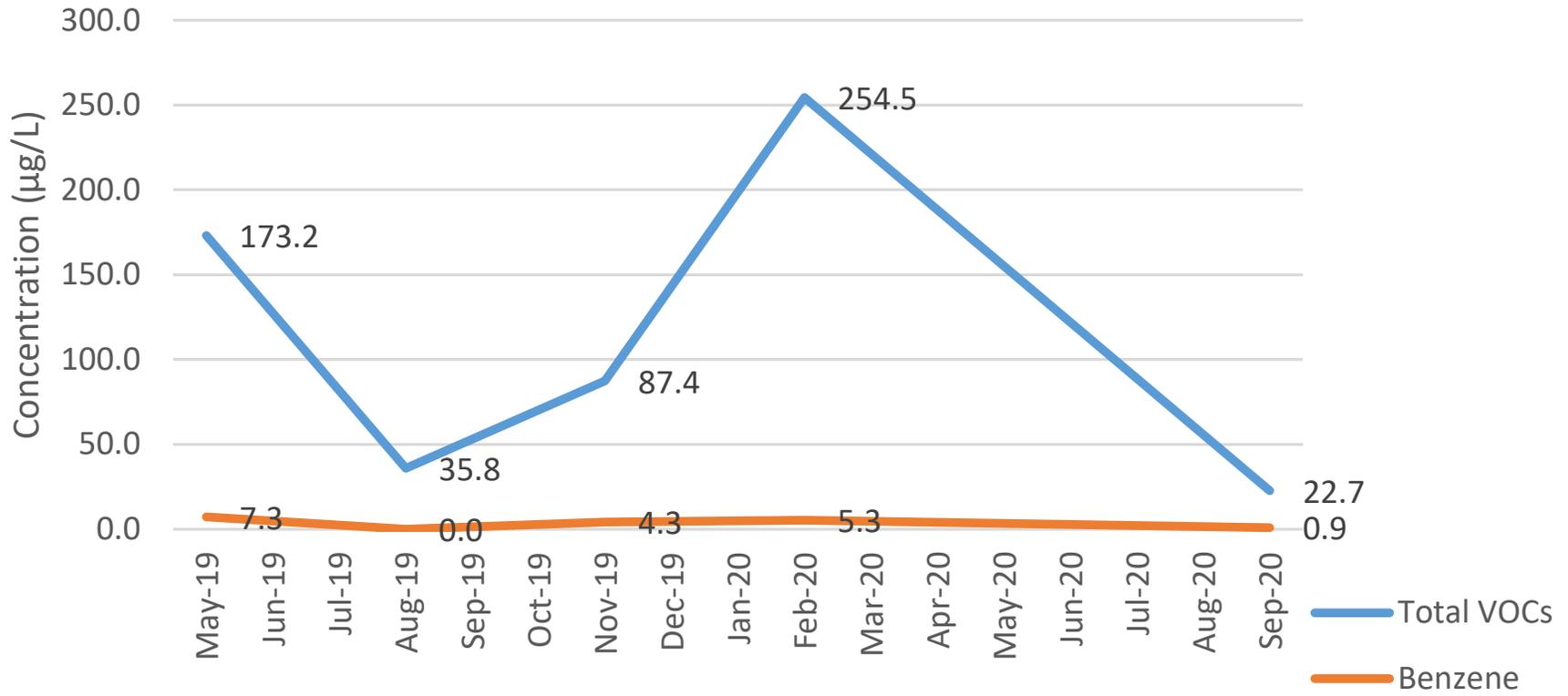
NA denotes that the well was decommissioned

*Bold and underlined font denotes a benzene detection exceeding 6 NYCRR Part 703.5 Groundwater Standards of 1.0 µg/L



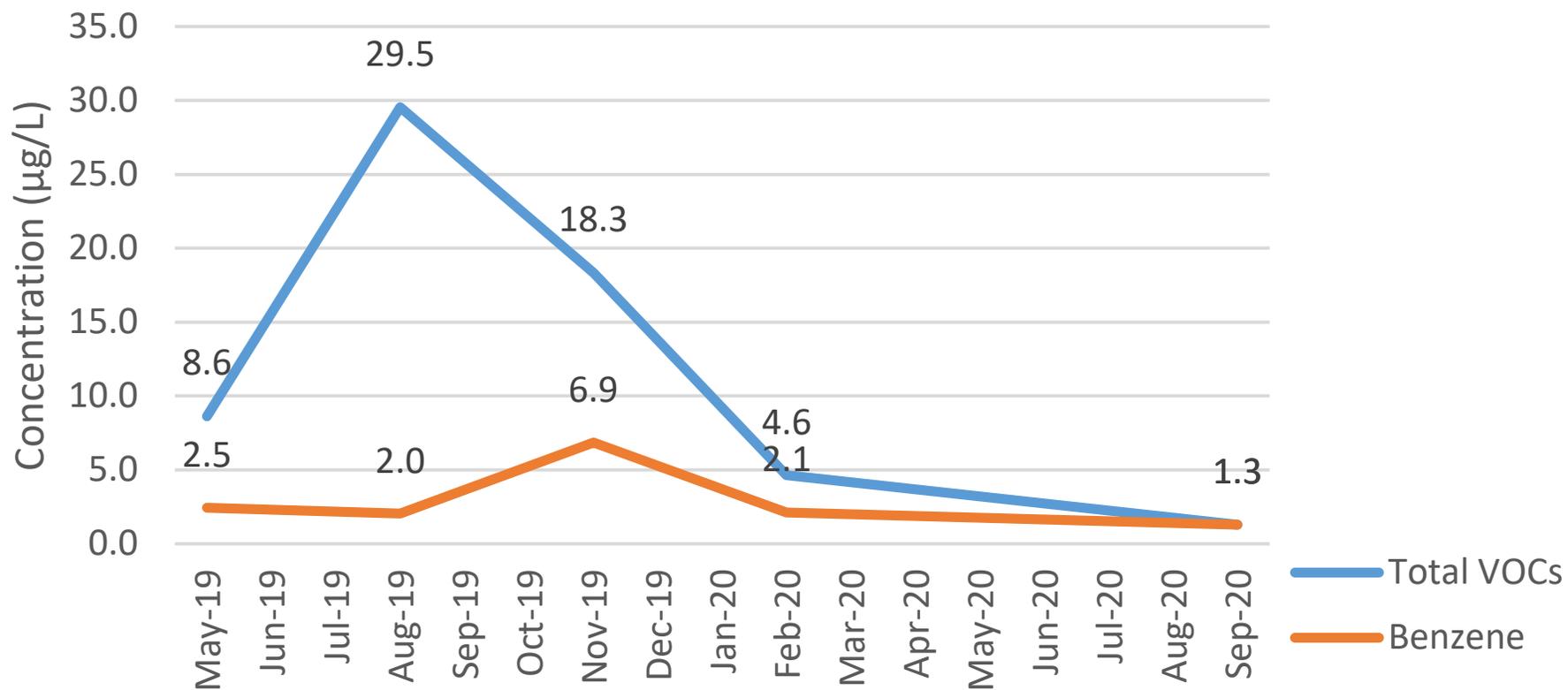
CONTAMINANT TREND CHARTS

CONTAMINANT TREND CHART 1 - MW-1



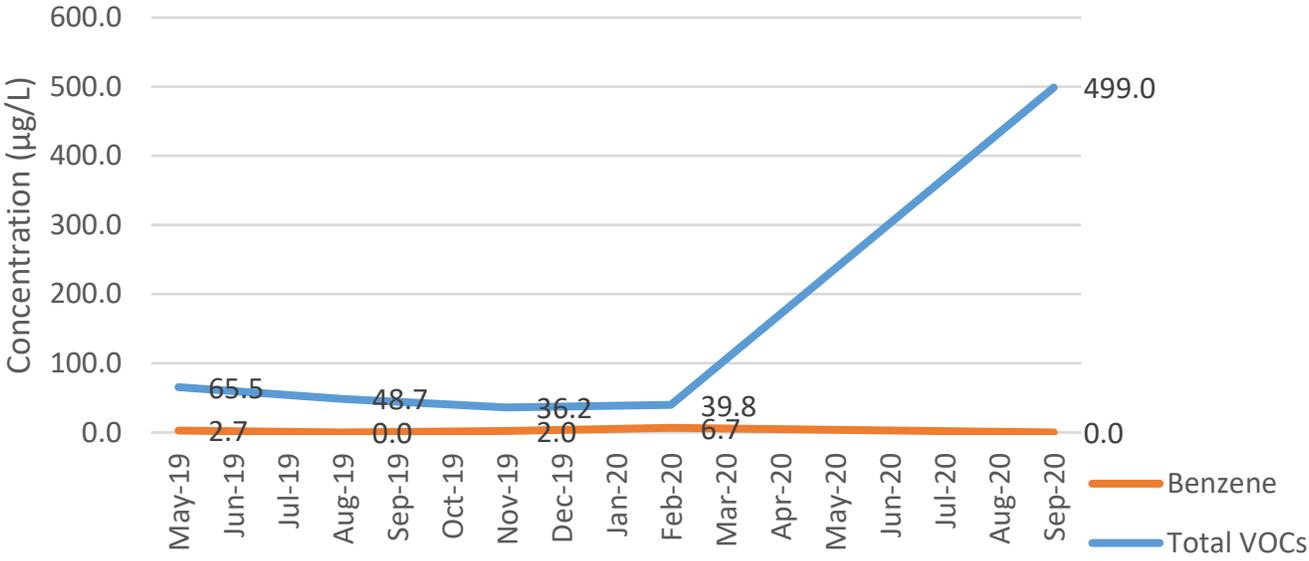
Feb-20 - Sep-20 VOC Percent Change: -91%

CONTAMINANT TREND CHART 2 - MW-3



Feb-20 - Sep-20 VOC Percent Change: -73%

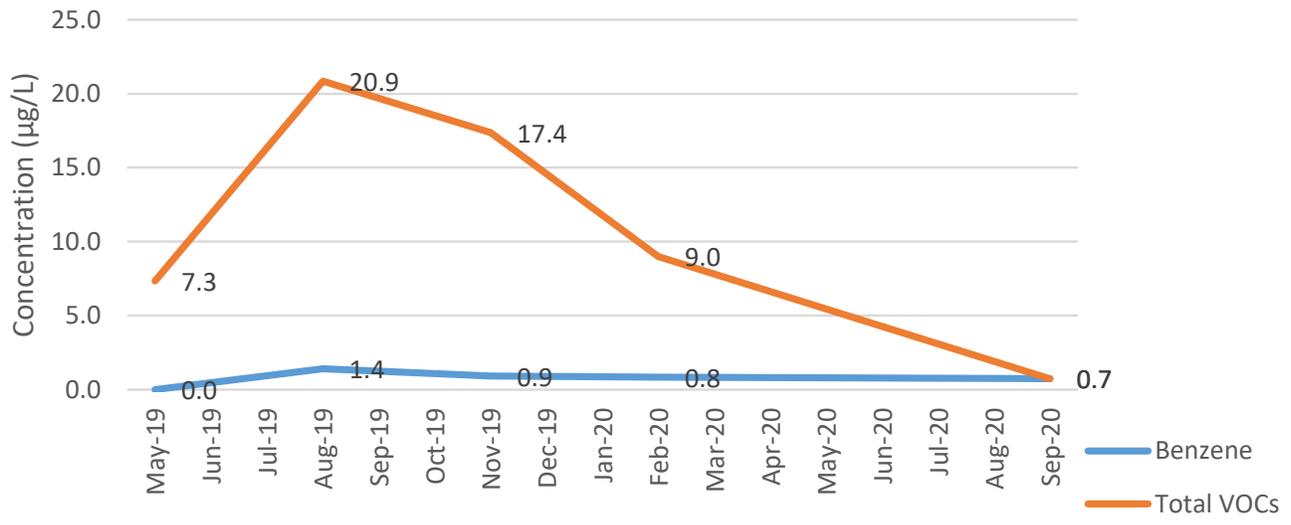
CONTAMINANT TREND CHART 3 - MW-7R



PRR 2019-2020

May-19 - Sept-20 VOC Percent Change: +1,154%

CONTAMINANT TREND CHART 4 - MW-11



Feb-20 - Sept-20 VOC Percent Change: -92%



FIGURES

City of Rochester 1200 East Main Street - ERP B00129 Periodic Review Report June 11, 2020 - June 11, 2021

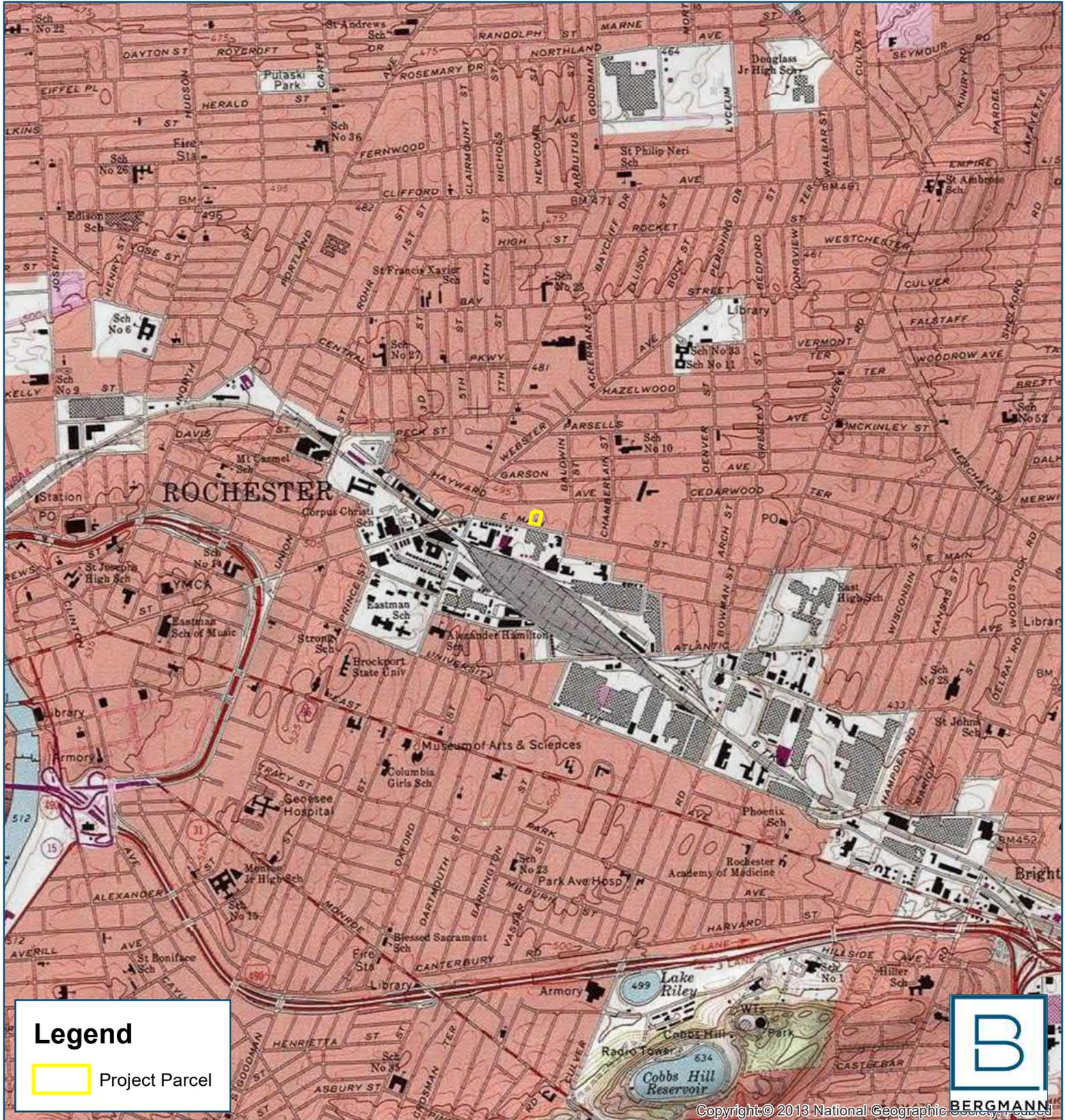
SITE LOCATION
MAP

Fig. 1

2,000 Feet



City of Rochester, Monroe County, New York



Legend

 Project Parcel



City of Rochester 1200 East Main Street ERP - B00129 Periodic Review Report June 11, 2020 - June 11, 2021

Site Plan

Fig. 2

40

Feet



City of Rochester, Monroe County, New York



Legend

-  Monitoring Wells
-  Decommissioned Monitoring Wells
-  Site Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR
USDA, USGS, AeroGRID, IGN, and the GIS User Community



City of Rochester 1200 East Main Street - ERP B00129 Periodic Review Report June 11, 2020 - June 11, 2021

September 2020 Groundwater Analytical Results

Fig. 3

40 Feet



City of Rochester, Monroe County, New York





APPENDIX A:

SITE INSPECTION FORM

SITE-WIDE INSPECTION FORM

SITE INFORMATION
1200 East Main Street
NYSDEC Site No. B00129
City of Rochester, Monroe County, NY

NAME OF INSPECTOR: J. Forbes
COMPANY OF INSPECTOR: City of Rochester
DATE OF INSPECTION: 5/20/2021
CURRENT USE OF SITE: Vacant

HAS A CHANGE OF USE OCCURRED SINCE THE LAST CERTIFICATION?
 YES NO
IF YES, THEN EXPLAIN: _____

GENERAL DESCRIPTION OF ENG. CONTROL: chain link fence; gate; lock.
GENERAL DESCRIPTION OF COVER SYSTEM: partial asphalt; grass.

HAVE THE ECs BEEN CHANGED/ REMOVED? YES NO
IF YES, THEN EXPLAIN: _____

HAS THE COVER BEEN PENETRATED? YES NO
IF YES, THEN EXPLAIN: 6 monitoring wells decommissioned. cover restored w/ grass upon completion. (5/20/2021).

HAVE ANY STRUCTURES BEEN CONSTRUCTED ON THE SITE SINCE THE
LAST INSPECTION? YES NO
IF YES, THEN EXPLAIN: _____

HAVE COVER CONDITIONS CHANGED SINCE THE LAST INSPECTION?
 YES NO
IF YES, THEN EXPLAIN: _____

IS ANY MAINTENANCE OF THE COVER REQUIRED?

YES NO

IF YES, THEN EXPLAIN:

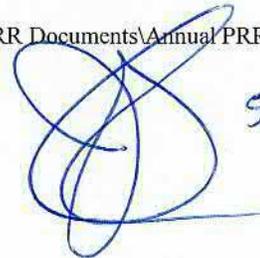
periodic grass cutting is performed by City of Rochester Services of Contract - State

ADDITIONAL OBSERVATIONS, CONCLUSIONS OR RECOMMENDATIONS:

no significant changes besides well removal.

ANY CHANGES TO THE SITE OR REQUIRED MAINTENANCE SHOULD BE MARKED IN THE CORRESPONDING LOCATION ON THE ATTACHED MAP

G:\ENVQUAL\MANE\PROJECTS\1200 EAST MAIN STREET\Post COC Qrtly Sampling\PRR Documents\Annual\PRR Site-Wide Inspection Form\TEMPLATE.docx

 5/20/2021



APPENDIX B:
GROUNDWATER SAMPLING
LOGS



APPENDIX C:
LABORATORY ANALYTICAL DATA REPORT



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier:	MW-1	Date Sampled:	9/2/2020
Lab Sample ID:	204166-01	Date Received:	9/2/2020
Matrix:	Groundwater		

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 05:27
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 05:27
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 05:27
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 05:27
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 05:27
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 05:27
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 05:27
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 05:27
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:27
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:27
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 05:27
2-Chlorophenol	< 10.0	ug/L		9/9/2020 05:27
2-Methylnaphthalene	< 10.0	ug/L		9/9/2020 05:27
2-Methylphenol	< 10.0	ug/L		9/9/2020 05:27
2-Nitroaniline	< 20.0	ug/L		9/9/2020 05:27
2-Nitrophenol	< 10.0	ug/L		9/9/2020 05:27
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 05:27
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 05:27

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-1			
Lab Sample ID:	204166-01		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
3-Nitroaniline	< 20.0	ug/L	9/9/2020	05:27
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020	05:27
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020	05:27
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020	05:27
4-Chloroaniline	< 10.0	ug/L	9/9/2020	05:27
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020	05:27
4-Nitroaniline	< 20.0	ug/L	9/9/2020	05:27
4-Nitrophenol	< 20.0	ug/L	9/9/2020	05:27
Acenaphthene	< 10.0	ug/L	9/9/2020	05:27
Acenaphthylene	< 10.0	ug/L	9/9/2020	05:27
Acetophenone	< 10.0	ug/L	9/9/2020	05:27
Anthracene	< 10.0	ug/L	9/9/2020	05:27
Atrazine	< 10.0	ug/L	9/9/2020	05:27
Benzaldehyde	< 10.0	ug/L	9/9/2020	05:27
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020	05:27
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020	05:27
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020	05:27
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020	05:27
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020	05:27
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020	05:27
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020	05:27
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020	05:27
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020	05:27
Caprolactam	< 10.0	ug/L	9/9/2020	05:27
Carbazole	< 10.0	ug/L	9/9/2020	05:27

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-1			
Lab Sample ID:	204166-01		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
Chrysene	< 10.0	ug/L	9/9/2020	05:27
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020	05:27
Dibenzofuran	< 10.0	ug/L	9/9/2020	05:27
Diethyl phthalate	< 10.0	ug/L	9/9/2020	05:27
Dimethyl phthalate	< 20.0	ug/L	9/9/2020	05:27
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020	05:27
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020	05:27
Fluoranthene	< 10.0	ug/L	9/9/2020	05:27
Fluorene	< 10.0	ug/L	9/9/2020	05:27
Hexachlorobenzene	< 10.0	ug/L	9/9/2020	05:27
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020	05:27
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020	05:27
Hexachloroethane	< 10.0	ug/L	9/9/2020	05:27
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020	05:27
Isophorone	< 10.0	ug/L	9/9/2020	05:27
Naphthalene	< 10.0	ug/L	9/9/2020	05:27
Nitrobenzene	< 10.0	ug/L	9/9/2020	05:27
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020	05:27
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020	05:27
Pentachlorophenol	< 20.0	ug/L	9/9/2020	05:27
Phenanthrene	< 10.0	ug/L	9/9/2020	05:27
Phenol	< 10.0	ug/L	9/9/2020	05:27
Pyrene	< 10.0	ug/L	9/9/2020	05:27

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	81.6	53.8 - 116		9/9/2020 05:27
2-Fluorobiphenyl	61.5	36.5 - 95.3		9/9/2020 05:27
2-Fluorophenol	36.2	11.1 - 99.3		9/9/2020 05:27
Nitrobenzene-d5	73.6	49.4 - 100		9/9/2020 05:27
Phenol-d5	27.0	10 - 103		9/9/2020 05:27
Terphenyl-d14	81.6	54.3 - 109		9/9/2020 05:27

Method Reference(s): EPA 8270D
 EPA 3510C
 Preparation Date: 9/3/2020
 Data File: B49277.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-1
Lab Sample ID: 204166-01 **Date Sampled:** 9/2/2020
Matrix: Groundwater **Date Received:** 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1,2-Trichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1-Dichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1-Dichloroethene	< 2.00	ug/L		9/8/2020 18:28
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/8/2020 18:28
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/8/2020 18:28
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/8/2020 18:28
1,2-Dibromoethane	< 2.00	ug/L		9/8/2020 18:28
1,2-Dichlorobenzene	< 2.00	ug/L		9/8/2020 18:28
1,2-Dichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,2-Dichloropropane	< 2.00	ug/L		9/8/2020 18:28
1,3-Dichlorobenzene	< 2.00	ug/L		9/8/2020 18:28
1,4-Dichlorobenzene	< 2.00	ug/L		9/8/2020 18:28
1,4-Dioxane	< 20.0	ug/L		9/8/2020 18:28
2-Butanone	< 10.0	ug/L		9/8/2020 18:28
2-Hexanone	< 5.00	ug/L		9/8/2020 18:28
4-Methyl-2-pentanone	< 5.00	ug/L		9/8/2020 18:28
Acetone	14.5	ug/L		9/8/2020 18:28
Benzene	0.943	ug/L	J	9/8/2020 18:28
Bromochloromethane	< 5.00	ug/L		9/8/2020 18:28
Bromodichloromethane	< 2.00	ug/L		9/8/2020 18:28
Bromoform	< 5.00	ug/L		9/8/2020 18:28

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-1			
Lab Sample ID:	204166-01		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
Bromomethane	< 2.00	ug/L		9/8/2020 18:28
Carbon disulfide	< 2.00	ug/L		9/8/2020 18:28
Carbon Tetrachloride	< 2.00	ug/L		9/8/2020 18:28
Chlorobenzene	< 2.00	ug/L		9/8/2020 18:28
Chloroethane	< 2.00	ug/L		9/8/2020 18:28
Chloroform	< 2.00	ug/L		9/8/2020 18:28
Chloromethane	< 2.00	ug/L		9/8/2020 18:28
cis-1,2-Dichloroethene	< 2.00	ug/L		9/8/2020 18:28
cis-1,3-Dichloropropene	< 2.00	ug/L		9/8/2020 18:28
Cyclohexane	5.90	ug/L	J	9/8/2020 18:28
Dibromochloromethane	< 2.00	ug/L		9/8/2020 18:28
Dichlorodifluoromethane	< 2.00	ug/L		9/8/2020 18:28
Ethylbenzene	< 2.00	ug/L		9/8/2020 18:28
Freon 113	< 2.00	ug/L		9/8/2020 18:28
Isopropylbenzene	< 2.00	ug/L		9/8/2020 18:28
m,p-Xylene	< 2.00	ug/L		9/8/2020 18:28
Methyl acetate	< 2.00	ug/L		9/8/2020 18:28
Methyl tert-butyl Ether	< 2.00	ug/L		9/8/2020 18:28
Methylcyclohexane	1.34	ug/L	J	9/8/2020 18:28
Methylene chloride	< 5.00	ug/L		9/8/2020 18:28
o-Xylene	< 2.00	ug/L		9/8/2020 18:28
Styrene	< 5.00	ug/L		9/8/2020 18:28
Tetrachloroethene	< 2.00	ug/L		9/8/2020 18:28
Toluene	< 2.00	ug/L		9/8/2020 18:28
trans-1,2-Dichloroethene	< 2.00	ug/L		9/8/2020 18:28

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020	18:28
Trichloroethene	< 2.00	ug/L	9/8/2020	18:28
Trichlorofluoromethane	< 2.00	ug/L	9/8/2020	18:28
Vinyl chloride	< 2.00	ug/L	9/8/2020	18:28

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	106	70.9 - 139		9/8/2020 18:28
4-Bromofluorobenzene	85.0	59.5 - 129		9/8/2020 18:28
Pentafluorobenzene	97.0	89.3 - 117		9/8/2020 18:28
Toluene-D8	97.2	82.9 - 115		9/8/2020 18:28

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73129.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-3
Lab Sample ID: 204166-02 **Date Sampled:** 9/2/2020
Matrix: Groundwater **Date Received:** 9/2/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 05:56
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 05:56
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 05:56
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 05:56
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 05:56
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 05:56
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 05:56
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 05:56
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:56
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:56
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 05:56
2-Chlorophenol	< 10.0	ug/L		9/9/2020 05:56
2-Methylnaphthalene	< 10.0	ug/L		9/9/2020 05:56
2-Methylphenol	< 10.0	ug/L		9/9/2020 05:56
2-Nitroaniline	< 20.0	ug/L		9/9/2020 05:56
2-Nitrophenol	< 10.0	ug/L		9/9/2020 05:56
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 05:56
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 05:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-3			
Lab Sample ID:	204166-02		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
3-Nitroaniline	< 20.0	ug/L	9/9/2020	05:56
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020	05:56
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020	05:56
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020	05:56
4-Chloroaniline	< 10.0	ug/L	9/9/2020	05:56
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020	05:56
4-Nitroaniline	< 20.0	ug/L	9/9/2020	05:56
4-Nitrophenol	< 20.0	ug/L	9/9/2020	05:56
Acenaphthene	< 10.0	ug/L	9/9/2020	05:56
Acenaphthylene	< 10.0	ug/L	9/9/2020	05:56
Acetophenone	< 10.0	ug/L	9/9/2020	05:56
Anthracene	< 10.0	ug/L	9/9/2020	05:56
Atrazine	< 10.0	ug/L	9/9/2020	05:56
Benzaldehyde	< 10.0	ug/L	9/9/2020	05:56
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020	05:56
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020	05:56
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020	05:56
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020	05:56
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020	05:56
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020	05:56
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020	05:56
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020	05:56
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020	05:56
Caprolactam	< 10.0	ug/L	9/9/2020	05:56
Carbazole	< 10.0	ug/L	9/9/2020	05:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Chrysene	< 10.0	ug/L	9/9/2020 05:56
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 05:56
Dibenzofuran	< 10.0	ug/L	9/9/2020 05:56
Diethyl phthalate	< 10.0	ug/L	9/9/2020 05:56
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 05:56
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 05:56
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 05:56
Fluoranthene	< 10.0	ug/L	9/9/2020 05:56
Fluorene	< 10.0	ug/L	9/9/2020 05:56
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 05:56
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 05:56
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 05:56
Hexachloroethane	< 10.0	ug/L	9/9/2020 05:56
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 05:56
Isophorone	< 10.0	ug/L	9/9/2020 05:56
Naphthalene	< 10.0	ug/L	9/9/2020 05:56
Nitrobenzene	< 10.0	ug/L	9/9/2020 05:56
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 05:56
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 05:56
Pentachlorophenol	< 20.0	ug/L	9/9/2020 05:56
Phenanthrene	< 10.0	ug/L	9/9/2020 05:56
Phenol	< 10.0	ug/L	9/9/2020 05:56
Pyrene	< 10.0	ug/L	9/9/2020 05:56

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	81.5	53.8 - 116		9/9/2020 05:56
2-Fluorobiphenyl	58.5	36.5 - 95.3		9/9/2020 05:56
2-Fluorophenol	33.6	11.1 - 99.3		9/9/2020 05:56
Nitrobenzene-d5	69.6	49.4 - 100		9/9/2020 05:56
Phenol-d5	24.8	10 - 103		9/9/2020 05:56
Terphenyl-d14	79.3	54.3 - 109		9/9/2020 05:56

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49278.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-3
Lab Sample ID: 204166-02 **Date Sampled:** 9/2/2020
Matrix: Groundwater **Date Received:** 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1,2-Trichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1-Dichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1-Dichloroethene	< 2.00	ug/L		9/10/2020 13:49
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/10/2020 13:49
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/10/2020 13:49
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/10/2020 13:49
1,2-Dibromoethane	< 2.00	ug/L		9/10/2020 13:49
1,2-Dichlorobenzene	< 2.00	ug/L		9/10/2020 13:49
1,2-Dichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,2-Dichloropropane	< 2.00	ug/L		9/10/2020 13:49
1,3-Dichlorobenzene	< 2.00	ug/L		9/10/2020 13:49
1,4-Dichlorobenzene	< 2.00	ug/L		9/10/2020 13:49
1,4-Dioxane	< 20.0	ug/L		9/10/2020 13:49
2-Butanone	< 10.0	ug/L		9/10/2020 13:49
2-Hexanone	< 5.00	ug/L		9/10/2020 13:49
4-Methyl-2-pentanone	< 5.00	ug/L		9/10/2020 13:49
Acetone	< 10.0	ug/L		9/10/2020 13:49
Benzene	1.29	ug/L		9/10/2020 13:49
Bromochloromethane	< 5.00	ug/L		9/10/2020 13:49
Bromodichloromethane	< 2.00	ug/L		9/10/2020 13:49
Bromoform	< 5.00	ug/L		9/10/2020 13:49

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-3			
Lab Sample ID:	204166-02		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
Bromomethane	< 2.00	ug/L		9/10/2020 13:49
Carbon disulfide	< 2.00	ug/L		9/10/2020 13:49
Carbon Tetrachloride	< 2.00	ug/L		9/10/2020 13:49
Chlorobenzene	< 2.00	ug/L		9/10/2020 13:49
Chloroethane	< 2.00	ug/L		9/10/2020 13:49
Chloroform	< 2.00	ug/L		9/10/2020 13:49
Chloromethane	< 2.00	ug/L		9/10/2020 13:49
cis-1,2-Dichloroethene	< 2.00	ug/L		9/10/2020 13:49
cis-1,3-Dichloropropene	< 2.00	ug/L		9/10/2020 13:49
Cyclohexane	< 10.0	ug/L		9/10/2020 13:49
Dibromochloromethane	< 2.00	ug/L		9/10/2020 13:49
Dichlorodifluoromethane	< 2.00	ug/L		9/10/2020 13:49
Ethylbenzene	< 2.00	ug/L		9/10/2020 13:49
Freon 113	< 2.00	ug/L		9/10/2020 13:49
Isopropylbenzene	< 2.00	ug/L		9/10/2020 13:49
m,p-Xylene	< 2.00	ug/L		9/10/2020 13:49
Methyl acetate	< 2.00	ug/L		9/10/2020 13:49
Methyl tert-butyl Ether	< 2.00	ug/L		9/10/2020 13:49
Methylcyclohexane	< 2.00	ug/L		9/10/2020 13:49
Methylene chloride	< 5.00	ug/L		9/10/2020 13:49
o-Xylene	< 2.00	ug/L		9/10/2020 13:49
Styrene	< 5.00	ug/L		9/10/2020 13:49
Tetrachloroethene	< 2.00	ug/L		9/10/2020 13:49
Toluene	< 2.00	ug/L		9/10/2020 13:49
trans-1,2-Dichloroethene	< 2.00	ug/L		9/10/2020 13:49

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020	13:49
Trichloroethene	< 2.00	ug/L	9/10/2020	13:49
Trichlorofluoromethane	< 2.00	ug/L	9/10/2020	13:49
Vinyl chloride	< 2.00	ug/L	9/10/2020	13:49

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	104	70.9 - 139		9/10/2020 13:49
4-Bromofluorobenzene	112	59.5 - 129		9/10/2020 13:49
Pentafluorobenzene	94.8	89.3 - 117		9/10/2020 13:49
Toluene-D8	111	82.9 - 115		9/10/2020 13:49

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73192.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-8
Lab Sample ID: 204166-03 **Date Sampled:** 9/2/2020
Matrix: Groundwater **Date Received:** 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1,2-Trichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1-Dichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1-Dichloroethene	< 2.00	ug/L		9/8/2020 19:58
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/8/2020 19:58
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/8/2020 19:58
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/8/2020 19:58
1,2-Dibromoethane	< 2.00	ug/L		9/8/2020 19:58
1,2-Dichlorobenzene	< 2.00	ug/L		9/8/2020 19:58
1,2-Dichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,2-Dichloropropane	< 2.00	ug/L		9/8/2020 19:58
1,3-Dichlorobenzene	< 2.00	ug/L		9/8/2020 19:58
1,4-Dichlorobenzene	< 2.00	ug/L		9/8/2020 19:58
1,4-Dioxane	< 20.0	ug/L		9/8/2020 19:58
2-Butanone	< 10.0	ug/L		9/8/2020 19:58
2-Hexanone	< 5.00	ug/L		9/8/2020 19:58
4-Methyl-2-pentanone	< 5.00	ug/L		9/8/2020 19:58
Acetone	< 10.0	ug/L		9/8/2020 19:58
Benzene	< 1.00	ug/L		9/8/2020 19:58
Bromochloromethane	< 5.00	ug/L		9/8/2020 19:58
Bromodichloromethane	< 2.00	ug/L		9/8/2020 19:58
Bromoform	< 5.00	ug/L		9/8/2020 19:58

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-8

Lab Sample ID: 204166-03

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L	9/8/2020 19:58
Carbon disulfide	< 2.00	ug/L	9/8/2020 19:58
Carbon Tetrachloride	< 2.00	ug/L	9/8/2020 19:58
Chlorobenzene	< 2.00	ug/L	9/8/2020 19:58
Chloroethane	< 2.00	ug/L	9/8/2020 19:58
Chloroform	< 2.00	ug/L	9/8/2020 19:58
Chloromethane	< 2.00	ug/L	9/8/2020 19:58
cis-1,2-Dichloroethene	< 2.00	ug/L	9/8/2020 19:58
cis-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020 19:58
Cyclohexane	< 10.0	ug/L	9/8/2020 19:58
Dibromochloromethane	< 2.00	ug/L	9/8/2020 19:58
Dichlorodifluoromethane	< 2.00	ug/L	9/8/2020 19:58
Ethylbenzene	< 2.00	ug/L	9/8/2020 19:58
Freon 113	< 2.00	ug/L	9/8/2020 19:58
Isopropylbenzene	< 2.00	ug/L	9/8/2020 19:58
m,p-Xylene	< 2.00	ug/L	9/8/2020 19:58
Methyl acetate	< 2.00	ug/L	9/8/2020 19:58
Methyl tert-butyl Ether	< 2.00	ug/L	9/8/2020 19:58
Methylcyclohexane	< 2.00	ug/L	9/8/2020 19:58
Methylene chloride	< 5.00	ug/L	9/8/2020 19:58
o-Xylene	< 2.00	ug/L	9/8/2020 19:58
Styrene	< 5.00	ug/L	9/8/2020 19:58
Tetrachloroethene	< 2.00	ug/L	9/8/2020 19:58
Toluene	< 2.00	ug/L	9/8/2020 19:58
trans-1,2-Dichloroethene	< 2.00	ug/L	9/8/2020 19:58

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-8

Lab Sample ID: 204166-03

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020	19:58
Trichloroethene	< 2.00	ug/L	9/8/2020	19:58
Trichlorofluoromethane	< 2.00	ug/L	9/8/2020	19:58
Vinyl chloride	< 2.00	ug/L	9/8/2020	19:58

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	111	70.9 - 139		9/8/2020 19:58
4-Bromofluorobenzene	80.4	59.5 - 129		9/8/2020 19:58
Pentafluorobenzene	100	89.3 - 117		9/8/2020 19:58
Toluene-D8	92.0	82.9 - 115		9/8/2020 19:58

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73133.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier:	MW-11	Date Sampled:	9/2/2020
Lab Sample ID:	204166-04	Date Received:	9/2/2020
Matrix:	Groundwater		

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 07:25
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 07:25
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 07:25
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 07:25
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 07:25
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 07:25
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 07:25
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 07:25
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:25
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:25
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 07:25
2-Chlorophenol	< 10.0	ug/L		9/9/2020 07:25
2-Methylnaphthalene	< 10.0	ug/L		9/9/2020 07:25
2-Methylphenol	< 10.0	ug/L		9/9/2020 07:25
2-Nitroaniline	< 20.0	ug/L		9/9/2020 07:25
2-Nitrophenol	< 10.0	ug/L		9/9/2020 07:25
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 07:25
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 07:25

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

3-Nitroaniline	< 20.0	ug/L	9/9/2020 07:25
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020 07:25
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:25
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020 07:25
4-Chloroaniline	< 10.0	ug/L	9/9/2020 07:25
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:25
4-Nitroaniline	< 20.0	ug/L	9/9/2020 07:25
4-Nitrophenol	< 20.0	ug/L	9/9/2020 07:25
Acenaphthene	< 10.0	ug/L	9/9/2020 07:25
Acenaphthylene	< 10.0	ug/L	9/9/2020 07:25
Acetophenone	< 10.0	ug/L	9/9/2020 07:25
Anthracene	< 10.0	ug/L	9/9/2020 07:25
Atrazine	< 10.0	ug/L	9/9/2020 07:25
Benzaldehyde	< 10.0	ug/L	9/9/2020 07:25
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020 07:25
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020 07:25
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020 07:25
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020 07:25
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020 07:25
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020 07:25
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020 07:25
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020 07:25
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020 07:25
Caprolactam	< 10.0	ug/L	9/9/2020 07:25
Carbazole	< 10.0	ug/L	9/9/2020 07:25

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Chrysene	< 10.0	ug/L	9/9/2020 07:25
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 07:25
Dibenzofuran	< 10.0	ug/L	9/9/2020 07:25
Diethyl phthalate	< 10.0	ug/L	9/9/2020 07:25
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 07:25
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 07:25
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 07:25
Fluoranthene	< 10.0	ug/L	9/9/2020 07:25
Fluorene	< 10.0	ug/L	9/9/2020 07:25
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 07:25
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 07:25
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 07:25
Hexachloroethane	< 10.0	ug/L	9/9/2020 07:25
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 07:25
Isophorone	< 10.0	ug/L	9/9/2020 07:25
Naphthalene	< 10.0	ug/L	9/9/2020 07:25
Nitrobenzene	< 10.0	ug/L	9/9/2020 07:25
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 07:25
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 07:25
Pentachlorophenol	< 20.0	ug/L	9/9/2020 07:25
Phenanthrene	< 10.0	ug/L	9/9/2020 07:25
Phenol	< 10.0	ug/L	9/9/2020 07:25
Pyrene	< 10.0	ug/L	9/9/2020 07:25

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	88.5	53.8 - 116		9/9/2020 07:25
2-Fluorobiphenyl	57.8	36.5 - 95.3		9/9/2020 07:25
2-Fluorophenol	35.9	11.1 - 99.3		9/9/2020 07:25
Nitrobenzene-d5	74.7	49.4 - 100		9/9/2020 07:25
Phenol-d5	26.5	10 - 103		9/9/2020 07:25
Terphenyl-d14	80.9	54.3 - 109		9/9/2020 07:25

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49281.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-11
Lab Sample ID: 204166-04 **Date Sampled:** 9/2/2020
Matrix: Groundwater **Date Received:** 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1,2-Trichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1-Dichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1-Dichloroethene	< 2.00	ug/L		9/10/2020 14:56
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/10/2020 14:56
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/10/2020 14:56
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/10/2020 14:56
1,2-Dibromoethane	< 2.00	ug/L		9/10/2020 14:56
1,2-Dichlorobenzene	< 2.00	ug/L		9/10/2020 14:56
1,2-Dichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,2-Dichloropropane	< 2.00	ug/L		9/10/2020 14:56
1,3-Dichlorobenzene	< 2.00	ug/L		9/10/2020 14:56
1,4-Dichlorobenzene	< 2.00	ug/L		9/10/2020 14:56
1,4-Dioxane	< 20.0	ug/L		9/10/2020 14:56
2-Butanone	< 10.0	ug/L		9/10/2020 14:56
2-Hexanone	< 5.00	ug/L		9/10/2020 14:56
4-Methyl-2-pentanone	< 5.00	ug/L		9/10/2020 14:56
Acetone	< 10.0	ug/L		9/10/2020 14:56
Benzene	0.732	ug/L	J	9/10/2020 14:56
Bromochloromethane	< 5.00	ug/L		9/10/2020 14:56
Bromodichloromethane	< 2.00	ug/L		9/10/2020 14:56
Bromoform	< 5.00	ug/L		9/10/2020 14:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-11			
Lab Sample ID:	204166-04		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
Bromomethane	< 2.00	ug/L		9/10/2020 14:56
Carbon disulfide	< 2.00	ug/L		9/10/2020 14:56
Carbon Tetrachloride	< 2.00	ug/L		9/10/2020 14:56
Chlorobenzene	< 2.00	ug/L		9/10/2020 14:56
Chloroethane	< 2.00	ug/L		9/10/2020 14:56
Chloroform	< 2.00	ug/L		9/10/2020 14:56
Chloromethane	< 2.00	ug/L		9/10/2020 14:56
cis-1,2-Dichloroethene	< 2.00	ug/L		9/10/2020 14:56
cis-1,3-Dichloropropene	< 2.00	ug/L		9/10/2020 14:56
Cyclohexane	< 10.0	ug/L		9/10/2020 14:56
Dibromochloromethane	< 2.00	ug/L		9/10/2020 14:56
Dichlorodifluoromethane	< 2.00	ug/L		9/10/2020 14:56
Ethylbenzene	< 2.00	ug/L		9/10/2020 14:56
Freon 113	< 2.00	ug/L		9/10/2020 14:56
Isopropylbenzene	< 2.00	ug/L		9/10/2020 14:56
m,p-Xylene	< 2.00	ug/L		9/10/2020 14:56
Methyl acetate	< 2.00	ug/L		9/10/2020 14:56
Methyl tert-butyl Ether	< 2.00	ug/L		9/10/2020 14:56
Methylcyclohexane	< 2.00	ug/L		9/10/2020 14:56
Methylene chloride	< 5.00	ug/L		9/10/2020 14:56
o-Xylene	< 2.00	ug/L		9/10/2020 14:56
Styrene	< 5.00	ug/L		9/10/2020 14:56
Tetrachloroethene	< 2.00	ug/L		9/10/2020 14:56
Toluene	< 2.00	ug/L		9/10/2020 14:56
trans-1,2-Dichloroethene	< 2.00	ug/L		9/10/2020 14:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020	14:56
Trichloroethene	< 2.00	ug/L	9/10/2020	14:56
Trichlorofluoromethane	< 2.00	ug/L	9/10/2020	14:56
Vinyl chloride	< 2.00	ug/L	9/10/2020	14:56

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	101	70.9 - 139		9/10/2020 14:56
4-Bromofluorobenzene	83.0	59.5 - 129		9/10/2020 14:56
Pentafluorobenzene	100	89.3 - 117		9/10/2020 14:56
Toluene-D8	93.7	82.9 - 115		9/10/2020 14:56

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73195.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-7R
Lab Sample ID: 204166-05 **Date Sampled:** 9/2/2020
Matrix: Groundwater **Date Received:** 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1,2,2-Tetrachloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1,2-Trichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1-Dichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1-Dichloroethene	< 10.0	ug/L		9/10/2020 15:18
1,2,3-Trichlorobenzene	< 25.0	ug/L		9/10/2020 15:18
1,2,4-Trichlorobenzene	< 25.0	ug/L		9/10/2020 15:18
1,2-Dibromo-3-Chloropropane	< 50.0	ug/L		9/10/2020 15:18
1,2-Dibromoethane	< 10.0	ug/L		9/10/2020 15:18
1,2-Dichlorobenzene	< 10.0	ug/L		9/10/2020 15:18
1,2-Dichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,2-Dichloropropane	< 10.0	ug/L		9/10/2020 15:18
1,3-Dichlorobenzene	< 10.0	ug/L		9/10/2020 15:18
1,4-Dichlorobenzene	< 10.0	ug/L		9/10/2020 15:18
1,4-Dioxane	< 100	ug/L		9/10/2020 15:18
2-Butanone	< 50.0	ug/L		9/10/2020 15:18
2-Hexanone	< 25.0	ug/L		9/10/2020 15:18
4-Methyl-2-pentanone	< 25.0	ug/L		9/10/2020 15:18
Acetone	< 50.0	ug/L		9/10/2020 15:18
Benzene	< 5.00	ug/L		9/10/2020 15:18
Bromochloromethane	< 25.0	ug/L		9/10/2020 15:18
Bromodichloromethane	< 10.0	ug/L		9/10/2020 15:18
Bromoform	< 25.0	ug/L		9/10/2020 15:18

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	MW-7R			
Lab Sample ID:	204166-05		Date Sampled:	9/2/2020
Matrix:	Groundwater		Date Received:	9/2/2020
Bromomethane	< 10.0	ug/L		9/10/2020 15:18
Carbon disulfide	< 10.0	ug/L		9/10/2020 15:18
Carbon Tetrachloride	< 10.0	ug/L		9/10/2020 15:18
Chlorobenzene	< 10.0	ug/L		9/10/2020 15:18
Chloroethane	< 10.0	ug/L		9/10/2020 15:18
Chloroform	< 10.0	ug/L		9/10/2020 15:18
Chloromethane	< 10.0	ug/L		9/10/2020 15:18
cis-1,2-Dichloroethene	< 10.0	ug/L		9/10/2020 15:18
cis-1,3-Dichloropropene	< 10.0	ug/L		9/10/2020 15:18
Cyclohexane	< 50.0	ug/L		9/10/2020 15:18
Dibromochloromethane	< 10.0	ug/L		9/10/2020 15:18
Dichlorodifluoromethane	< 10.0	ug/L		9/10/2020 15:18
Ethylbenzene	< 10.0	ug/L		9/10/2020 15:18
Freon 113	< 10.0	ug/L		9/10/2020 15:18
Isopropylbenzene	< 10.0	ug/L		9/10/2020 15:18
m,p-Xylene	< 10.0	ug/L		9/10/2020 15:18
Methyl acetate	< 10.0	ug/L		9/10/2020 15:18
Methyl tert-butyl Ether	499	ug/L		9/10/2020 15:18
Methylcyclohexane	< 10.0	ug/L		9/10/2020 15:18
Methylene chloride	< 25.0	ug/L		9/10/2020 15:18
o-Xylene	< 10.0	ug/L		9/10/2020 15:18
Styrene	< 25.0	ug/L		9/10/2020 15:18
Tetrachloroethene	< 10.0	ug/L		9/10/2020 15:18
Toluene	< 10.0	ug/L		9/10/2020 15:18
trans-1,2-Dichloroethene	< 10.0	ug/L		9/10/2020 15:18

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-7R

Lab Sample ID: 204166-05

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 10.0	ug/L	9/10/2020	15:18
Trichloroethene	< 10.0	ug/L	9/10/2020	15:18
Trichlorofluoromethane	< 10.0	ug/L	9/10/2020	15:18
Vinyl chloride	< 10.0	ug/L	9/10/2020	15:18

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	101	70.9 - 139		9/10/2020 15:18
4-Bromofluorobenzene	77.3	59.5 - 129		9/10/2020 15:18
Pentafluorobenzene	101	89.3 - 117		9/10/2020 15:18
Toluene-D8	91.6	82.9 - 115		9/10/2020 15:18

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73196.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier:	Blind Duplicate	Date Sampled:	9/2/2020
Lab Sample ID:	204166-06	Date Received:	9/2/2020
Matrix:	Groundwater		

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 07:54
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 07:54
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 07:54
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 07:54
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 07:54
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 07:54
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 07:54
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 07:54
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:54
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:54
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 07:54
2-Chlorophenol	< 10.0	ug/L		9/9/2020 07:54
2-Methylnaphthalene	< 10.0	ug/L		9/9/2020 07:54
2-Methylphenol	< 10.0	ug/L		9/9/2020 07:54
2-Nitroaniline	< 20.0	ug/L		9/9/2020 07:54
2-Nitrophenol	< 10.0	ug/L		9/9/2020 07:54
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 07:54
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 07:54

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	Blind Duplicate		
Lab Sample ID:	204166-06	Date Sampled:	9/2/2020
Matrix:	Groundwater	Date Received:	9/2/2020

3-Nitroaniline	< 20.0	ug/L	9/9/2020 07:54
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020 07:54
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:54
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020 07:54
4-Chloroaniline	< 10.0	ug/L	9/9/2020 07:54
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:54
4-Nitroaniline	< 20.0	ug/L	9/9/2020 07:54
4-Nitrophenol	< 20.0	ug/L	9/9/2020 07:54
Acenaphthene	< 10.0	ug/L	9/9/2020 07:54
Acenaphthylene	< 10.0	ug/L	9/9/2020 07:54
Acetophenone	< 10.0	ug/L	9/9/2020 07:54
Anthracene	< 10.0	ug/L	9/9/2020 07:54
Atrazine	< 10.0	ug/L	9/9/2020 07:54
Benzaldehyde	< 10.0	ug/L	9/9/2020 07:54
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020 07:54
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020 07:54
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020 07:54
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020 07:54
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020 07:54
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020 07:54
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020 07:54
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020 07:54
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020 07:54
Caprolactam	< 10.0	ug/L	9/9/2020 07:54
Carbazole	< 10.0	ug/L	9/9/2020 07:54

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	Blind Duplicate		
Lab Sample ID:	204166-06	Date Sampled:	9/2/2020
Matrix:	Groundwater	Date Received:	9/2/2020
Chrysene	< 10.0	ug/L	9/9/2020 07:54
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 07:54
Dibenzofuran	< 10.0	ug/L	9/9/2020 07:54
Diethyl phthalate	< 10.0	ug/L	9/9/2020 07:54
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 07:54
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 07:54
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 07:54
Fluoranthene	< 10.0	ug/L	9/9/2020 07:54
Fluorene	< 10.0	ug/L	9/9/2020 07:54
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 07:54
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 07:54
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 07:54
Hexachloroethane	< 10.0	ug/L	9/9/2020 07:54
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 07:54
Isophorone	< 10.0	ug/L	9/9/2020 07:54
Naphthalene	< 10.0	ug/L	9/9/2020 07:54
Nitrobenzene	< 10.0	ug/L	9/9/2020 07:54
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 07:54
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 07:54
Pentachlorophenol	< 20.0	ug/L	9/9/2020 07:54
Phenanthrene	< 10.0	ug/L	9/9/2020 07:54
Phenol	< 10.0	ug/L	9/9/2020 07:54
Pyrene	< 10.0	ug/L	9/9/2020 07:54

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	85.6	53.8 - 116		9/9/2020	07:54
2-Fluorobiphenyl	60.4	36.5 - 95.3		9/9/2020	07:54
2-Fluorophenol	35.1	11.1 - 99.3		9/9/2020	07:54
Nitrobenzene-d5	75.0	49.4 - 100		9/9/2020	07:54
Phenol-d5	26.3	10 - 103		9/9/2020	07:54
Terphenyl-d14	80.0	54.3 - 109		9/9/2020	07:54

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49282.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1,2-Trichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1-Dichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1-Dichloroethene	< 2.00	ug/L		9/8/2020 21:07
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/8/2020 21:07
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/8/2020 21:07
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/8/2020 21:07
1,2-Dibromoethane	< 2.00	ug/L		9/8/2020 21:07
1,2-Dichlorobenzene	< 2.00	ug/L		9/8/2020 21:07
1,2-Dichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,2-Dichloropropane	< 2.00	ug/L		9/8/2020 21:07
1,3-Dichlorobenzene	< 2.00	ug/L		9/8/2020 21:07
1,4-Dichlorobenzene	< 2.00	ug/L		9/8/2020 21:07
1,4-Dioxane	< 20.0	ug/L		9/8/2020 21:07
2-Butanone	< 10.0	ug/L		9/8/2020 21:07
2-Hexanone	< 5.00	ug/L		9/8/2020 21:07
4-Methyl-2-pentanone	< 5.00	ug/L		9/8/2020 21:07
Acetone	11.4	ug/L		9/8/2020 21:07
Benzene	< 1.00	ug/L		9/8/2020 21:07
Bromochloromethane	< 5.00	ug/L		9/8/2020 21:07
Bromodichloromethane	< 2.00	ug/L		9/8/2020 21:07
Bromoform	< 5.00	ug/L		9/8/2020 21:07

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier:	Blind Duplicate		
Lab Sample ID:	204166-06	Date Sampled:	9/2/2020
Matrix:	Groundwater	Date Received:	9/2/2020
Bromomethane	< 2.00	ug/L	9/8/2020 21:07
Carbon disulfide	< 2.00	ug/L	9/8/2020 21:07
Carbon Tetrachloride	< 2.00	ug/L	9/8/2020 21:07
Chlorobenzene	< 2.00	ug/L	9/8/2020 21:07
Chloroethane	< 2.00	ug/L	9/8/2020 21:07
Chloroform	< 2.00	ug/L	9/8/2020 21:07
Chloromethane	< 2.00	ug/L	9/8/2020 21:07
cis-1,2-Dichloroethene	< 2.00	ug/L	9/8/2020 21:07
cis-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020 21:07
Cyclohexane	8.52	ug/L	J 9/8/2020 21:07
Dibromochloromethane	< 2.00	ug/L	9/8/2020 21:07
Dichlorodifluoromethane	< 2.00	ug/L	9/8/2020 21:07
Ethylbenzene	< 2.00	ug/L	9/8/2020 21:07
Freon 113	< 2.00	ug/L	9/8/2020 21:07
Isopropylbenzene	< 2.00	ug/L	9/8/2020 21:07
m,p-Xylene	< 2.00	ug/L	9/8/2020 21:07
Methyl acetate	< 2.00	ug/L	9/8/2020 21:07
Methyl tert-butyl Ether	< 2.00	ug/L	9/8/2020 21:07
Methylcyclohexane	2.34	ug/L	9/8/2020 21:07
Methylene chloride	< 5.00	ug/L	9/8/2020 21:07
o-Xylene	< 2.00	ug/L	9/8/2020 21:07
Styrene	< 5.00	ug/L	9/8/2020 21:07
Tetrachloroethene	< 2.00	ug/L	9/8/2020 21:07
Toluene	< 2.00	ug/L	9/8/2020 21:07
trans-1,2-Dichloroethene	< 2.00	ug/L	9/8/2020 21:07

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020	21:07
Trichloroethene	< 2.00	ug/L	9/8/2020	21:07
Trichlorofluoromethane	< 2.00	ug/L	9/8/2020	21:07
Vinyl chloride	< 2.00	ug/L	9/8/2020	21:07

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	106	70.9 - 139		9/8/2020 21:07
4-Bromofluorobenzene	77.1	59.5 - 129		9/8/2020 21:07
Pentafluorobenzene	98.0	89.3 - 117		9/8/2020 21:07
Toluene-D8	94.9	82.9 - 115		9/8/2020 21:07

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73136.D

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: Trip Blank T1004
Lab Sample ID: 204166-07
Matrix: Water

Date Sampled: 8/31/2020
Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1,2-Trichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1-Dichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1-Dichloroethene	< 2.00	ug/L		9/10/2020 15:41
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/10/2020 15:41
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/10/2020 15:41
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/10/2020 15:41
1,2-Dibromoethane	< 2.00	ug/L		9/10/2020 15:41
1,2-Dichlorobenzene	< 2.00	ug/L		9/10/2020 15:41
1,2-Dichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,2-Dichloropropane	< 2.00	ug/L		9/10/2020 15:41
1,3-Dichlorobenzene	< 2.00	ug/L		9/10/2020 15:41
1,4-Dichlorobenzene	< 2.00	ug/L		9/10/2020 15:41
1,4-Dioxane	< 20.0	ug/L		9/10/2020 15:41
2-Butanone	< 10.0	ug/L		9/10/2020 15:41
2-Hexanone	< 5.00	ug/L		9/10/2020 15:41
4-Methyl-2-pentanone	< 5.00	ug/L		9/10/2020 15:41
Acetone	< 10.0	ug/L		9/10/2020 15:41
Benzene	< 1.00	ug/L		9/10/2020 15:41
Bromochloromethane	< 5.00	ug/L		9/10/2020 15:41
Bromodichloromethane	< 2.00	ug/L		9/10/2020 15:41
Bromoform	< 5.00	ug/L		9/10/2020 15:41

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Trip Blank T1004

Lab Sample ID: 204166-07

Date Sampled: 8/31/2020

Matrix: Water

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L	9/10/2020 15:41
Carbon disulfide	< 2.00	ug/L	9/10/2020 15:41
Carbon Tetrachloride	< 2.00	ug/L	9/10/2020 15:41
Chlorobenzene	< 2.00	ug/L	9/10/2020 15:41
Chloroethane	< 2.00	ug/L	9/10/2020 15:41
Chloroform	< 2.00	ug/L	9/10/2020 15:41
Chloromethane	< 2.00	ug/L	9/10/2020 15:41
cis-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 15:41
cis-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020 15:41
Cyclohexane	< 10.0	ug/L	9/10/2020 15:41
Dibromochloromethane	< 2.00	ug/L	9/10/2020 15:41
Dichlorodifluoromethane	< 2.00	ug/L	9/10/2020 15:41
Ethylbenzene	< 2.00	ug/L	9/10/2020 15:41
Freon 113	< 2.00	ug/L	9/10/2020 15:41
Isopropylbenzene	< 2.00	ug/L	9/10/2020 15:41
m,p-Xylene	< 2.00	ug/L	9/10/2020 15:41
Methyl acetate	< 2.00	ug/L	9/10/2020 15:41
Methyl tert-butyl Ether	< 2.00	ug/L	9/10/2020 15:41
Methylcyclohexane	< 2.00	ug/L	9/10/2020 15:41
Methylene chloride	< 5.00	ug/L	9/10/2020 15:41
o-Xylene	< 2.00	ug/L	9/10/2020 15:41
Styrene	< 5.00	ug/L	9/10/2020 15:41
Tetrachloroethene	< 2.00	ug/L	9/10/2020 15:41
Toluene	< 2.00	ug/L	9/10/2020 15:41
trans-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 15:41

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Report Prepared Wednesday, September 16, 2020



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Trip Blank T1004

Lab Sample ID: 204166-07

Date Sampled: 8/31/2020

Matrix: Water

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020	15:41
Trichloroethene	< 2.00	ug/L	9/10/2020	15:41
Trichlorofluoromethane	< 2.00	ug/L	9/10/2020	15:41
Vinyl chloride	< 2.00	ug/L	9/10/2020	15:41

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
1,2-Dichloroethane-d4	105	70.9 - 139		9/10/2020 15:41
4-Bromofluorobenzene	74.2	59.5 - 129		9/10/2020 15:41
Pentafluorobenzene	101	89.3 - 117		9/10/2020 15:41
Toluene-D8	86.8	82.9 - 115		9/10/2020 15:41

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73197.D

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Report Prepared Wednesday, September 16, 2020



Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.

"E" = Result has been estimated, calibration limit exceeded.

"Z" = See case narrative.

"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.

"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.

"B" = Method blank contained trace levels of analyte. Refer to included method blank report.

"J" = Result estimated between the quantitation limit and half the quantitation limit.

"L" = Laboratory Control Sample recovery outside accepted QC limits.

"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.

"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.

"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

"(1)" = Indicates data from primary column used for QC calculation.

"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.

"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

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GENERAL TERMS AND CONDITIONS

LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation.

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.

Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility.

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

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CHAIN OF CUSTODY

REPORT TO:

INVOICE TO:

CLIENT: CITY OF ROCHESTER	CLIENT: Same	LAB PROJECT ID
ADDRESS: 30 CHURCH ST ROOM 300B	ADDRESS:	204164
CITY: ROCHESTER STATE: NY ZIP: 14614	CITY: STATE: ZIP:	Quotation #:
PHONE: 585-428-7094	PHONE:	Email: alexandra.zobel@cityofrochester.gov
ATTN: Alexandra Zobel	ATTN:	

PROJECT REFERENCE

1200 East Main Street
PO# 21001332

Matrix Codes:

AQ - Aqueous Liquid WA - Water DW - Drinking Water SO - Soil SD - Solid WP - Wipe OL - Oil
 NQ - Non-Aqueous Liquid WG - Groundwater WW - Wastewater SL - Sludge PT - Paint CK - Caulk AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX	COUNTAINERS	TCL VOCs	TCL SVOCs	REMARKS	PARADIGM LAB SAMPLE NUMBER
9/2/2020	12 ⁰⁰		X	MW-1	GW	3	X	X	Will have product * email or call if lower present *	01
9/2/2020	15 ⁰⁰		X	MW-3 / MS/MSD		9	X	X		02
9/2/2020	10 ³⁰		X	MW-8		1	X			03
9/2/2020	11 ⁴⁰		X	MW-11		3	X	X		04
9/2/2020	13 ⁰⁰		X	MW-7R		2	X			05
9/2/20	NA		X	Blind Duplicate		3	X	X		06
9/3/2020				Trip Blank / T1004 per label on 9/2/2020	W	1	X			07

Sealed 9/2/2020 9MVA/Kail
1600 N/A custody seal client delivered

Turnaround Time	Report Supplements		
Availability contingent upon lab approval; additional fees may apply.			
Standard 5 day <input type="checkbox"/>	None Required <input type="checkbox"/>	None Required <input type="checkbox"/>	None Required <input type="checkbox"/>
10 day <input checked="" type="checkbox"/>	Batch QC <input type="checkbox"/>	Basic EDD <input type="checkbox"/>	
Rush 3 day <input type="checkbox"/>	Category A <input type="checkbox"/>	NYSDEC EDD <input checked="" type="checkbox"/>	
Rush 2 day <input type="checkbox"/>	Category B <input checked="" type="checkbox"/>		
Rush 1 day <input type="checkbox"/>			
Other <input type="checkbox"/>	Other <input type="checkbox"/>	Other EDD <input type="checkbox"/>	
<small>please indicate date needed:</small>	<small>please indicate package needed:</small>	<small>please indicate EDD needed:</small>	

A. Zobel 9/2/20
 Sampled By: *A. Zobel* Date/Time: 9/2/20 @ 15⁵⁶
 Relinquished By: *[Signature]* Date/Time: 9/2/20 15⁵⁶
 Received By: *[Signature]* Date/Time: 9/2/2020 16⁰⁷
 Received @ Lab By: *[Signature]* Date/Time: 9/2/2020 16⁰⁷

Total Cost:
 P.I.F.

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

See additional page for sample conditions.

2062



Chain of Custody Supplement

Client: City of Roch Completed by: Molly Nair
 Lab Project ID: 204166 Date: 9/2/2020

Sample Condition Requirements
 Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	<u>5°C</u>		
Compliant Sample Quantity/Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		



**APPENDIX D:
INSTITUTIONAL AND ENGINEERING
CONTROLS CERTIFICATION FORM**



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



	Site Details	Box 1	
Site No.	B00129		
Site Name 1200 E. Main Street			
Site Address: 1200 E. Main Street	Zip Code: 14609-		
City/Town: Rochester			
County: Monroe			
Site Acreage: 0.622			
Reporting Period: June 11, 2020 to June 11, 2021 (see NYSDEC email correspondence provided after Box 7)			
		YES	NO
1. Is the information above correct?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5. Is the site currently undergoing development?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2	
		YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs in place and functioning as designed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address these issues.			
Signature of Owner, Remedial Party or Designated Representative		Date	

SITE NO. B00129

Box 3

Description of Institutional Controls

Parcel

Owner

Institutional Control

106.76-1-44

City of Rochester

Ground Water Use Restriction

Soil Management Plan
Landuse Restriction
Building Use Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

Environmental Easement:

The property may be used for commercial or industrial uses.

The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purpose, and the user must first notify and obtain written approval to do so from the NYSDEC.

A Site Management Plan.

Box 4

Description of Engineering Controls

Parcel

Engineering Control

106.76-1-44

Vapor Mitigation
Groundwater Treatment System*
Air Sparging/Soil Vapor Extraction*

Exposure to remaining groundwater contamination at the Site is prevented by continued operation and maintenance of an oxygen injection system and soil vapor extraction trench.

NYSDEC approved deactivation of the groundwater treatment system and air sparging/soil vapor extraction in a letter dated March 18, 2019. Deactivation occurred in May 2019. The injection wells and SVE trenches remain in place. A summary of these EC changes was included in the July 2020 PRR.

Periodic Review Report (PRR) Certification Statements

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

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

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

YES NO

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

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

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

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

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

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

YES NO

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. B00129

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

I Joseph Biondolillo at City Hall, 30 Church St., Rochester, NY 14614
print name print business address

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

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

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

9-21-2021
Date

Tshimanga

EC CERTIFICATIONS

Box 7

Signature

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

I Mufuta J. Tshimanga at 280 East Broad Street, Rochester, NY 14604
print name print business address

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

Tshimanga



9/15/2021

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

Stamp
(Required for PE)

Date

From: [Theobald, Charlotte B \(DEC\)](#)
To: [Forbes, Jane](#)
Subject: Re: PRR Reporting period?
Date: Thursday, September 09, 2021 11:36:22 AM

Yes that will be acceptable ✓

From: "Forbes, Jane" <Jane.Forbes@CityofRochester.Gov>
Date: Thursday, September 9, 2021 at 11:29 AM
To: "Theobald, Charlotte B (DEC)" <charlotte.theobald@dec.ny.gov>
Subject: RE: PRR Reporting period?

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hey Charlotte,

One more thing, Box 4 of the certification form indicates that exposure to GW contamination is being controlled with the SVE/ Sparging system(s), which were removed and reported in last year's PRR. I'm assuming that we can add a note to that effect for that box and it will be satisfactory? Joe Biondolillo will be signing off on the forms and I know that he'll be concerned if it's inaccurate.

Thanks
Jane

From: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Sent: Wednesday, September 08, 2021 12:52 PM
To: Forbes, Jane <Jane.Forbes@CityofRochester.Gov>
Cc: lgregor@bergmannpc.com; Zobel, Alexandra L. <Alexandra.Zobel@CityofRochester.Gov>
Subject: RE: PRR Reporting period?

Keep it the June to June. Mark up the cert forms accordingly. No justification needed for me as I review and approve the PRRs. The system is temperamental and lets leave it at that. ✓

From: Forbes, Jane <Jane.Forbes@CityofRochester.Gov>
Sent: Wednesday, September 8, 2021 12:39 PM
To: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Cc: lgregor@bergmannpc.com; Zobel, Alexandra L. <Alexandra.Zobel@CityofRochester.Gov>
Subject: PRR Reporting period?

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Charlotte,

I'm reviewing our PRR for the 1200 East Main street site and I didn't realize that the reporting period designated in the reminder letter was shortened from June 20, 2020 through March 4, 2021. (In our defense, we didn't receive the letter or certification forms from Albany until August 11, 2021). I was expecting a year's time span, from June 20, 2020 through June 20, 2021. Consequently, that puts our annual site inspection conducted on May 20, 2021, and the well decommissioning (May 19 and 20, 2021), outside of the reporting period.

I'd like to request that we be allowed to report through June 20, 2021 so that we meet our obligations under the COC and Environmental Easement. I'm not sure if it's in your power to ensure that the dates going forward span a consistent timeframe, but if it is, that would help us keep on our schedule to meet our reporting obligations.

Please let me know as soon as you can, and if these correspondence need to be included in the PRR to justify the change in the reporting period, we'll make the revisions to the report.

Regards,

Jane MH Forbes, MPA
Sr. Environmental Specialist
City of Rochester – Division of Environmental Quality
30 Church Street Room 300B
Rochester, NY 14614
585-428-7892 (office)
585-314-1719 (mobile)



APPENDIX E:

Monitoring Well Decommissioning Summary

LaBella Associates, July 2, 2021



July 2, 2021

Ms. Jane Forbes
Department of Environmental Services
Division of Environmental Quality
City of Rochester
30 Church Street, Room 300-B
Rochester, New York 14614

Re: Monitoring Well Decommissioning Summary
E. Main and Laura Streets
Various Properties at E. Main and Laura Streets
Rochester, New York 14609
LaBella Project No. 2182815.01

Dear Ms. Forbes:

LaBella Associates, D.P.C. (LaBella) is pleased to submit this letter summarizing monitoring well decommissioning work that took place at the East Main and Laura Street Site located at 14609 intersection of East Main Street and Laura Street, City of Rochester, Monroe County, New York, 14604, hereinafter referred to as the "Site."

PROJECT BACKGROUND

LaBella recently completed two (2) Phase II Environmental Site Assessments (ESA) for the Site in support of a project to construct a new police precinct building on various former residential properties at East Main and Laura Streets. There is also an adjacent Site, 1200 East Main Street, which is to be developed as part of this project. Based on current design plans, two (2) existing monitoring wells must be decommissioned at the Site. The 1200 East Main Street site has a total of eleven (11) monitoring wells, six (6) of which must be decommissioned based on the planned redevelopment.

WORK PERFORMED

On May 19 and 20, 2021, LaBella performed monitoring well decommissioning at the Site at the following locations:

Well ID	Property	Diameter	Depth	Type
MW-2	1200 E. Main	2"	22.0'	Stickup
MW-4	1200 E. Main	2"	22.0'	Flush Mount
MW-9R	1200 E. Main	2"	22.0'	Flush Mount
MW-10	1200 E. Main	2"	22.0'	Stickup
MW-15R	1200 E. Main	2"	24.0'	Flush Mount
MW-16	1200 E. Main	2"	24.0'	Flush Mount
BW-01	1244-1246 E. Main	2"	24.0'	Flush Mount
BW-02	1222 E. Main	2"	24.5'	Flush Mount



Monitoring well decommissioning was conducted in accordance with New York State Department of Environmental Conservation (NYSDEC) Commissioner Policy (CP-)43, "Groundwater Monitoring Well Decommissioning Policy."

Presented below is a table summarizing monitoring well decommissioning activities. Full monitoring well decommissioning logs can be found in Attachment 1.

Well ID	Interval Grouted	Cement Type	Grout Vol. (gal)
MW-2	0' - 22' bgs	Portland	3.75
MW-4	0' - 22' bgs	Portland	3.75
MW-9R	0' - 22' bgs	Portland	3.75
MW-10	0' - 22' bgs	Portland	3.75
MW-15R	0' - 24' bgs	Portland	3.75
MW-16	0' - 24' bgs	Portland	3.75
BW-01	0' - 24' bgs	Portland	3.75
BW-02	0' - 24.5' bgs	Portland	3.75

We appreciate the opportunity to serve your professional environmental engineering needs and look forward to working with you toward a successful completion of this project. If you have any questions please do not hesitate to contact me at (585) 295-6611.

Respectfully submitted,

LABELLA ASSOCIATES, D.P.C.

Jared Pristach, PE
Project Manager

Attachment

C:\USERS\JPRISTACH\DOCUMENTS\IN CAR\E. MAIN LAURA DECOMMISSIONING\LTR.2021-07-01.2182815_EMAINLAURA_MW_DECOMMISSIONING.DOCX



**ATTACHMENT 1 -
MONITORING WELL DECOMMISSIONING LOGS**

**FIGURE 3
WELL DECOMMISSIONING RECORD**

Site Name: <u>East Main and Laura</u>	Well I.D.: <u>MW-2</u>
Site Location: <u>1200 E Main, Rochester, NY</u>	Driller: <u>M. Pepe</u>
Drilling Co.: <u>LaBella LLC</u>	Inspector: <u>J. Folger</u>
	Date: <u>5/19/21</u>

DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u>	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Depth (feet)</p> <hr/> <p>5</p> <hr/> <p>10</p> <hr/> <p>15</p> <hr/> <p>20</p> <hr/> </div> </div>	
Interval Drilled		
Drilling Method(s)		
Borehole Dia. (in.)		
Temporary Casing Installed? (y/n)		
Depth temporary casing installed		
Casing type/dia. (in.)		
Method of installing		
<u>CASING PULLING</u>		
Method employed		
Casing retrieved (feet)		0
Casing type/dia. (in)		2" PVC
<u>CASING PERFORATING</u>		
Equipment used		
Number of perforations/foot		
Size of perforations		
Interval perforated		
<u>GROUTING</u>		
Interval grouted (FBLs)		0' - 22'
# of batches prepared		1
For each batch record:		
Quantity of water used (gal.)		5
Quantity of cement used (lbs.)		90
Cement type		portland
Quantity of bentonite used (lbs.)		
Quantity of calcium chloride used (lbs.)		
Volume of grout prepared (gal.)		
Volume of grout used (gal.)	3.75	

COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor _____


 Department Representative

**FIGURE 3
WELL DECOMMISSIONING RECORD**

Site Name: <i>East Main and Laura</i>	Well I.D.: <i>MW-4</i>
Site Location: <i>1200 East Main, Rochester, NY</i>	Driller: <i>M. Pepe</i>
Drilling Co.: <i>LaBella LLC</i>	Inspector: <i>J. Folger</i>
	Date: <i>5/19/21</i>

DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p>	<p>Depth (feet)</p>
<p><u>CASING PULLING</u></p> <p>Method employed <input type="text"/></p> <p>Casing retrieved (feet) <input type="text" value="0"/></p> <p>Casing type/dia. (in) <input pvc"="" type="text" value="2\"/></p>	
<p><u>CASING PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p>	
<p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="text" value="0'-22'"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="5"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="90"/></p> <p>Cement type <input type="text" value="Portland"/></p> <p>Quantity of bentonite used (lbs.) <input type="text"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="3.75"/></p>	

COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor _____


 Department Representative

**FIGURE 3
WELL DECOMMISSIONING RECORD**

Site Name: <u>East Main and Laura</u>	Well I.D.: <u>MW-9R</u>
Site Location: <u>1200 E Main, Rochester, NY</u>	Driller: <u>LaBella LLC, M. Pepe</u>
Drilling Co.: <u>LaBella LLC</u>	Inspector: <u>J. Folger</u>
	Date: <u>5/19/21</u>

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING

Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	

CASING PULLING

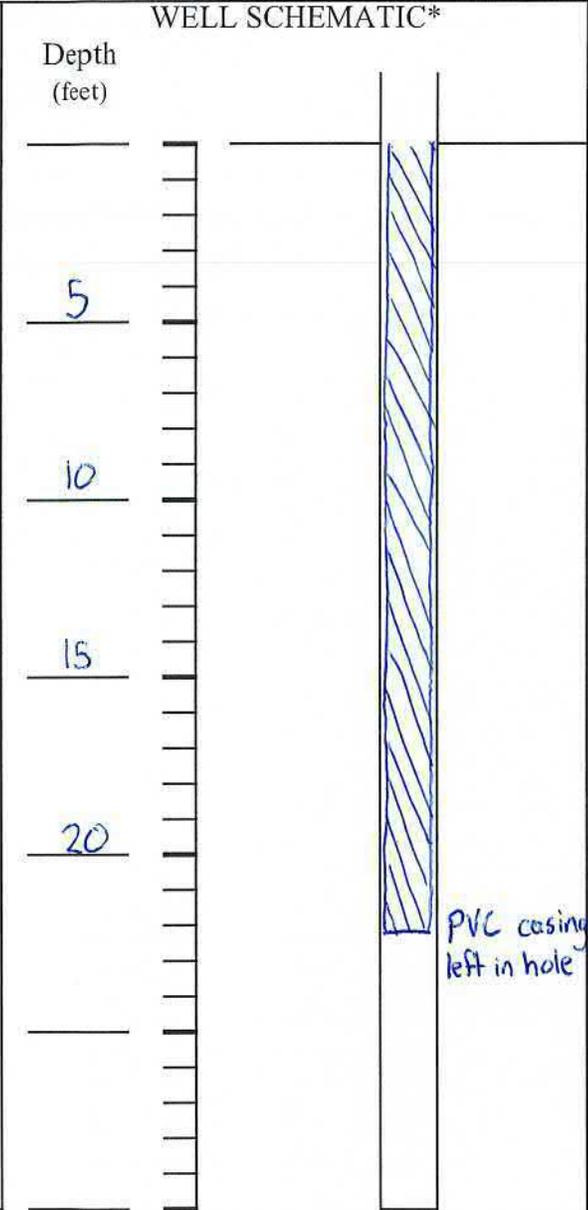
Method employed	
Casing retrieved (feet)	<u>0</u>
Casing type/dia. (in)	<u>2" PVC</u>

CASING PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

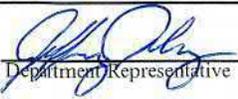
Interval grouted (FBLs)	<u>0'-22'</u>
# of batches prepared	<u>1</u>
For each batch record:	
Quantity of water used (gal.)	<u>5</u>
Quantity of cement used (lbs.)	<u>90</u>
Cement type	<u>Portland</u>
Quantity of bentonite used (lbs.)	
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>3.75</u>



COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor _____


 Department Representative

**FIGURE 3
WELL DECOMMISSIONING RECORD**

Site Name: <u>East Main and Laura</u>	Well I.D.: <u>MW-10</u>
Site Location: <u>1200 E Main, Rochester, NY</u>	Driller: <u>M. Pepe</u>
Drilling Co.: <u>LaBella LLC</u>	Inspector: <u>J. Folger</u>
	Date: <u>5/19/21</u>

DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<u>OVERDRILLING</u>	
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
<u>CASING PULLING</u>	
Method employed	
Casing retrieved (feet)	
Casing type/dia. (in)	
<u>CASING PERFORATING</u>	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
<u>GROUTING</u>	
Interval grouted (FBLs)	
# of batches prepared	
For each batch record:	
Quantity of water used (gal.)	
Quantity of cement used (lbs.)	
Cement type	
Quantity of bentonite used (lbs.)	
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	

COMMENTS:

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor _____


 Department Representative

**FIGURE 3
WELL DECOMMISSIONING RECORD**

Site Name: <u>East Main and Laura</u>	Well I.D.: <u>BW-01</u>
Site Location: <u>1244-1246 E. Main, Rochester, NY</u>	Driller: <u>M. Pepe</u>
Drilling Co.: <u>LaBella LLC</u>	Inspector: <u>J. Folger</u>
	Date: <u>5/20/21</u>

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING

Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	

CASING PULLING

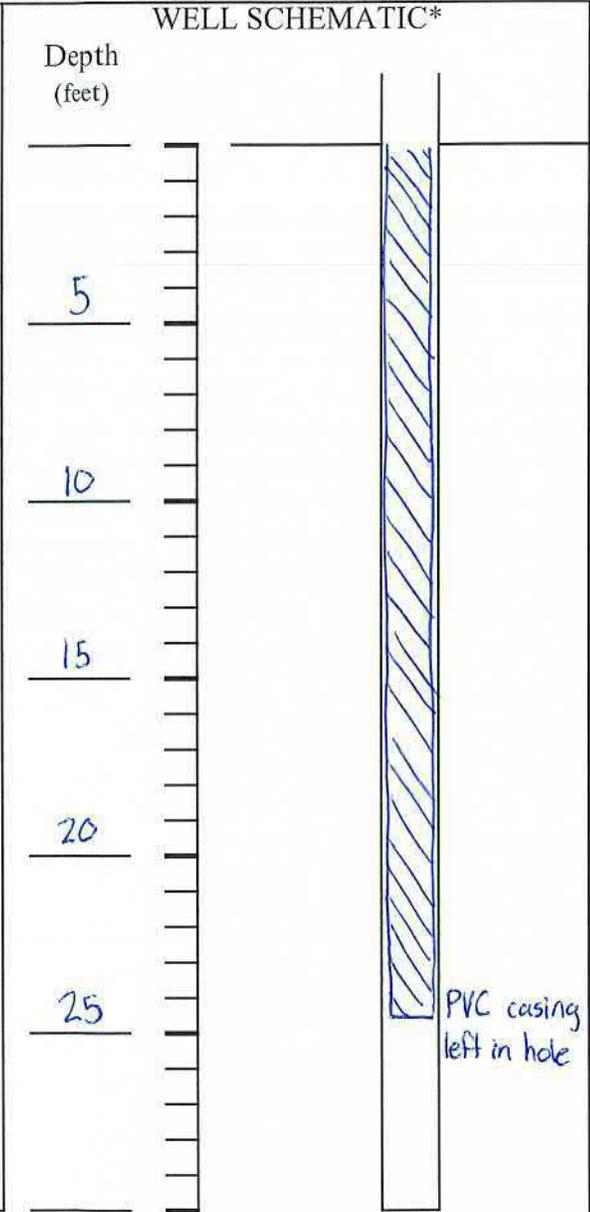
Method employed	
Casing retrieved (feet)	<u>0</u>
Casing type/dia. (in)	<u>2" PVC</u>

CASING PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBS)	<u>0'-24'</u>
# of batches prepared	<u>1</u>
For each batch record:	
Quantity of water used (gal.)	<u>5</u>
Quantity of cement used (lbs.)	<u>90</u>
Cement type	<u>Portland</u>
Quantity of bentonite used (lbs.)	
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>3.75</u>



COMMENTS:

* Sketch in all relevant decommissioning data, including:
interval overdrilled, interval grouted, casing left in hole,
well stickup, etc.

Drilling Contractor _____


 Department Representative

**FIGURE 3
WELL DECOMMISSIONING RECORD**

Site Name: <u>East Main and Laura</u>	Well I.D.: <u>BW-02</u>
Site Location: <u>1222 E Main, Rochester, NY</u>	Driller: <u>M. Pepe</u>
Drilling Co.: <u>LaBella, LLC</u>	Inspector: <u>J. Folger</u>
	Date: <u>5/19/21</u>

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING

Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	

CASING PULLING

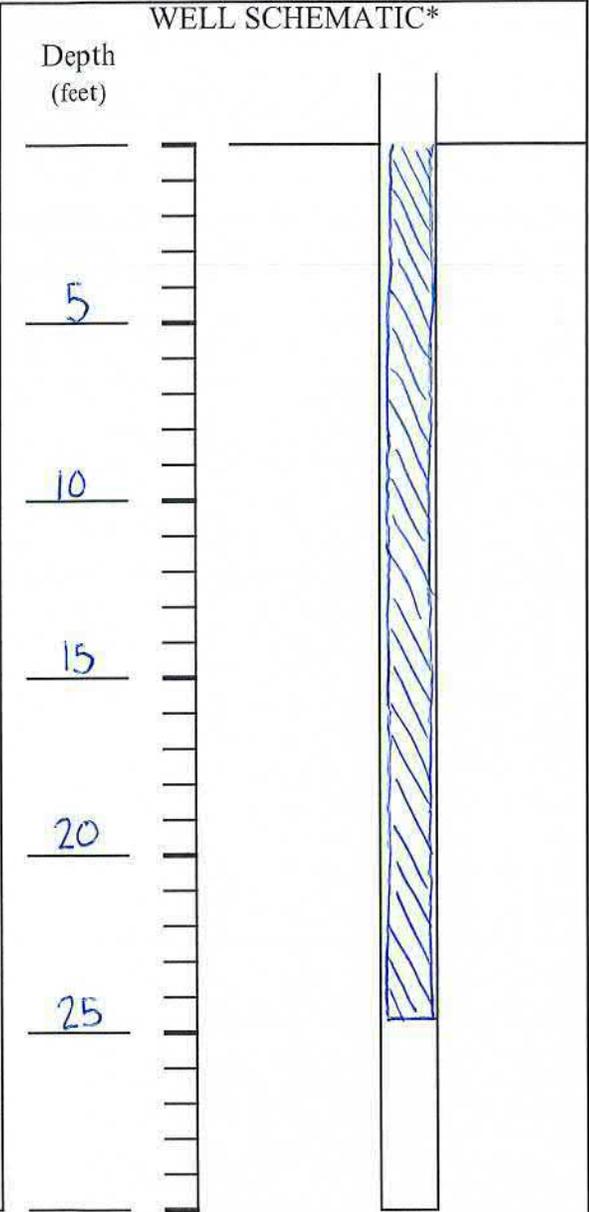
Method employed	
Casing retrieved (feet)	<u>0</u>
Casing type/dia. (in)	<u>2" PVC</u>

CASING PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBLs)	<u>0'-24.5'</u>
# of batches prepared	<u>1</u>
For each batch record:	
Quantity of water used (gal.)	<u>5</u>
Quantity of cement used (lbs.)	<u>90</u>
Cement type	<u>Portland</u>
Quantity of bentonite used (lbs.)	
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>3.75</u>



COMMENTS:

* Sketch in all relevant decommissioning data, including:
interval overdrilled, interval grouted, casing left in hole,
well stickup, etc.

Drilling Contractor _____


 Department Representative



APPENDIX F:
OXYGEN INJECTION SYSTEM
RECORDS AND DEACTIVATION
DOCUMENTATION

From: [Forbes, Jane](#)
To: ["charlotte.theobald@dec.ny.gov"](mailto:charlotte.theobald@dec.ny.gov)
Subject: 1200 East Main Street
Date: Thursday, February 21, 2019 11:43:47 AM
Attachments: [Total VOCs vs Time Nov2016-March2018.xls](#)

Hi Charlotte:

I've sent the COC over to our Law Department to get it filed with the County and I should have the Notice of COC, the Final FER and Final SMP added to the document repository at the Winton Branch Library by the end of the week.

As for shutting down the systems, I've been reviewing the language in the SMP regarding system termination (Section 3.3.3) and all it says is that the City "will petition NYSDEC to terminate" "once contaminant concentrations in groundwater and/or soil have become asymptotic". It doesn't state that system termination would require a 60-day change of use notification. I reviewed the 60 Day notification form too and I'd interpret it as not being required since: (i) there is no change in Remedial Party(ies); (ii) the COC is not being transferred; and (iii) we are not physically altering or changing the use of the site at this time. We will submit the COU once we move toward the RPD redevelopment.

I'd like to decommission the systems as soon as possible so the GW conditions can stabilize before we conduct our first, post COC, quarterly sampling event. How do you want me to proceed with my petition to terminate? Will this e-mail suffice, or do you need a formal letter detailing the decommissioning procedures?

Also, I haven't submitted any data to you yet, but in anticipation that we were to have the COC *last year*, we were already quarterly sampling the on-site wells beginning in November 2017 through March 2018. I stopped that GW sampling in March 2018 when we were delayed in getting the COC. No sense in wasting funds. But FYI, I've included a table showing Total VOCs and Benzene. How do you want to handle that data? Do you require a separate GW Monitoring Report? I can draft something that details the monthly inspections and GW results. LMK

Feel free to call if you have comments or questions.

Thanks!

Jane MH Forbes, MPA
Sr. Environmental Specialist
City of Rochester – Division of Environmental Quality
30 Church Street Room 300B
Rochester, NY 14614
585-428-7892 (office)
585-314-1719 (mobile)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
P: (585) 226-5353 | F: (585) 226-8139
www.dec.ny.gov

March 18, 2019

Jane Forbes, MPA
Sr. Environmental Specialist
City of Rochester – Division of Environmental Quality
30 Church Street Room 300B
Rochester, New York 14614

Re: Site Management
1200 East Main Street
Site No.: B00129
Rochester (C), Monroe (C)

Dear Ms. Forbes:

The New York State Department of Environmental Conservation (Department) has completed its review of the City of Rochester request to shut down the oxygen injection and soil vapor extraction system at the 1200 East Main Street site (Site) located in the City of Rochester. The proposed shutdown of the remedial systems is to assess the rebound potential for contamination in site groundwater. Based on the information provided in your e-mail correspondences dated February 21, 2019 and March 14, 2019; groundwater sampling summary table; and the Site's Site Management Plan (SMP), the Department is amenable to the system shut down providing the following stipulations.

1. The oxygen injection trailer and soil vapor extraction system will be shut down and the associated shed and trailer will be removed from the Site.
2. The injection wells and soil vapor extraction trenches will remain in place and will not be removed/decommissioned without prior Department approval.
3. The subsequent groundwater sampling event will occur 30 days after the oxygen injection and soil vapor extraction system has been shut down.
4. The groundwater sampling event will be in accordance with the approved SMP - Page 29, Table C of the SMP.
5. No groundwater monitoring wells will be decommissioned as part of this remedial system shutdown. Department approval must be obtained prior to the decommissioning of groundwater monitoring wells associated with the Site.
6. If significant rebound of groundwater contamination occurs during the shutdown of the remedial systems, additional measures/treatment of the Site's groundwater will need to be taken to address the groundwater contamination rebound.
7. The laboratory data package will be ASP Cat B deliverable and, in the Department's current EDD format as defined in Section 7.0 of the SMP.

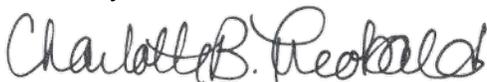
8. The Department will be provided a summary table presenting groundwater sampling data. The summary table will include all compounds detected from all groundwater sampling events since November 2016.

The following items are friendly reminders associated with the development of the Rochester Police Department Building (RPD Building):

9. Failure to maintain compliance with the SMP, the Certificate of Completion (COC), the Environmental Easement (EE), and the State Assistance Contract (SAC) could be grounds for revocation of the site's COC which can result in the City of Rochester having to repay all or a portion of the State's 90% reimbursement (**\$790,624**) to the City of Rochester associated with the investigation and remediation of the Site.
10. It must be noted that any construction activities associated with the development of the RPD Building will require a 60 day change of use notification to the Department. Department approval is required prior to the start of any construction activities associated with RPD Building. It would advantageous for the City of Rochester to submit the 60 day change of use notification sooner rather than later.
11. The Site's SMP must be implemented during the construction activities at the Site. The SMP's Excavation Work Plan (EWP) must be implemented for all ground intrusive activities at the Site. All excavated soil/fill material must be managed in accordance with the SMP's EWP.
12. The Department now has new guidance regarding the PFAS and 1,4-Dioxane sampling for soil/fill material to be imported to site. No soil/fill material will be allowed to be imported to the site with laboratory analysis for 1,4-Dioxane and PFAS. Other fill material (non-soil) to be imported to the site must meet the sieve analysis as presented in DER-10 Section 5.4(e). PFAS and 1,4-Dioxane guidance has been attached.
13. No groundwater monitoring wells will be decommissioned as part of this remedial system shut down. Department approval must be obtained prior to the decommissioning of groundwater monitoring wells associated with the Site.
14. Any structures built on the Site must be evaluated for soil vapor intrusion.
15. The SMP will need to be update when and if the Site is redeveloped and the Department must approve the updated SMP.

If you have any questions or concerns regarding this letter, or need further assistance with the Site, please feel free to contact me at 585-226-5354 or via e-mail at charlotte.theobald@dec.ny.gov.

Sincerely,



Charlotte B. Theobald
Environmental Engineer 1

ec:

Anne Spaulding (City of Rochester)
Joseph Biondolillo (City of Rochester)
Justin Deming (NYS. Dept. of Health – Albany)

Melissa Doroski (NYS Dept. of Health - Albany)
John Frazer (MCHD)
Wade Silkworth (MCHD)
Dennis Harkawik (NYSDEC)
Bernette Schilling (NYSDEC)
Todd Caffoe (NYSDEC)



Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC's Part 375 Remedial Programs

Objective

The Department of Environmental Conservation (DEC) is requiring sampling of all environmental media and subsequent analysis for the emerging contaminants 1,4-Dioxane and PFAS as part of all remedial programs implemented under 6 NYCRR Part 375, as further described in the guidance below.

Sample Planning

The number of samples required for emerging contaminant analyses is to be the same number of samples where "full TAL/TCL sampling" would typically be required in an investigation or remedial action compliance program.

Sampling of all media for ECs is required at all sites coming into or already in an investigative phase of any DER program. In other words, if the sampling outlined in the guidance hasn't already been done or isn't part of an existing work plan to be sampled for in the future, it will be necessary to go back out and perform the sampling prior to approving a SC report or issuing a decision document.

PFAS and 1,4-dioxane shall be incorporated into the investigation of potentially affected media, including soil, groundwater, surface water, and sediment as an addition to the standard "full TAL/TCL sampling." Biota sampling may be necessary based upon the potential for biota to be affected as determined pursuant to a Fish and Wildlife Impact analysis. Soil vapor sampling for PFAS and 1,4-dioxane is not required.

Upon an emerging contaminant being identified as a contaminant of concern (COC) for a site, those compounds must be assessed as part of the remedy selection process in accordance with Part 375 and DER-10 and included as part of the monitoring program upon entering the site management phase.

Soil imported to a site for use in a soil cap, soil cover, or as backfill must be sampled for 1,4-dioxane and PFAS contamination in general conformance with DER-10, section 5.4(e). Assessment of the soil data will be made on a site-specific basis to determine appropriateness for use.

The work plan should explicitly describe analysis and reporting requirements, including laboratory analytical procedures for modified methods discussed below.

Analysis and Reporting

Labs should provide a full category B deliverable, and a DUSR should be prepared by an independent 3rd party data validator. QA/QC samples should be collected as required in DER-10, Section 2.3(c). The electronic data submission should meet the requirements provided at:

<https://www.dec.ny.gov/chemical/62440.html>.

PFAS analysis and reporting: DEC has developed a *PFAS Analyte List* (below) for remedial programs. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any compounds, the DEC project manager, in consultation with the DEC remedial program chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site.

Currently, ELAP does not offer certification for PFAS compounds in matrices other than finished drinking water. However, laboratories analyzing environmental samples (e.g., soil, sediments, and groundwater) are required by DER to hold ELAP certification for PFOA and PFOS in drinking water by EPA Method 537 or ISO 25101. Labs must also adhere to the requirements and criteria set forth in the [Laboratory Guidance for Analysis of PFAS in Non-Potable Water and Solids](#).

Modified EPA Method 537 is the preferred method to use for environmental samples due to its ability to achieve very low detection limits. Reporting limits for PFAS in groundwater and soil are to be 2 ng/L (ppt) and 1 ug/kg (ppb), respectively. If contract labs or work plans submitted by responsible parties indicate that they are not able to achieve these reporting limits for the entire list of 21 PFAS, site-specific decisions will need to be made by the DEC project manager in consultation with the DEC remedial program chemist. Note: Reporting limits for PFOA and PFOS in groundwater should not exceed 2 ng/L.

Additional laboratory methods for analysis of PFAS may be warranted at a site. These methods include Synthetic Precipitation Leaching Procedure (SPLP) by EPA Method 1312 and Total Oxidizable Precursor Assay (TOP Assay).

SPLP is a technique for determining the potential for chemicals in soil to leach to groundwater and may be helpful in determining the need for addressing PFAS-containing soils or other solid material as part of the remedy. SPLP sampling need not be considered if there are no elevated PFAS levels in groundwater. If elevated levels of PFAS are detected in water, and PFAS are also seen in soil, then an SPLP test should be considered to better understand the relationship between the PFAS in the two media.

The TOP Assay can assist in determining the potential PFAS risk at a site. For example, some polyfluoroalkyl substances may transform to form perfluoroalkyl substances, resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from the site. To conceptualize the amount and type of oxidizable perfluoroalkyl substances which could be liberated in the environment, a "TOP Assay" analysis can be performed, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized.

PFAS-containing materials can be made up of per- and polyfluoroalkyl substances that are not analyzable by routine analytical methodology (LC-MS/MS). The TOP assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by current analytical methodology. Please note that analysis of highly contaminated samples, such as those from an AFFF site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. Please consult with a DEC remedial program chemist for assistance interpreting the results.

1,4-Dioxane analysis and reporting: The reporting limit for 1,4-dioxane in groundwater should be no higher than 0.35 µg/L (ppb) and no higher than 0.1 mg/kg (ppm) in soil. Although ELAP offers certification for both EPA Method 8260 SIM and EPA Method 8270 SIM in waters, DER is advising the use of Method 8270 SIM because it provides a more robust extraction procedure, uses a larger sample volume, and is less vulnerable to interference from chlorinated solvents. The analysis currently performed for SVOCs in soil is adequate for evaluation of 1,4-dioxane in soil, which already has an established SCO.

Refinement of sample analyses

As with other contaminants that are analyzed for at a site, the emerging contaminant analyte list may be refined for future sampling events based on investigative findings. Initially, however, sampling using this PFAS Analyte List and 1,4-dioxane is needed to understand the nature of contamination.

PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4
Perfluorooctane-sulfonamides	Perfluorooctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

July 6, 2020

Jane Forbes
City of Rochester Department of Environmental Quality
30 Church Street
Room 300B
Rochester, NY 14614

RE: Remediation Systems Decommissioning
Site Number B-00129-8
1200 East Main Street
Rochester, Monroe County, NY

Dear Ms. Forbes,

On May 28 and 31, 2019, Matrix Environmental Technologies Inc. decommissioned the remediation systems at the site referenced above. The following work was completed:

Soil Vapor Extraction System

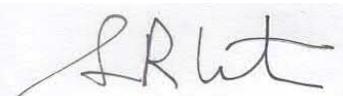
- Disconnected the electrical service and piping to the extraction wells
- Removed the vapor extraction system enclosure (wood shed) and transported to an off site location for storage

Oxygen Injection System

- Completed maintenance on the oxygen generator and air compressor
- Disconnected the electrical service and piping to the injection wells
- Removed the trailer mounted system and transported to an off site location for storage

Please let me know if you have any questions.

Sincerely,
Matrix Environmental Technologies Inc.



Sean R. Carter, P.E.
Principal Engineer

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 8/22/18

Project No. 12-041 Project Name COR-1200 E. Main Performed By Peck
 Bi-Weekly _____ Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 110
 CYCLE (psi) 70
 RECIEVER (psi) 53
 RUN TIME (hours) 20651
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 102 OIL Level: GOOD LOW
 Run Hours 28572 amount added: _____
 Load Hours 17466
 System Starts 100001 Kaeser FILTER MAT: GOOD or CHG.
 Motor Hours _____ BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>26</u>	<u>25</u>	<u>2932</u>	<u>27</u>	<u>30</u>	<u>28</u>
PSI	<u>3</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>4</u>	<u>3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>26</u>	<u>30</u>	<u>30</u>			
PSI	<u>2</u>	<u>2</u>	<u>1</u>			

Points set to 30 SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>6589</u>	8000	<u>N</u>
OIL FILTER	<u>2589</u>	4000	<u>N</u>
AIR FILTER	<u>3802</u>	4000	<u>N</u>
AIR/OIL SEPERATOR	<u>6/26</u>	8000	<u>N</u>
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 9/5/18

Project No. 12-041 Project Name COR-1200 E. Main Performed By Peck
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 110
 CYCLE (psi) 70
 RECIEVER (psi) 60
 RUN TIME (hours) 20976
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 100
 Run Hours 28624
 Load Hours 17471
 System Starts 100622
 Motor Hours _____

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>10</u>	<u>8</u>	<u>8</u>	<u>14</u>	<u>12</u>	<u>12</u>
PSI	<u>3</u>	<u>1</u>	<u>1</u>	<u>4</u>	<u>1</u>	<u>1</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>8</u>	<u>12</u>	<u>8</u>			
PSI	<u>1</u>	<u>1</u>	<u>1</u>			

Points set to _____ SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>6,2537</u>	8000	
OIL FILTER	<u>2537</u>	4000	
AIR FILTER	<u>3750</u>	4000	
AIR/OIL SEPERATOR	<u>6074</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 9/25/18

Project No. 12-041 Project Name COR-1200 E. Main Performed By _____
 Bi-Weekly _____ Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 110
 CYCLE (psi) 70
 RECIEVER (psi) 63
 RUN TIME (hours) 21457
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 100
 Run Hours 28790
 Load Hours 17560
 System Starts 101723
 Motor Hours _____

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>28</u>	<u>27</u>	<u>28</u>	<u>27</u>	<u>28</u>	<u>26</u>
PSI	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>4</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>26</u>	<u>29</u>	<u>27</u>			
PSI	<u>1</u>	<u>2</u>	<u>2</u>			

Points set to _____ SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>6371</u>	8000	
OIL FILTER	<u>2371</u>	4000	
AIR FILTER	<u>3584</u>	4000	
AIR/OIL SEPERATOR	<u>5908</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 10/9/18

Project No. 12-041 Project Name COR-1200 E. Main Performed By _____
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 105
 CYCLE (psi) 70
 RECIEVER (psi) 55
 RUN TIME (hours) 21788
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 103
 Run Hours 28902
 Load Hours 17621
 System Starts _____
 Motor Hours 10241

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>26</u>	<u>22</u>	<u>24</u>	<u>24</u>	<u>22</u>	<u>23</u>
PSI	<u>3</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>3</u>	<u>4</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>23</u>	<u>30</u>	<u>24</u>			
PSI	<u>2</u>	<u>3</u>	<u>2</u>			

Points set to _____ SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>6259</u>	8000	
OIL FILTER	<u>2259</u>	4000	
AIR FILTER	<u>3472</u>	4000	
AIR/OIL SEPERATOR	<u>5896</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 11/2/2018

Project No. 12-041 Project Name COR-1200 E. Main Performed By AZM
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 40
 CYCLE (psi) 35
 RECIEVER (psi) 60
 RUN TIME (hours) 22359
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 39
 Run Hours 29128
 Load Hours 17757
 System Starts _____
 Motor Hours 29128

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>48</u>	<u>56</u>	<u>54</u>	<u>48</u>	<u>60</u>	<u>56</u>
PSI	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>52</u>	<u>42</u>	<u>52</u>			
PSI	<u>1.5</u>	<u>2</u>	<u>2</u>			

Points set to _____ SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>6033</u>	8000	<u>N</u>
OIL FILTER	<u>2033</u>	4000	↓
AIR FILTER	<u>3246</u>	4000	
AIR/OIL SEPERATOR	<u>5570</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 11/26/2018

Project No. 12-041 Project Name COR-1200 E. Main Performed By A.Z.M
 Bi-Weekly _____ Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 120
 CYCLE (psi) 70
 RECIEVER (psi) 55
 RUN TIME (hours) 22937
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 99
 Run Hours 29251
 Load Hours 17826
 System Starts _____
 Motor Hours 29251

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>21</u>	<u>21</u>	<u>20 18</u>	<u>21</u>	<u>22</u>	<u>25</u>
PSI	<u>3</u>	<u>4.5</u>	<u>5 3.5</u>	<u>5</u>	<u>3</u>	<u>3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>22</u>	<u>24</u>	<u>20</u>			
PSI	<u>2</u>	<u>3</u>	<u>3</u>			

Points set to 30 SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5910</u>	8000	<u>N</u>
OIL FILTER	<u>1910</u>	4000	↓
AIR FILTER	<u>3123</u>	4000	
AIR/OIL SEPERATOR	<u>5447</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 12/5/2018

Project No. 12-041 Project Name COR-1200 E. Main Performed By AZM
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 100
 CYCLE (psi) 70
 RECIEVER (psi) 50
 RUN TIME (hours) 23149
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 97
 Run Hours 29304
 Load Hours 17859
 System Starts _____
 Motor Hours 29304

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>30</u>	<u>30</u>	<u>30</u>	<u>30</u>	<u>32</u>	<u>32</u>
PSI	<u>4</u>	<u>5</u>	<u>4</u>	<u>6</u>	<u>4</u>	<u>7.3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>51</u>	<u>30</u>	<u>30</u>			
PSI	<u>3.3</u>	<u>3.5</u>	<u>3</u>			

Points set to 30 SCFH on departure.
↳ SCFH meter stuck @ 50 when turned off

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5857</u>	8000	<u>N</u>
OIL FILTER	<u>1857</u>	4000	↓
AIR FILTER	<u>3070</u>	4000	
AIR/OIL SEPERATOR	<u>5394</u>	8000	
BELT TENSION	NA	1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 1/2/2019

Project No. 12-041 Project Name COR-1200 E. Main Performed By AZM
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF

If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 110
 CYCLE (psi) 70
 RECIEVER (psi) 62
 RUN TIME (hours) 23290
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 101
 Run Hours 29331
 Load Hours 17873
 System Starts _____
 Motor Hours 29331

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>16</u>	<u>13</u>	<u>10</u>	<u>20</u>	<u>14</u>	<u>20</u>
PSI	<u>3.5</u>	<u>5</u>	<u>5.4</u>	<u>5.5</u>	<u>4</u>	<u>3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>90</u>	<u>20</u>	<u>19</u>			
PSI	<u>3</u>	<u>3</u>	<u>3</u>			

Points set to 30 SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5830</u>	8000	<u>N</u>
OIL FILTER	<u>1830</u>	4000	↓
AIR FILTER	<u>3043</u>	4000	
AIR/OIL SEPERATOR	<u>5367</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 1/16/2019

Project No. 12-041 Project Name COR-1200 E. Main Performed By AZM
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 105
 CYCLE (psi) 70
 RECIEVER (psi) 55
 RUN TIME (hours) 23626
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 97
 Run Hours 29400
 Load Hours 17915
 System Starts _____
 Motor Hours 29400

OIL Level: GOOD LOW
 amount added: _____
 Kaeser FILTER MAT: GOOD or CHG.
 BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>25</u>	<u>25</u>	<u>28</u>	<u>26</u>	<u>25</u>	<u>31</u>
PSI	<u>3</u>	<u>4.5</u>	<u>4</u>	<u>5</u>	<u>3.5</u>	<u>3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>33</u>	<u>30</u>	<u>29</u>			
PSI	<u>3</u>	<u>3</u>	<u>3</u>			

Points set to 30 SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5761</u>	8000	<div style="text-align: center;"> N ↓ </div>
OIL FILTER	<u>1761</u>	4000	
AIR FILTER	<u>2974</u>	4000	
AIR/OIL SEPERATOR	<u>5298</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 1/30/19

Project No. 12-041 Project Name COR-1200 E. Main Performed By AZM
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

**heat is on*

AIRSEP Unit

FEED (psi) 100
 CYCLE (psi) 68
 RECIEVER (psi) 55
 RUN TIME (hours) 23956
 OXYGEN PURITY (%) _____

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 96
 Run Hours 29468
 Load Hours 17957
 System Starts _____
 Motor Hours 29468

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>22</u>	<u>23</u>	<u>31</u>	<u>30</u>	<u>31</u>	<u>35</u>
PSI	<u>4</u>	<u>5</u>	<u>4</u>	<u>6</u>	<u>4</u>	<u>4</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>40</u>	<u>33</u>	<u>33</u>			
PSI	<u>3</u>	<u>3</u>	<u>3</u>			

Points set to 30 SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5693</u>	8000	<u>N</u>
OIL FILTER	<u>1693</u>	4000	↓
AIR FILTER	<u>2906</u>	4000	
AIR/OIL SEPERATOR	<u>5230</u>	8000	
BELT TENSION		1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 2/15/2019

Project No. 12-041 Project Name COR-1200 E. Main Performed By A.Z.M
 Bi-Weekly Monthly Quarterly Maintenance/Repairs

System Status on Arrival: ON OFF
 If OFF probable cause: _____

** heat is on*

AIRSEP Unit

FEED (psi) 110
 CYCLE (psi) 70
 RECIEVER (psi) 50
 RUN TIME (hours) 24335
 OXYGEN PURITY (%) N/A

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 100
 Run Hours 29539
 Load Hours 17999
 System Starts N/A
 Motor Hours 29539

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>23</u>	<u>20</u>	<u>21</u>	<u>25</u>	<u>20</u>	<u>21</u>
PSI	<u>4</u>	<u>5</u>	<u>4.5</u>	<u>6</u>	<u>4</u>	<u>3</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>19</u>	<u>20</u>	<u>20</u>			
PSI	<u>3</u>	<u>3</u>	<u>3</u>			

Points set to 30 SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5622</u>	8000	<u>N</u>
OIL FILTER	<u>1622</u>	4000	↓
AIR FILTER	<u>2835</u>	4000	
AIR/OIL SEPERATOR	<u>5159</u>	8000	
BELT TENSION	<u>N/A</u>	1000	

TA5 Air Dryer: _____

OXYGEN INJECTION SYSTEM EVALUATION SHEET

Date Work Performed: 3/11/2019

Project No. 12-041 Project Name COR-1200 E. Main Performed By AZM
 Bi-Weekly Monthly _____ Quarterly _____ Maintenance/Repairs _____

System Status on Arrival: ON OFF
 If OFF probable cause: _____

AIRSEP Unit

FEED (psi) 100
 CYCLE (psi) 70
 RECIEVER (psi) 53
 RUN TIME (hours) 24906
 OXYGEN PURITY (%) NA

COMPRESSOR Unit Kaeser SX-6

Air Supply (psi) 96
 Run Hours 29661
 Load Hours 18076
 System Starts NA
 Motor Hours 29661

OIL Level: GOOD LOW
 amount added: _____

Kaeser FILTER MAT: GOOD or CHG.

BELTS: GOOD or ADJ.

INJECTION BANK

Point ID	IP-1	IP-2	IP-3	IP-4	IP-5	IP-6
SCFH	<u>29</u>	<u>28</u>	<u>30</u>	<u>29</u>	<u>30</u>	<u>27</u>
PSI	<u>4</u>	<u>5</u>	<u>4.5</u>	<u>6</u>	<u>4</u>	<u>4</u>
Point ID	IP-7	IP-8	IP-9			
SCFH	<u>29</u>	<u>29</u>	<u>29</u>			
PSI	<u>3</u>	<u>3.5</u>	<u>3</u>			

Points set to _____ SCFH on departure.

REGULAR MAINTENANCE TASKS:

	Hours before Service is needed	Parts Lifetime Hours	Service Required Yes/No
OIL	<u>5500</u>	8000	<u>N</u>
OIL FILTER	<u>1500</u>	4000	↓
AIR FILTER	<u>2713</u>	4000	
AIR/OIL SEPERATOR	<u>5037</u>	8000	
BELT TENSION	<u>NA</u>	1000	

TA5 Air Dryer: _____



APPENDIX G:

CHANGE OF USE DOCUMENTATION



City Hall Room 300B, 30 Church Street
Rochester, New York 14614-1290
www.cityofrochester.gov

April 1, 2020

Site Control Office
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7020
Attn: Ms. Kelly Lewandowski

Re: New York State Department of Environmental Conservation (NYSDEC)
60 Day Advance Notification of Site Change of Use
1200 E. Main St., Rochester NY
NYSDEC Site No. B00129

Dear Ms. Lewandowski:

Please find in the attached, the *60-Day Advance Notification of Site Change of Use (COU)*, for the above referenced site, as required by 6NYCRR Part 375-1.11(d) and 375-1.9(f). The City of Rochester has plans to redevelop the property, as well as several adjoining parcels, into a new public safety office, the Rochester Police Department's Goodman Section Office. The project is currently in the late stages of design development and will proceed to construction design in mid-April.

The City of Rochester will retain ownership of the property, consequently this COU notification does not involve change of ownership, change of remedial parties or transfer of the certificate of completion. However, development of the site will involve several physical alterations, re-zoning, property line combinations and other administrative changes that require the review and approval of the NYSDEC.

In an effort to facilitate the review process, I'm providing the comprehensive development design details of the project, as of March 10, 2020, on the accompanying flash-drive. In addition, the Site Plan Review Package (SPRP) is also included which provides further clarification on the proposed new site configuration. Please note, although the Development Design Report (DDR) is in draft, the conceptual model can be considered substantially set.

Briefly, the project plans entail the following changes with respect to, and relevant to the 1200 East Main Street property:

- The 1200 East Main Street parcel will be combined with the adjoining parcels at 1214-1216, 1222, 1228-1230 E. Main Street; and 1-5, 7-9, and 11-15 Laura Street. The entire property will be given a new Tax ID No., surveyed and the new boundaries will be recorded with Monroe County Deeds Office. The new site survey will include the limits of the existing Environmental Easement boundaries and the new parcel will be "flagged" with an Activities Use Restriction (AUL) in the City's Building Information System (BIS). Properties subject to AUL flags cannot be issued Site Plan or Building



Permits without prior review and authorization from the City or NYSDEC, in the case of Environmental Easements.

- In accordance with the DDR and the SPRP, the 1200 E. Main Street parcel use will change from a vacant lot, to an improved lot with new asphalt and limited permeable pavement or landscaped areas along what is currently the eastern side of the parcel. Figure C201 – Site Plan of the SPRP illustrates the new site configuration.
- As of February 2020, the City had completed four (4) quarters of groundwater sampling in accordance with the NYSDEC approved Site Management Plan (February 2019) and the Annual Periodic Review Report is due in June 2020. At that time, the City intends to petition the Department's approval to suspend further groundwater testing based on the favorable groundwater results illustrated throughout the year of post remedial activities at the site. Furthermore, the City will request that all on-site monitoring wells be decommissioned in accordance with DER-10.

The City already has institutional controls in place designed disrupt any potential exposure pathways to contaminated groundwater including: the aforementioned AUL flags; the Department's Environmental Easement; and a City Code restriction on the use of groundwater for drinking. In addition, the City has incorporated the installation of a sub-slab depressurization system (SSDS) into the design of the new section office in order to disrupt any exposure pathways due to soil vapor intrusion (SVI). Prior to construction, an SVI evaluation will be completed in order to properly size and locate the necessary components of the SSDS.

The project design and construction team has completed its due diligence on all other parcels relating to this development. Copies of the Phase I and II Environmental Assessment Reports are included on the enclosed flash-drive. During construction, personnel from the City's Division of Environmental Quality will provide the necessary project oversight to ensure that any site work is completed in strict adherence to the 1200 East Main Street Site Management Plan and the East Main and Laura Street properties Environmental Management Plan.

The City appreciates your prompt consideration and feedback regarding this project, and will continue to inform the NYSDEC of changes or other relevant issues as they impact the Site's Certificate of Completion and the Environmental Easement.

Please feel free to contact me at 585-428-7892 or via e-mail at forbesj@cityofrochester.gov if you have any questions or require additional information.

Regards,

Jane MH Forbes, MPA
Sr. Environmental Specialist
City of Rochester – Division of Environmental Quality
30 Church Street Room 300B
Rochester, NY 14614
585-428-7892 (office)



**60-Day Advance Notification of Site Change of Use, Transfer of
Certificate of Completion, and/or Ownership**
Required by 6NYCRR Part 375-1.11(d) and 375-1.9(f)

To be submitted at least 60 days prior to change of use to:

Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation, 625 Broadway
Albany NY 12233-7020

I. Site Name: 1200 EAST MAIN STREET **DEC Site ID No.** B00129

II. Contact Information of Person Submitting Notification:

Name: JANE MH FORBES
Address1: CITY OF ROCHESTER, 30 CHURCH STREET ROOM 300B
Address2: ROCHESTER NY 14614
Phone: 585-428-7892 E-mail: forbesj@cityofrochester.gov

III. Type of Change and Date: Indicate the Type of Change(s) (check all that apply):

- Change in Ownership or Change in Remedial Party(ies)
- Transfer of Certificate of Completion (CoC)
- Other (e.g., any physical alteration or other change of use)

Proposed Date of Change (mm/dd/yyyy): Jun 1, 2020

IV. Description: Describe proposed change(s) indicated above and attach maps, drawings, and/or parcel information.

GROUNDWATER MONITORING WELLS WILL BE DECOMMISSIONED; THE PROPERTY WILL BE COMBINED WITH SEVERAL ADJOINING PROPERTIES TO THE EAST AND DEVELOPED INTO A NEW CITY OF ROCHESTER POLICE DEPARTMENT SECTION OFFICE; PROPERTY WILL BE REZONED; (REFER TO THE ATTACHED CORRESPONDANCE AND THE DRAFT DESIGN DEVELOPMENT REPORT PROVIDED ON ACCOMPANYING FLASHDRIVE FOR MORE DETAIL).

If "Other," the description must explain and advise the Department how such change may or may not affect the site's proposed, ongoing, or completed remedial program (attach additional sheets if needed).

THE CURRENT DESIGN PLANS WILL REQUIRE DECOMMISSIONING OF GW MONITORING WELLS, AND INSTALLATION OF A SUB-SLAB DEPRESSURIZATION SYSTEM BENEATH NEW CONSTRUCTION; THE SMP WILL BE REVISED AND THE REQUIREMENTS OF THE COC AND ENV. EASEMENT WILL RUN WITH THE LAND. ADDITIONAL INSTITUTIONAL AND ENGINEERING CONTROLS ARE DESCRIBED IN THE ATTACHED CORRESPONDANCE. TGHRE WILL BE NO CHANGE OF OWNERSHIP.

VII. Agreement to Notify DEC after Transfer: If Section VI applies, and all or part of the site will be sold, a letter to notify the DEC of the completion of the transfer must be provided. If the current owner is also the holder of the CoC for the site, the CoC should be transferred to the new owner using DEC's form found at <http://www.dec.ny.gov/chemical/54736.html>. This form has its own filing requirements (see 6NYCRR Part 375-1.9(f)).

Signing below indicates that these notices will be provided to the DEC within the specified time frames. If the sale of the site also includes the transfer of a CoC, the DEC agrees to accept the notice given in VII.3 below in satisfaction of the notice required by VII.1 below (which normally must be submitted within 15 days of the sale of the site).

Within 30 days of the sale of the site, I agree to submit to the DEC:

1. the name and contact information for the new owner(s) (see §375-1.11(d)(3)(ii));
2. the name and contact information for any owner representative; and
3. a notice of transfer using the DEC's form found at <http://www.dec.ny.gov/chemical/54736.html> (see §375-1.9(f)).

Name: _____
(Signature)

(Date)

(Print Name)

Address1: _____

Address2: _____

Phone: _____ E-mail: _____



Task Item	Start Date	Completion Date	Prior Completion	Phase Duration
Issued Preliminary Drawings To Planning Commission		12/20/20		
Goodman Public Information Meeting		01/23/20	11/26/19	
Reissued Drawings to Planning Commission		02/06/20	12/11/19	
Traffic Control Board Submission		02/12/20		
QA/QC DD Report	02/25/20	03/09/20		
PRC Meeting		02/26/20		
Issue Zoning Map Amendment Application		03/05/20	12/11/19	
Issue DD Report		03/10/20	12/24/19	
City Review & Approval	03/11/20	03/18/20	01/03/20	
DD Phase Complete (Goodman Section)		03/18/20	01/03/20	16 weeks
Begin CD Phase (Goodman Section)	03/11/20		01/03/20	
Planning Commission Meeting		04/13/20		
City Council Meeting (Re-Zoning Authorization)		05/12/20		
Zoning Board Meeting		05/21/20		
Planning Commission Meeting (Parking)		06/08/20		
QA/QC CD's	04/06/20	04/16/20		
Issue Final CD's		04/17/20	01/15/20	
City Review & Approval	04/17/20	03/16/20		
CD Phase Complete (Goodman Section)		04/24/20	02/19/20	6.5 weeks
Begin Bid Phase (Goodman Section)	04/27/20			
Bid Advertisement Published	04/27/20	06/01/20		5 weeks
Pre-bid Meeting	05/07/20			
Bid Opening	05/28/20			
Architect Review Bids / Recommendation	06/01/20	06/05/20		
Bid Recommendation Sent to Purchasing	06/11/20			
Notice of Award	07/13/20			11 weeks
BN Phase Complete (Goodman Section)	—	07/13/20	05/11/20	
Construction Phase (Goodman Section)	08/10/20		05/11/20	
Notice To Proceed	08/10/20			
Construction	08/10/20	11/08/21		15 Months
Construction Phase Substantially Complete		11/08/21		



2.1 PRELIMINARY PROJECT SCHEDULE

Task Item	Start Date	Completion Date	Prior Completion	Phase Duration
Receive Signed Contract	08/02/19	--	---	
Property Acquisition - Goodman Section	07/29/19	10/18/19		12 weeks
Project Start Date	07/29/19	--	---	
Begin Programming Phase (Lake & Goodman)	07/29/19			
Project Kick-off Meeting w/ City	08/20/19	--		
Complete Program Report Lake & Goodman	08/20/19	09/06/19		
Review Meeting w/ City Planning & Zoning		09/06/19		
QA/QC Program Report	09/03/19	09/20/19	09/06/19	
Issue Program Verification Report		09/20/19	09/06/19	
Issue Revised Program Verification Report		10/11/19		
City Review & Approval	09/20/19	10/17/20		
Issue Final Program Verification Report		10/17/20		
Programming Phase - Lake & Goodman Complete		10/17/19	09/11/19	11 weeks
Begin SD Phase (Lake & Goodman Section)	09/26/19			
Goodman Property Acquisition Complete		10/18/19	10/01/19	
Complete Site Survey & Mapping Goodman	10/07/19	11/29/19	10/25/19	
Complete Goodman Site Design	10/28/19	TBD		
QA/QC Draft SD Report	11/11/19	11/18/19	11/07/19	
Submit Laura Street Road Closure Application		12/03/19	11/06/19	
Issue Draft SD Report		11/18/19	10/10/19	
City Review & Approval	11/18/19	12/10/19	02/12/20	
Issue Final SD Report		02/12/20		
SD Phase Complete - Lake & Goodman Section		02/12/20	10/16/19	20 weeks
Begin DD Phase - Goodman	11/25/19		11/13/19	
Goodman Survey & Mapping Complete		12/03/20		
Green Infrastructure Grant Award Notice		12/18/20		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
P: (585) 226-5353 | F: (585) 226-8139
www.dec.ny.gov

June 17, 2020

Jane MH Forbes, MPA
Sr. Environmental Specialist
City of Rochester
Division of Environmental Quality
30 Church Street, Room 300B
Rochester, New York 14614

Re: Change of Use Notification Submittal
1200 East Main Street Site
Site No.: B00129
City of Rochester, Monroe (C)

Dear Ms. Forbes:

The New York State Department of Environmental Conservation (Department) in conjunction with the New York State Department of Health (NYSDOH) have completed a review of the City of Rochester's Change of Use Notification submittal dated April 1, 2020 for the 1200 East Main Street site (Site). Based on the information presented in the Change of Use Notification submittal, the Department is conditionally approving the Change of Use with the following modifications and clarifications.

1. The Site's Site Management Plan must be implemented; in particular, the Excavation Work Plan which details the oversight and management of soil/fill material, fluids, and waste generated at the Site as well as the import material (e.g., soil, stone) to the Site. In addition, the Site's Community Air Monitoring Plan must be implemented for all ground intrusive activities at the Site.
2. The import of soil and backfill material to the Site must be in compliance with the SMP. In addition to the SMP requirements, the import of soil and backfill material to the Site must also be in compliance with the Department's PFAS guidance titled "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs, dated January 2020". The current version of the guidance is attached and the following weblink: https://www.dec.ny.gov/docs/remediation_hudson_pdf/pfassampanaly.pdf
3. In the Change of Use the City of Rochester requested to decommission the 11 on-site groundwater monitoring wells and terminate groundwater sampling requirement. The Department does acknowledge that there has been a significant reduction in groundwater contamination at the Site. With that said and given the extensive development at the Site and directly adjacent to the Site, the Department cannot at this time grant the request. The Department is amendable to a reduction in the number of groundwater monitoring wells at the Site as well as a reducing the groundwater sampling frequency from quarterly to annually. The groundwater sampling will be annually for at least 2 years.

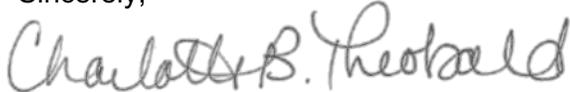
The Department is granting the City of Rochester permission to decommission the following groundwater monitoring wells: MW-2, MW-4, MW-9R, MW-10, MW-15R, and MW-16. The Department understands that the groundwater monitoring wells will be decommissioned in accordance with CP-43: Commissioner Policy on Monitoring Well Decommissioning.

The Department understands that the following groundwater monitoring wells will either be protected during the development of the Site or will be re-installed once development has been completed: MW-1, MW-3, MW-7R, MW-8, and MW-11. The Department understands that the groundwater monitoring wells will be re-installed consistent with the current groundwater monitoring well intervals.

4. The Department understands that the Site Management Plan will be revised and submitted to the State for review and approval.

If you have any questions or concerns regarding this letter, or need further assistance with the Site, please feel free to contact me at 585-226-5354 or via e-mail at charlotte.theobald@dec.ny.gov.

Sincerely,



Charlotte B. Theobald
Project Manager
Assistant Engineer

ec:

Anne Spaulding (City of Rochester)
Joseph Biondolillo (City of Rochester)
Justin Deming (NYS Dept. of Health – Albany)
Melissa Doroski (NYS Dept. of Health - Albany)
John Frazer (MCHD)
Dudley Loew (NYSDEC)
David Pratt (NYSDEC)
Todd Caffoe (NYSDEC)



Department of
Environmental
Conservation

GUIDELINES FOR SAMPLING AND ANALYSIS OF PFAS

Under NYSDEC's Part 375 Remedial Programs

January 2020



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ERRATA SHEET for

Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Program

Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date

Guidelines for Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis and reporting of PFAS, DER has developed this document to summarize procedures and update previous DER technical guidance pertaining to PFAS.

Applicability

Sampling for PFAS has already been initiated at numerous sites under DER-approved work plans, in accordance with specified procedures. All future work plans should include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day or one per twenty samples, whichever is more frequent.

Data Assessment and Application to Site Cleanup

Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10.

Water Sample Results

PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt). In addition, further assessment of water may be warranted if either of the following screening levels are met:

- a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or
- b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L

If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase.

Sites in the site management phase should evaluate for PFAS to determine if modification to any components of the SMP is necessary (e.g., monitoring for PFAS, upgrading treatment facilities, or performing an RSO).

Testing for Imported Soil

Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the *PFAS Analyte List* (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs.

If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Analysis and Reporting

As of January 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third party data validator. Electronic data submissions should meet the requirements provided at: <https://www.dec.ny.gov/chemical/62440.html>.

DER has developed a *PFAS Analyte List* (Appendix F) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP) does not offer certification for PFAS in matrices other than finished drinking water. However, laboratories analyzing environmental samples for PFAS (e.g., soil, sediments, and groundwater) under DER's Part 375 remedial programs need to hold ELAP certification for PFOA and PFOS in drinking water by EPA Method 537.1 or ISO 25101. Laboratories should adhere to the guidelines and criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids). Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist.

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay). Commercially methods are also available for biota and air samples.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.

Please note that TOP Assay analysis of highly-contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
 - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP-approved lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an “Analytical Methods/Quality Assurance Summary Table” specifying:
 - Matrix type
 - Number or frequency of samples to be collected per matrix
 - Number of field and trip blanks per matrix
 - Analytical parameters to be measured per matrix
 - Analytical methods to be used per matrix with minimum reporting limits
 - Number and type of matrix spike and matrix spike duplicate samples to be collected
 - Number and type of duplicate samples to be collected
 - Sample preservation to be used per analytical method and sample matrix
 - Sample container volume and type to be used per analytical method and sample matrix
 - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by LC-MS/MS for PFAS using methodologies based on EPA Method 537.1
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
 - Reporting Limits should be less than or equal to:
 - Aqueous – 2 ng/L (ppt)
 - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
- Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537.1, EPA Method 533, or ISO 25101
- Include detailed sampling procedures
 - Precautions to be taken
 - Pump and equipment types
 - Decontamination procedures
 - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification. Previous results of “non-detect” for PFAS from the UCMR3 water supply testing program are acceptable as verification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^\circ$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^\circ$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank every day that sampling is conducted and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^\circ$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank every day that sampling is conducted and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., wash room sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at $4 \pm 2^\circ$ Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank every day that sampling is conducted and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the latest guidelines developed by the Division of Fish and Wildlife (DFW) entitled “General Fish Handling Procedures for Contaminant Analysis” (Ver. 8).

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

- A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:
1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).
 2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.
 3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.
- B. The following data are required on each **Fish Collection Record** form:
1. Project and Site Name.
 2. DEC Region.
 3. All personnel (and affiliation) involved in the collection.
 4. Method of collection (gill net, hook and line, etc.)
 5. Preservation Method.
- C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:
1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.
 2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.
 3. Date collected.
 4. Sample location (waterway and nearest prominent identifiable landmark).
 5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.
 2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.
 3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.
 4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate "Age" column.
 5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.
 6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.
 7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.
- E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish's tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

- F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.
- G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.
- H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:
 - No materials containing Teflon.
 - No Post-it notes.
 - No ice packs; only water ice or dry ice.
 - Any gloves worn must be powder free nitrile.
 - No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
 - No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
 - Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
 - Wash hands after handling any food containers or packages as these may contain PFCs.
 - Keep pre-wrapped food containers and wrappers isolated from fish handling.
 - Wear clothing washed at least six times since purchase.
 - Wear clothing washed without fabric softener.
 - Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.
- I. All fish must be kept at a temperature <math><45^{\circ}\text{F}</math> (<math><8^{\circ}\text{C}</math>) immediately following data processing. As soon as possible, freeze at $-20^{\circ}\text{C} \pm 5^{\circ}\text{C}$. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.
- J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.
- K. A recommended equipment list is at the end of this document.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY**

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20____.

_____ Signature _____ Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_____ Signature _____ Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelopes, approximately 2" x 3.5", if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4
Perfluorooctane-sulfonamides	Perfluorooctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) developed the following guidelines for laboratories analyzing environmental samples for PFAS under DER programs. If laboratories cannot adhere to the following guidelines, they should contact DER's Quality Assurance Officer, Dana Maikels, at dana.maikels@dec.ny.gov prior to analysis of samples.

Isotope Dilution

Isotope dilution techniques should be utilized for the analysis of PFAS in all media.

Extraction

For water samples, the entire sample bottle should be extracted, and the sample bottle rinsed with appropriate solvent to remove any residual PFAS.

For samples with high particulates, the samples should be handled in one of the following ways:

1. Spike the entire sample bottle with isotope dilution analytes (IDAs) prior to any sample manipulation. The sample can be passed through the SPE and if it clogs, record the volume that passed through.
2. If the sample contains too much sediment to attempt passing it through the SPE cartridge, the sample should be spiked with isotope dilution analytes, centrifuged and decanted.
3. If higher reporting limits are acceptable for the project, the sample can be diluted by taking a representative aliquot of the sample. If isotope dilution analytes will be diluted out of the sample, they can be added after the dilution. The sample should be homogenized prior to taking an aliquot.

If alternate sample extraction procedures are used, please contact the DER remedial program chemist prior to employing. Any deviations in sample preparation procedures should be clearly noted in the case narrative.

Signal to Noise Ratio

For all target analyte ions used for quantification, signal to noise ratio should be 3:1 or greater.

Blanks

There should be no detections in the method blanks above the reporting limits.

Ion Transitions

The ion transitions listed below should be used for the following PFAS:

PFOA	413 > 369
PFOS	499 > 80
PFH _x S	399 > 80
PFBS	299 > 80
6:2 FTS	427 > 407
8:2 FTS	527 > 507
N-EtFOSAA	584 > 419
N-MeFOSAA	570 > 419

Branched and Linear Isomers

Standards containing both branched and linear isomers should be used when standards are commercially available. Currently, quantitative standards are available for PFHxS, PFOS, NMeFOSAA, and NEtFOSAA. As more standards become available, they should be incorporated in to the method. All isomer peaks present in the standard should be integrated and the areas summed. Samples should be integrated in the same manner as the standards.

Since a quantitative standard does not exist for branched isomers of PFOA, the instrument should be calibrated using just the linear isomer and a technical (qualitative) PFOA standard should be used to identify the retention time of the branched PFOA isomers in the sample. The total response of PFOA branched and linear isomers should be integrated in the samples and quantitated using the calibration curve of the linear standard.

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated for each target analyte and the ratio compared to standards. Lab derived criteria should be used to determine if the ratios are acceptable.

Reporting

Detections below the reporting limit should be reported and qualified with a J qualifier.

The acid form of PFAS analytes should be reported. If the salt form of the PFAS was used as a stock standard, the measured mass should be corrected to report the acid form of the analyte.

Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report. Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory’s Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER’s Quality Assurance Officer, Dana Maikels, at dana.maikels@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 14 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6°C upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of five standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%. Linear fit calibration curves should have an R² value greater than 0.990.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects
R ² >0.990	J flag detects and UJ non detects
Low-level calibration check <50% or >150%	J flag detects and UJ non detects
Mid-level calibration check <70% or >130%	J flag detects and UJ non detects

Initial Calibration Verification

An initial calibration verification (ICV) standard should be from a second source (if available). The ICV should be at the same concentration as the mid-level standard of the calibration curve.

ICV recovery <70% or >130%	J flag detects and non-detects
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Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results
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Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample
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Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects
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Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated from the standards for each target analyte. Lab derived criteria should be used to determine if the ratios are acceptable. If the ratios fall outside of the laboratory criteria, qualify results as an estimated maximum concentration.

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Branched and Linear Isomers

Observed branched isomers in the sample that do not have a qualitative or quantitative standard should be noted and the analyte should be qualified as biased low in the final data review summary report. Note: The branched isomer peak should also be present in the secondary ion transition.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.



APPENDIX H:

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT

for

LABELLA ASSOCIATES, P.C.

300 State Street

Rochester, NY 14614

CITY of ROCHESTER
1200 East Main Street
Project 2182815.01
Groundwater Samples
SDG: 204166
Sampled September 2, 2020

VOLATILE ORGANICS, SEMIVOLATILE ORGANICS

MW-1	(204166-01)
MW-3	(204166-02)
MW-8	(204166-03)
MW-11	(204166-04)
MW-7R	(204166-05)
BLIND DUPLICATE	(204166-06)
TRIP BLANK	(204166-07)

DATA ASSESSMENT

An ASP Category B data package containing analytical results for six groundwater samples and a trip blank was received from LaBella Associates, P.C. on 09Jul21. The deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the City of Rochester 1200 East Main Street Site, were identified by Chain of Custody documents and traceable through the work of Paradigm Environmental Services, the laboratory contracted for analysis. Analyses, performed according to SW-846 methods, addressed determinations of volatile organics and semivolatile organics. Laboratory data was evaluated according to the quality assurance / quality control requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP), September 1989, Rev. 07/2005. When the required protocol was not followed, the current EPA Region II Functional Guidelines (SOP NO. HW-33, Rev. #3, March 2013, Low/Medium Volatile Data Validation, and SOP HW-35, Rev.#2, March 2013, Semivolatile Data Validation) were used as a technical reference.

The acetone concentrations found in MW-1 and the Blind Duplicate have been qualified as estimations because they may represent laboratory artifacts.

The VOC results from MW-1, MW-11, MW-7R and the Trip Blank have been qualified as estimations because their holding time limitation was exceeded.

The bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene and 1,2-dibromo-3-chloropropane results from MW-1, MW-8 and the Blind Duplicate; and the bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene, 1,2-dibromo-3-chloropropane, Freon 113, methylene chloride and isopropylbenzene results from MW-3, MW-11, MW-7R and the Trip Blank have been qualified as estimations due to poor calibration performance. The 2,4-dimethylphenol, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-octylphthalate, indeno(1,2,3-cd)pyrene, 1,2,4-trichlorobenzene, 2-chloronaphthalate and atrazene results from this project have been similarly qualified.

The VOC results from MW-1, MW-8, MW-11, MW-7R, the Blind Duplicate and the Trip Blank; and the benzene concentration found in MW-3 have been qualified as estimations due to unacceptable surrogate standard recoveries.

The cis-1,3-dichloropropene and methylene chloride results from MW-3, MW-11, MW-7R and the trip blank; and the 4-nitrophenol and phenol results from this group of samples have been qualified as estimations due to low spiked blank recoveries.

CORRECTNESS AND USABILITY

Reported data should be considered technically defensible and completely usable in its present form. Results presenting a usable estimation of the conditions at the time of sampling have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed strict QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly, DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature:


James B. Baldwin
DATAVAL Inc.Date: 15 July 21

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the time of sample collection. Samples must remain chilled to $4\pm 2^{\circ}\text{C}$ between the time of collection and the time of analysis. Acid preserved VOC samples must be analyzed within 14 days, unpreserved VOC samples within 7 days. The holding time for VOC soils is 14 days. Aqueous semivolatile organics, pesticide and PCB samples must be extracted within seven days of collection. Soils must be extracted within 14 days. The extracts must then be analyzed within forty days of extraction. Aqueous PFAS samples must be extracted within 14 days of collection, soils within 28 days. The extracts must then be analyzed within 28 days of extraction. The holding times for cyanide and mercury samples are 14 and 28 days, respectively. Metals samples must be analyzed within six months.

This delivery group contained six aqueous samples that were collected from the City of Rochester 1200 East Main Street Site on 02Sep20. The samples were packaged with a trip blank and delivered to the laboratory on the day of collection. At the time of receipt the sample cooler was found to be intact and properly chilled. A cooler temperature of 5°C was recorded at that time.

It is noted that there was no documentation to indicate that this group of VOC samples was properly preserved. The VOC results from MW-3, MW-11, MW-7R and Trip Blank have been qualified as estimations because the samples were not analyzed within the holding time limitation of unpreserved samples.

VOLATILE ORGANICS

This group of samples was analyzed for volatile organics between 08Sep20 and 10Sep20. Holding time issues associated with this group of samples have been previously addressed.

Blanks

Blanks are analyzed to evaluate various sources of sample contamination. Field and trip blanks monitor sampling, shipping and storage activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank.

Two method blanks and a trip blank were analyzed with this group of samples. Although these blanks demonstrated acceptable chromatography, methylene chloride was found in one method blank. The presence of this artifact, however, warrants no concern because methylene chloride was not found in this group of samples.

Although not found in the associated blanks, acetone was detected in MW-1 and the Blind Duplicate. These concentrations have been qualified as estimations because low levels of acetone frequently represent laboratory artifacts. Acetone could not be removed from the affected reports because it was not detected in the associated blanks.

MS Tuning

Mass spectrometer tuning and performance criteria are established to ensure that mass resolution and sensitivity are sufficient to accurately detect and identify targeted analytes. Verification is accomplished using a certified BFB standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence that included samples from this program. An Instrument Performance Check Form is present for each BFB evaluation. The BFB tunes associated with this group of samples satisfied the program acceptance criteria.

Calibrations

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration check standards verify instrument stability.

Initial instrument calibrations for VOC was performed on 08Sep20 and 10Sep20. Standards of 1.0, 5.0, 20, 50, 100, 150 and 200 µg/l were included. During these calibrations, bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene, 1,2-dibromo-3-chloropropane, Freon 113, methylene chloride and isopropylbenzene either demonstrated poor linearity or failed to produced the required level of instrument response. Based on this performance, the bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene and 1,2-dibromo-3-chloropropane results from MW-1, MW-8 and the Blind Duplicate, and the bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene, 1,2-dibromo-3-chloropropane, Freon 113, methylene chloride and isopropylbenzene results from MW-3, MW-11, MW-7R and the Trip Blank have been qualified as estimations based on this performance.

Calibration check standards were analyzed on 08Sep20 and 10Sep20, prior to the twelve-hour periods of instrument operation that included samples from this program. When compared to the initial calibration, and unacceptable shift was observed in the instrument response of methylene chloride. Data qualifications are not required based on this performance because the affected methylene chloride results have been previously qualified due to poor calibration performance.

Surrogates

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Summary Sheets were properly prepared, based on the laboratory's statistical acceptance criteria. When compared to the ASP requirements, however, unacceptably low recoveries were reported for the 4-bromofluorobenzene additions to MW-1, MW-8, the Blind Duplicate, MW-11, MW-7R and the Trip Blank. A high recoveries was also reported for the toluene-d8 addition to MW-3. Based on this performance, the VOC results from MW-1, MW-8, the Blind Duplicate, MW-11, MW-7R and the Trip Blank; and the positive results from MW-3 have been qualified as estimations.

Internal Standards

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the response of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard response and retention times. When compared to this criteria, acceptable performance was reported for the internal standard additions to each program sample.

Matrix Spikes

Matrix spiking refers to the addition of known analyte concentrations to a sample, prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

MW-3 was selected for matrix spiking. The entire list of targeted analytes was added to two aliquots of this sample. The recoveries reported for these additions demonstrated acceptable levels of measurement precision and accuracy.

Two spiked blanks (LCS) were also analyzed with this group of samples. The recoveries reported for these LCS samples included low results for cis-1,3-dichloropropene (68%) and methylene chloride (61%). The cis-1,3-dichloropropene and methylene chloride results from MW-3, MW-11, MW-7R and the Trip Blank have been qualified as estimations based on these indications of negative bias.

Duplicates

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. The results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

The field split duplicate sample that was included in this delivery group was not identified.

Reported Analytes

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument print-outs. Reference mass spectra were provided to confirm the identification of each analyte that was found in this group of samples. Tentatively Identified Compounds (TIC) were not reported.

SEMIVOLATILE ORGANICS

Samples from this delivery group were extracted for SVOC analysis on 03Sep20 and the extracts were analyzed on 09Sep20. The SW-846 holding time limitations were satisfied.

Blanks

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling, transport and storage activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank.

One method blank was analyzed with this group of samples. This blank produced acceptable chromatography and was free of targeted analyte contamination.

GC/MS Tuning

Mass spectrometer tuning and performance criteria are established to ensure that mass resolution and sensitivity are sufficient to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard of DFTPP.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence that contained samples from this program. An Instrument Performance Check Form is present for each DFTPP evaluation. The DFTPP tunes associated with this delivery group satisfied the ASP requirements.

Calibration

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range

through which measurements may be made. Continuing calibration check standards verify instrument stability.

The initial instrument calibration for SVOC was performed on 09Sep20. Standards of 5.0, 10, 20, 50, 75, 100, 150 and 200 µg/ml were included. During this calibration, 2,4-dimethylphenol, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-octylphthalate, indeno(1,2,3-cd)pyrene, 1,2,4-trichlorobenzene and 2-chloronaphthalate standards either demonstrated poor linearity or failed to produce the required minimum levels of instrument response. Based on this performance, the 2,4-dimethylphenol, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-octylphthalate, indeno(1,2,3-cd)pyrene, 1,2,4-trichlorobenzene and 2-chloronaphthalate results from this group of samples have been qualified as estimations.

A Calibration verification standard was analyzed on 08Sep20, prior to the 12-hour period of instrument operation that included samples from this program. When compared to the initial calibration, an unacceptably large shift was observed in the instrument response of atrazine. The atrazine results from this group of samples have been qualified as estimations based on this performance. The remaining targeted analytes demonstrated an acceptable level of instrument stability.

Surrogates

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Summary Sheets were properly prepared, based on the laboratory's statistical acceptance criteria. When compared to the ASP requirements, however, an acceptable recovery was reported for each surrogate addition to this group of samples.

Internal Standards

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the response of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard response and retention times. When compared to these

limits, acceptable performance was indicated by the internal standard additions to each program sample.

Matrix Spikes

Matrix spiking refers to the addition of known analyte concentrations to a sample, prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

MW-3 was selected for matrix spiking. Eighteen of the seventy-one targeted analytes were added to two portions of this sample. The recoveries reported for these spikes included low results of 4-nitrophenol (27%,28%) and phenol (26%,25%). The 4-nitrophenol and phenol results from MW-3 have been qualified as estimations based on these indications of negative bias.

A spiked blank (LCS) was also extracted and analyzed with this group of samples. The recoveries reported for this LCS sample included low results for 4-nitrophenol (35%) and phenol (34%). The 4-nitrophenol and phenol results from this project have been qualified as estimations based on these indications of negative bias.

Duplicates

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. The results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

The field split duplicate sample that was included in this delivery group was not identified.

Reported Analytes

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument print outs. Mass spectra references were included in the raw data to confirm the identification of each analyte that was detected in this group of samples. Tentatively Identified Compounds (TIC) were not reported.

SUMMARY OF QUALIFIED DATA

CITY OF ROCHESTER
1200 EAST MAIN STREET

SAMPLED: SEPTEMBER 2020

		HOLD TIME VOC	BLANK ACETONE	CALIBRATE CAL1*	CALIBRATE CAL2*	SURROGATE VOC	SURROGATE BENZENE
MW-1	(204166-01)	ALL J/UJ	14.5J	ALL J/UJ	ALL UJ	ALL J/UJ	1.29J
MW-3	(204166-02)						
MW-8	(204166-03)			ALL UJ	ALL UJ	ALL UJ	
MW-11	(204166-04)	ALL J/UJ			ALL J/UJ	ALL J/UJ	
MW-7R	(204166-05)	ALL J/UJ			ALL J/UJ	ALL J/UJ	
BLIND DUPLICATE	(204166-06)		11.4J	ALL J/UJ		ALL J/UJ	
TRIP BLANK	(204166-07)	ALL UJ			ALL UJ	ALL UJ	

CAL1* = bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene, 1,2-dibromo-3-chloropropane

CAL2* = bromomethane, acetone, 1,4-dioxane, cis-1,3-dichloroethene, trans-1,3-dichloroethene, styrene, 1,2-dibromo-3-chloropropane, Freon 113, methylene chloride, isopropylbenzene

SUMMARY OF QUALIFIED DATA

CITY OF ROCHESTER
1200 EAST MAIN STREET

SAMPLED: SEPTEMBER 2020

	SPIKES MS1*	CALIBRATE CAL3*	CALIBRATE ATRAZINE	SPIKES MS2*
MW-1	(204166-01)	ALL UJ	10UJ	ALL UJ
MW-3	(204166-02)	ALL UJ	10UJ	ALL UJ
MW-8	(204166-03)			
MW-11	(204166-04)	ALL UJ	10UJ	ALL UJ
MW-7R	(204166-05)	ALL UJ	10UJ	ALL UJ
BLIND DUPLICATE	(204166-06)			
TRIP BLANK	(204166-07)	ALL UJ	10UJ	ALL UJ

MS1* = cis-1,3-dichloropropene, methylene chloride

CAL3* = 2,4-dimethylphenol, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol,
bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-octylphthalate, indeno(1,2,3-cd)
pyrene, 1,2,4-trichlorobenzene, 2-chloronaphthalate

MS2* = 4-nitrophenol, phenol



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1,2-Trichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1-Dichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,1-Dichloroethene	< 2.00	ug/L		9/8/2020 18:28
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/8/2020 18:28
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/8/2020 18:28
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/8/2020 18:28
1,2-Dibromoethane	< 2.00	ug/L		9/8/2020 18:28
1,2-Dichlorobenzene	< 2.00	ug/L		9/8/2020 18:28
1,2-Dichloroethane	< 2.00	ug/L		9/8/2020 18:28
1,2-Dichloropropane	< 2.00	ug/L		9/8/2020 18:28
1,3-Dichlorobenzene	< 2.00	ug/L		9/8/2020 18:28
1,4-Dichlorobenzene	< 2.00	ug/L		9/8/2020 18:28
1,4-Dioxane	< 20.0	ug/L		9/8/2020 18:28
2-Butanone	< 10.0	ug/L		9/8/2020 18:28
2-Hexanone	< 5.00	ug/L		9/8/2020 18:28
4-Methyl-2-pentanone	< 5.00	ug/L		9/8/2020 18:28
Acetone	14.5	ug/L		9/8/2020 18:28
Benzene	0.943	ug/L	J	9/8/2020 18:28
Bromochloromethane	< 5.00	ug/L		9/8/2020 18:28
Bromodichloromethane	< 2.00	ug/L		9/8/2020 18:28
Bromoform	< 5.00	ug/L		9/8/2020 18:28

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L		9/8/2020 18:28
Carbon disulfide	< 2.00	ug/L		9/8/2020 18:28
Carbon Tetrachloride	< 2.00	ug/L		9/8/2020 18:28
Chlorobenzene	< 2.00	ug/L		9/8/2020 18:28
Chloroethane	< 2.00	ug/L		9/8/2020 18:28
Chloroform	< 2.00	ug/L		9/8/2020 18:28
Chloromethane	< 2.00	ug/L		9/8/2020 18:28
cis-1,2-Dichloroethene	< 2.00	ug/L		9/8/2020 18:28
cis-1,3-Dichloropropene	< 2.00	ug/L		9/8/2020 18:28
Cyclohexane	5.90	ug/L	J	9/8/2020 18:28
Dibromochloromethane	< 2.00	ug/L		9/8/2020 18:28
Dichlorodifluoromethane	< 2.00	ug/L		9/8/2020 18:28
Ethylbenzene	< 2.00	ug/L		9/8/2020 18:28
Freon 113	< 2.00	ug/L		9/8/2020 18:28
Isopropylbenzene	< 2.00	ug/L		9/8/2020 18:28
m,p-Xylene	< 2.00	ug/L		9/8/2020 18:28
Methyl acetate	< 2.00	ug/L		9/8/2020 18:28
Methyl tert-butyl Ether	< 2.00	ug/L		9/8/2020 18:28
Methylcyclohexane	1.34	ug/L	J	9/8/2020 18:28
Methylene chloride	< 5.00	ug/L		9/8/2020 18:28
o-Xylene	< 2.00	ug/L		9/8/2020 18:28
Styrene	< 5.00	ug/L		9/8/2020 18:28
Tetrachloroethene	< 2.00	ug/L		9/8/2020 18:28
Toluene	< 2.00	ug/L		9/8/2020 18:28
trans-1,2-Dichloroethene	< 2.00	ug/L		9/8/2020 18:28

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020	18:28
Trichloroethene	< 2.00	ug/L	9/8/2020	18:28
Trichlorofluoromethane	< 2.00	ug/L	9/8/2020	18:28
Vinyl chloride	< 2.00	ug/L	9/8/2020	18:28

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	106	70.9 - 139		9/8/2020 18:28
4-Bromofluorobenzene	85.0	59.5 - 129		9/8/2020 18:28
Pentafluorobenzene	97.0	89.3 - 117		9/8/2020 18:28
Toluene-D8	97.2	82.9 - 115		9/8/2020 18:28

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73129.D

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1,2-Trichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1-Dichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,1-Dichloroethene	< 2.00	ug/L		9/10/2020 13:49
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/10/2020 13:49
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/10/2020 13:49
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/10/2020 13:49
1,2-Dibromoethane	< 2.00	ug/L		9/10/2020 13:49
1,2-Dichlorobenzene	< 2.00	ug/L		9/10/2020 13:49
1,2-Dichloroethane	< 2.00	ug/L		9/10/2020 13:49
1,2-Dichloropropane	< 2.00	ug/L		9/10/2020 13:49
1,3-Dichlorobenzene	< 2.00	ug/L		9/10/2020 13:49
1,4-Dichlorobenzene	< 2.00	ug/L		9/10/2020 13:49
1,4-Dioxane	< 20.0	ug/L		9/10/2020 13:49
2-Butanone	< 10.0	ug/L		9/10/2020 13:49
2-Hexanone	< 5.00	ug/L		9/10/2020 13:49
4-Methyl-2-pentanone	< 5.00	ug/L		9/10/2020 13:49
Acetone	< 10.0	ug/L		9/10/2020 13:49
Benzene	1.29	ug/L		9/10/2020 13:49
Bromochloromethane	< 5.00	ug/L		9/10/2020 13:49
Bromodichloromethane	< 2.00	ug/L		9/10/2020 13:49
Bromoform	< 5.00	ug/L		9/10/2020 13:49

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L	9/10/2020 13:49
Carbon disulfide	< 2.00	ug/L	9/10/2020 13:49
Carbon Tetrachloride	< 2.00	ug/L	9/10/2020 13:49
Chlorobenzene	< 2.00	ug/L	9/10/2020 13:49
Chloroethane	< 2.00	ug/L	9/10/2020 13:49
Chloroform	< 2.00	ug/L	9/10/2020 13:49
Chloromethane	< 2.00	ug/L	9/10/2020 13:49
cis-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 13:49
cis-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020 13:49
Cyclohexane	< 10.0	ug/L	9/10/2020 13:49
Dibromochloromethane	< 2.00	ug/L	9/10/2020 13:49
Dichlorodifluoromethane	< 2.00	ug/L	9/10/2020 13:49
Ethylbenzene	< 2.00	ug/L	9/10/2020 13:49
Freon 113	< 2.00	ug/L	9/10/2020 13:49
Isopropylbenzene	< 2.00	ug/L	9/10/2020 13:49
m,p-Xylene	< 2.00	ug/L	9/10/2020 13:49
Methyl acetate	< 2.00	ug/L	9/10/2020 13:49
Methyl tert-butyl Ether	< 2.00	ug/L	9/10/2020 13:49
Methylcyclohexane	< 2.00	ug/L	9/10/2020 13:49
Methylene chloride	< 5.00	ug/L	9/10/2020 13:49
o-Xylene	< 2.00	ug/L	9/10/2020 13:49
Styrene	< 5.00	ug/L	9/10/2020 13:49
Tetrachloroethene	< 2.00	ug/L	9/10/2020 13:49
Toluene	< 2.00	ug/L	9/10/2020 13:49
trans-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 13:49

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020	13:49
Trichloroethene	< 2.00	ug/L	9/10/2020	13:49
Trichlorofluoromethane	< 2.00	ug/L	9/10/2020	13:49
Vinyl chloride	< 2.00	ug/L	9/10/2020	13:49

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	104	70.9 - 139		9/10/2020 13:49
4-Bromofluorobenzene	112	59.5 - 129		9/10/2020 13:49
Pentafluorobenzene	94.8	89.3 - 117		9/10/2020 13:49
Toluene-D8	111	82.9 - 115		9/10/2020 13:49

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73192.D

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-8

Lab Sample ID: 204166-03

Matrix: Groundwater

Date Sampled: 9/2/2020

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1,2-Trichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1-Dichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,1-Dichloroethene	< 2.00	ug/L		9/8/2020 19:58
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/8/2020 19:58
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/8/2020 19:58
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/8/2020 19:58
1,2-Dibromoethane	< 2.00	ug/L		9/8/2020 19:58
1,2-Dichlorobenzene	< 2.00	ug/L		9/8/2020 19:58
1,2-Dichloroethane	< 2.00	ug/L		9/8/2020 19:58
1,2-Dichloropropane	< 2.00	ug/L		9/8/2020 19:58
1,3-Dichlorobenzene	< 2.00	ug/L		9/8/2020 19:58
1,4-Dichlorobenzene	< 2.00	ug/L		9/8/2020 19:58
1,4-Dioxane	< 20.0	ug/L		9/8/2020 19:58
2-Butanone	< 10.0	ug/L		9/8/2020 19:58
2-Hexanone	< 5.00	ug/L		9/8/2020 19:58
4-Methyl-2-pentanone	< 5.00	ug/L		9/8/2020 19:58
Acetone	< 10.0	ug/L		9/8/2020 19:58
Benzene	< 1.00	ug/L		9/8/2020 19:58
Bromochloromethane	< 5.00	ug/L		9/8/2020 19:58
Bromodichloromethane	< 2.00	ug/L		9/8/2020 19:58
Bromoform	< 5.00	ug/L		9/8/2020 19:58

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-8

Lab Sample ID: 204166-03

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L	9/8/2020 19:58
Carbon disulfide	< 2.00	ug/L	9/8/2020 19:58
Carbon Tetrachloride	< 2.00	ug/L	9/8/2020 19:58
Chlorobenzene	< 2.00	ug/L	9/8/2020 19:58
Chloroethane	< 2.00	ug/L	9/8/2020 19:58
Chloroform	< 2.00	ug/L	9/8/2020 19:58
Chloromethane	< 2.00	ug/L	9/8/2020 19:58
cis-1,2-Dichloroethene	< 2.00	ug/L	9/8/2020 19:58
cis-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020 19:58
Cyclohexane	< 10.0	ug/L	9/8/2020 19:58
Dibromochloromethane	< 2.00	ug/L	9/8/2020 19:58
Dichlorodifluoromethane	< 2.00	ug/L	9/8/2020 19:58
Ethylbenzene	< 2.00	ug/L	9/8/2020 19:58
Freon 113	< 2.00	ug/L	9/8/2020 19:58
Isopropylbenzene	< 2.00	ug/L	9/8/2020 19:58
m,p-Xylene	< 2.00	ug/L	9/8/2020 19:58
Methyl acetate	< 2.00	ug/L	9/8/2020 19:58
Methyl tert-butyl Ether	< 2.00	ug/L	9/8/2020 19:58
Methylcyclohexane	< 2.00	ug/L	9/8/2020 19:58
Methylene chloride	< 5.00	ug/L	9/8/2020 19:58
o-Xylene	< 2.00	ug/L	9/8/2020 19:58
Styrene	< 5.00	ug/L	9/8/2020 19:58
Tetrachloroethene	< 2.00	ug/L	9/8/2020 19:58
Toluene	< 2.00	ug/L	9/8/2020 19:58
trans-1,2-Dichloroethene	< 2.00	ug/L	9/8/2020 19:58

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-8

Lab Sample ID: 204166-03

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020	19:58
Trichloroethene	< 2.00	ug/L	9/8/2020	19:58
Trichlorofluoromethane	< 2.00	ug/L	9/8/2020	19:58
Vinyl chloride	< 2.00	ug/L	9/8/2020	19:58

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	111	70.9 - 139		9/8/2020 19:58
4-Bromofluorobenzene	80.4	59.5 - 129		9/8/2020 19:58
Pentafluorobenzene	100	89.3 - 117		9/8/2020 19:58
Toluene-D8	92.0	82.9 - 115		9/8/2020 19:58

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73133.D

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Client: City of Rochester
Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1,2-Trichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1-Dichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,1-Dichloroethene	< 2.00	ug/L		9/10/2020 14:56
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/10/2020 14:56
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/10/2020 14:56
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/10/2020 14:56
1,2-Dibromoethane	< 2.00	ug/L		9/10/2020 14:56
1,2-Dichlorobenzene	< 2.00	ug/L		9/10/2020 14:56
1,2-Dichloroethane	< 2.00	ug/L		9/10/2020 14:56
1,2-Dichloropropane	< 2.00	ug/L		9/10/2020 14:56
1,3-Dichlorobenzene	< 2.00	ug/L		9/10/2020 14:56
1,4-Dichlorobenzene	< 2.00	ug/L		9/10/2020 14:56
1,4-Dioxane	< 20.0	ug/L		9/10/2020 14:56
2-Butanone	< 10.0	ug/L		9/10/2020 14:56
2-Hexanone	< 5.00	ug/L		9/10/2020 14:56
4-Methyl-2-pentanone	< 5.00	ug/L		9/10/2020 14:56
Acetone	< 10.0	ug/L		9/10/2020 14:56
Benzene	0.732	ug/L	J	9/10/2020 14:56
Bromochloromethane	< 5.00	ug/L		9/10/2020 14:56
Bromodichloromethane	< 2.00	ug/L		9/10/2020 14:56
Bromoform	< 5.00	ug/L		9/10/2020 14:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L	9/10/2020 14:56
Carbon disulfide	< 2.00	ug/L	9/10/2020 14:56
Carbon Tetrachloride	< 2.00	ug/L	9/10/2020 14:56
Chlorobenzene	< 2.00	ug/L	9/10/2020 14:56
Chloroethane	< 2.00	ug/L	9/10/2020 14:56
Chloroform	< 2.00	ug/L	9/10/2020 14:56
Chloromethane	< 2.00	ug/L	9/10/2020 14:56
cis-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 14:56
cis-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020 14:56
Cyclohexane	< 10.0	ug/L	9/10/2020 14:56
Dibromochloromethane	< 2.00	ug/L	9/10/2020 14:56
Dichlorodifluoromethane	< 2.00	ug/L	9/10/2020 14:56
Ethylbenzene	< 2.00	ug/L	9/10/2020 14:56
Freon 113	< 2.00	ug/L	9/10/2020 14:56
Isopropylbenzene	< 2.00	ug/L	9/10/2020 14:56
m,p-Xylene	< 2.00	ug/L	9/10/2020 14:56
Methyl acetate	< 2.00	ug/L	9/10/2020 14:56
Methyl tert-butyl Ether	< 2.00	ug/L	9/10/2020 14:56
Methylcyclohexane	< 2.00	ug/L	9/10/2020 14:56
Methylene chloride	< 5.00	ug/L	9/10/2020 14:56
o-Xylene	< 2.00	ug/L	9/10/2020 14:56
Styrene	< 5.00	ug/L	9/10/2020 14:56
Tetrachloroethene	< 2.00	ug/L	9/10/2020 14:56
Toluene	< 2.00	ug/L	9/10/2020 14:56
trans-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 14:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020 14:56
Trichloroethene	< 2.00	ug/L	9/10/2020 14:56
Trichlorofluoromethane	< 2.00	ug/L	9/10/2020 14:56
Vinyl chloride	< 2.00	ug/L	9/10/2020 14:56

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	101	70.9 - 139		9/10/2020 14:56
4-Bromofluorobenzene	83.0	59.5 - 129		9/10/2020 14:56
Pentafluorobenzene	100	89.3 - 117		9/10/2020 14:56
Toluene-D8	93.7	82.9 - 115		9/10/2020 14:56

Method Reference(s): EPA 8260C
EPA 5030C

Data File: x73195.D

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-7R

Lab Sample ID: 204166-05

Matrix: Groundwater

Date Sampled: 9/2/2020

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1,2,2-Tetrachloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1,2-Trichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1-Dichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,1-Dichloroethene	< 10.0	ug/L		9/10/2020 15:18
1,2,3-Trichlorobenzene	< 25.0	ug/L		9/10/2020 15:18
1,2,4-Trichlorobenzene	< 25.0	ug/L		9/10/2020 15:18
1,2-Dibromo-3-Chloropropane	< 50.0	ug/L		9/10/2020 15:18
1,2-Dibromoethane	< 10.0	ug/L		9/10/2020 15:18
1,2-Dichlorobenzene	< 10.0	ug/L		9/10/2020 15:18
1,2-Dichloroethane	< 10.0	ug/L		9/10/2020 15:18
1,2-Dichloropropane	< 10.0	ug/L		9/10/2020 15:18
1,3-Dichlorobenzene	< 10.0	ug/L		9/10/2020 15:18
1,4-Dichlorobenzene	< 10.0	ug/L		9/10/2020 15:18
1,4-Dioxane	< 100	ug/L		9/10/2020 15:18
2-Butanone	< 50.0	ug/L		9/10/2020 15:18
2-Hexanone	< 25.0	ug/L		9/10/2020 15:18
4-Methyl-2-pentanone	< 25.0	ug/L		9/10/2020 15:18
Acetone	< 50.0	ug/L		9/10/2020 15:18
Benzene	< 5.00	ug/L		9/10/2020 15:18
Bromochloromethane	< 25.0	ug/L		9/10/2020 15:18
Bromodichloromethane	< 10.0	ug/L		9/10/2020 15:18
Bromoform	< 25.0	ug/L		9/10/2020 15:18

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-7R

Lab Sample ID: 204166-05

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 10.0	ug/L	9/10/2020 15:18
Carbon disulfide	< 10.0	ug/L	9/10/2020 15:18
Carbon Tetrachloride	< 10.0	ug/L	9/10/2020 15:18
Chlorobenzene	< 10.0	ug/L	9/10/2020 15:18
Chloroethane	< 10.0	ug/L	9/10/2020 15:18
Chloroform	< 10.0	ug/L	9/10/2020 15:18
Chloromethane	< 10.0	ug/L	9/10/2020 15:18
cis-1,2-Dichloroethene	< 10.0	ug/L	9/10/2020 15:18
cis-1,3-Dichloropropene	< 10.0	ug/L	9/10/2020 15:18
Cyclohexane	< 50.0	ug/L	9/10/2020 15:18
Dibromochloromethane	< 10.0	ug/L	9/10/2020 15:18
Dichlorodifluoromethane	< 10.0	ug/L	9/10/2020 15:18
Ethylbenzene	< 10.0	ug/L	9/10/2020 15:18
Freon 113	< 10.0	ug/L	9/10/2020 15:18
Isopropylbenzene	< 10.0	ug/L	9/10/2020 15:18
m,p-Xylene	< 10.0	ug/L	9/10/2020 15:18
Methyl acetate	< 10.0	ug/L	9/10/2020 15:18
Methyl tert-butyl Ether	499	ug/L	9/10/2020 15:18
Methylcyclohexane	< 10.0	ug/L	9/10/2020 15:18
Methylene chloride	< 25.0	ug/L	9/10/2020 15:18
o-Xylene	< 10.0	ug/L	9/10/2020 15:18
Styrene	< 25.0	ug/L	9/10/2020 15:18
Tetrachloroethene	< 10.0	ug/L	9/10/2020 15:18
Toluene	< 10.0	ug/L	9/10/2020 15:18
trans-1,2-Dichloroethene	< 10.0	ug/L	9/10/2020 15:18

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-7R

Lab Sample ID: 204166-05

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 10.0	ug/L	9/10/2020 15:18
Trichloroethene	< 10.0	ug/L	9/10/2020 15:18
Trichlorofluoromethane	< 10.0	ug/L	9/10/2020 15:18
Vinyl chloride	< 10.0	ug/L	9/10/2020 15:18

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	101	70.9 - 139		9/10/2020 15:18
4-Bromofluorobenzene	77.3	59.5 - 129		9/10/2020 15:18
Pentafluorobenzene	101	89.3 - 117		9/10/2020 15:18
Toluene-D8	91.6	82.9 - 115		9/10/2020 15:18

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73196.D

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1,2-Trichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1-Dichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,1-Dichloroethene	< 2.00	ug/L		9/8/2020 21:07
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/8/2020 21:07
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/8/2020 21:07
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/8/2020 21:07
1,2-Dibromoethane	< 2.00	ug/L		9/8/2020 21:07
1,2-Dichlorobenzene	< 2.00	ug/L		9/8/2020 21:07
1,2-Dichloroethane	< 2.00	ug/L		9/8/2020 21:07
1,2-Dichloropropane	< 2.00	ug/L		9/8/2020 21:07
1,3-Dichlorobenzene	< 2.00	ug/L		9/8/2020 21:07
1,4-Dichlorobenzene	< 2.00	ug/L		9/8/2020 21:07
1,4-Dioxane	< 20.0	ug/L		9/8/2020 21:07
2-Butanone	< 10.0	ug/L		9/8/2020 21:07
2-Hexanone	< 5.00	ug/L		9/8/2020 21:07
4-Methyl-2-pentanone	< 5.00	ug/L		9/8/2020 21:07
Acetone	11.4	ug/L		9/8/2020 21:07
Benzene	< 1.00	ug/L		9/8/2020 21:07
Bromochloromethane	< 5.00	ug/L		9/8/2020 21:07
Bromodichloromethane	< 2.00	ug/L		9/8/2020 21:07
Bromoform	< 5.00	ug/L		9/8/2020 21:07

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L		9/8/2020 21:07
Carbon disulfide	< 2.00	ug/L		9/8/2020 21:07
Carbon Tetrachloride	< 2.00	ug/L		9/8/2020 21:07
Chlorobenzene	< 2.00	ug/L		9/8/2020 21:07
Chloroethane	< 2.00	ug/L		9/8/2020 21:07
Chloroform	< 2.00	ug/L		9/8/2020 21:07
Chloromethane	< 2.00	ug/L		9/8/2020 21:07
cis-1,2-Dichloroethene	< 2.00	ug/L		9/8/2020 21:07
cis-1,3-Dichloropropene	< 2.00	ug/L		9/8/2020 21:07
Cyclohexane	8.52	ug/L	J	9/8/2020 21:07
Dibromochloromethane	< 2.00	ug/L		9/8/2020 21:07
Dichlorodifluoromethane	< 2.00	ug/L		9/8/2020 21:07
Ethylbenzene	< 2.00	ug/L		9/8/2020 21:07
Freon 113	< 2.00	ug/L		9/8/2020 21:07
Isopropylbenzene	< 2.00	ug/L		9/8/2020 21:07
m,p-Xylene	< 2.00	ug/L		9/8/2020 21:07
Methyl acetate	< 2.00	ug/L		9/8/2020 21:07
Methyl tert-butyl Ether	< 2.00	ug/L		9/8/2020 21:07
Methylcyclohexane	2.34	ug/L		9/8/2020 21:07
Methylene chloride	< 5.00	ug/L		9/8/2020 21:07
o-Xylene	< 2.00	ug/L		9/8/2020 21:07
Styrene	< 5.00	ug/L		9/8/2020 21:07
Tetrachloroethene	< 2.00	ug/L		9/8/2020 21:07
Toluene	< 2.00	ug/L		9/8/2020 21:07
trans-1,2-Dichloroethene	< 2.00	ug/L		9/8/2020 21:07

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/8/2020 21:07
Trichloroethene	< 2.00	ug/L	9/8/2020 21:07
Trichlorofluoromethane	< 2.00	ug/L	9/8/2020 21:07
Vinyl chloride	< 2.00	ug/L	9/8/2020 21:07

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	106	70.9 - 139		9/8/2020 21:07
4-Bromofluorobenzene	77.1	59.5 - 129		9/8/2020 21:07
Pentafluorobenzene	98.0	89.3 - 117		9/8/2020 21:07
Toluene-D8	94.9	82.9 - 115		9/8/2020 21:07

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73136.D

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Client: City of Rochester
Project Reference: 1200 East Main Street
Sample Identifier: Trip Blank T1004
Lab Sample ID: 204166-07
Matrix: Water

Date Sampled: 8/31/2020
Date Received: 9/2/2020

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1,2-Trichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1-Dichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,1-Dichloroethene	< 2.00	ug/L		9/10/2020 15:41
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/10/2020 15:41
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/10/2020 15:41
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/10/2020 15:41
1,2-Dibromoethane	< 2.00	ug/L		9/10/2020 15:41
1,2-Dichlorobenzene	< 2.00	ug/L		9/10/2020 15:41
1,2-Dichloroethane	< 2.00	ug/L		9/10/2020 15:41
1,2-Dichloropropane	< 2.00	ug/L		9/10/2020 15:41
1,3-Dichlorobenzene	< 2.00	ug/L		9/10/2020 15:41
1,4-Dichlorobenzene	< 2.00	ug/L		9/10/2020 15:41
1,4-Dioxane	< 20.0	ug/L		9/10/2020 15:41
2-Butanone	< 10.0	ug/L		9/10/2020 15:41
2-Hexanone	< 5.00	ug/L		9/10/2020 15:41
4-Methyl-2-pentanone	< 5.00	ug/L		9/10/2020 15:41
Acetone	< 10.0	ug/L		9/10/2020 15:41
Benzene	< 1.00	ug/L		9/10/2020 15:41
Bromochloromethane	< 5.00	ug/L		9/10/2020 15:41
Bromodichloromethane	< 2.00	ug/L		9/10/2020 15:41
Bromoform	< 5.00	ug/L		9/10/2020 15:41

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Trip Blank T1004

Lab Sample ID: 204166-07

Date Sampled: 8/31/2020

Matrix: Water

Date Received: 9/2/2020

Bromomethane	< 2.00	ug/L	9/10/2020 15:41
Carbon disulfide	< 2.00	ug/L	9/10/2020 15:41
Carbon Tetrachloride	< 2.00	ug/L	9/10/2020 15:41
Chlorobenzene	< 2.00	ug/L	9/10/2020 15:41
Chloroethane	< 2.00	ug/L	9/10/2020 15:41
Chloroform	< 2.00	ug/L	9/10/2020 15:41
Chloromethane	< 2.00	ug/L	9/10/2020 15:41
cis-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 15:41
cis-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020 15:41
Cyclohexane	< 10.0	ug/L	9/10/2020 15:41
Dibromochloromethane	< 2.00	ug/L	9/10/2020 15:41
Dichlorodifluoromethane	< 2.00	ug/L	9/10/2020 15:41
Ethylbenzene	< 2.00	ug/L	9/10/2020 15:41
Freon 113	< 2.00	ug/L	9/10/2020 15:41
Isopropylbenzene	< 2.00	ug/L	9/10/2020 15:41
m,p-Xylene	< 2.00	ug/L	9/10/2020 15:41
Methyl acetate	< 2.00	ug/L	9/10/2020 15:41
Methyl tert-butyl Ether	< 2.00	ug/L	9/10/2020 15:41
Methylcyclohexane	< 2.00	ug/L	9/10/2020 15:41
Methylene chloride	< 5.00	ug/L	9/10/2020 15:41
o-Xylene	< 2.00	ug/L	9/10/2020 15:41
Styrene	< 5.00	ug/L	9/10/2020 15:41
Tetrachloroethene	< 2.00	ug/L	9/10/2020 15:41
Toluene	< 2.00	ug/L	9/10/2020 15:41
trans-1,2-Dichloroethene	< 2.00	ug/L	9/10/2020 15:41

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Trip Blank T1004

Lab Sample ID: 204166-07

Date Sampled: 8/31/2020

Matrix: Water

Date Received: 9/2/2020

trans-1,3-Dichloropropene	< 2.00	ug/L	9/10/2020	15:41
Trichloroethene	< 2.00	ug/L	9/10/2020	15:41
Trichlorofluoromethane	< 2.00	ug/L	9/10/2020	15:41
Vinyl chloride	< 2.00	ug/L	9/10/2020	15:41

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	105	70.9 - 139		9/10/2020 15:41
4-Bromofluorobenzene	74.2	59.5 - 129		9/10/2020 15:41
Pentafluorobenzene	101	89.3 - 117		9/10/2020 15:41
Toluene-D8	86.8	82.9 - 115		9/10/2020 15:41

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73197.D

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2
VOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services
 Lab Project #: 204166
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street
 Client Project #: N/A
 SDG No.: 4166-01

Matrix: Groundwater
 QC Batch: QC200908voaw

Instrument ID: Instrument1
 GC Column 1: DB-624 ID (mm): 0.20 Detector: MSD

LAB SAMPLE NO.	CLIENT SAMPLE ID	PFB %REC	12DCEd4 %REC	TD8 %REC	4BFB %REC	Total Out	
1	Blk 1	N/A	103	107	91.1	77.3	0
2	LCS 1	N/A	100	99.7	103	106	0
3	204166-01	MW-1	97.0	106	97.2	85.0	0
4	204166-03	MW-8	100	111	92.0	80.4	0
5	204166-06	Blind Duplicate	98.0	106	94.9	77.1	0
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

QC LIMITS %

PFB = Pentafluorobenzene (89.3 - 117)
 12DCEd4 = 1,2-Dichloroethane-d4 (70.9 - 139)
 TD8 = Toluene-d8 (82.9 - 115)
 4BFB = 4-Bromofluorobenzene (59.5 - 129)

* Values outside of current required QC limits
 D Surrogate diluted out

2
VOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services
 Lab Project #: 204166
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street
 Client Project #: N/A
 SDG No.: 4166-01

Matrix: Groundwater
 QC Batch: QC200910voaw

Instrument ID: Instrument1
 GC Column 1: DB-624 ID (mm): 0.20 Detector: MSD

LAB SAMPLE NO.	CLIENT SAMPLE ID	PFB %REC	12DCEd4 %REC	TD8 %REC	4BFB %REC	Total Out	
1	Bik 1	N/A	103	106	88.2	76.0	0
2	LCS 1	N/A	101	97.8	103	110	0
3	204166-02	MW-3	94.8	104	111	112	0
4	204166-02MS	MW-3	96.8	98.0	112	108	0
5	204166-02MSD	MW-3	98.8	97.9	111	113	0
6	204166-04	MW-11	100	101	93.7	83.0	0
7	204166-05	MW-7R	101	101	91.6	77.3	0
8	204166-07	Trip Blank T1004	101	105	86.8	74.2	0
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

	QC LIMITS %
PFB = Pentafluorobenzene	(89.3 - 117)
12DCEd4 = 1,2-Dichloroethane-d4	(70.9 - 139)
TD8 = Toluene-d8	(82.9 - 115)
4BFB = 4-Bromofluorobenzene	(59.5 - 129)

* Values outside of current required QC limits
 D Surrogate diluted out



QC Report for Laboratory Control Sample

Client: City of Rochester

Project Reference: 1200 East Main Street

Lab Project ID: 204166

SDG #: 4166-01

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1,1-Trichloroethane	20.0	ug/L	20.9	105	63.1 - 132		9/8/2020
1,1,2,2-Tetrachloroethane	20.0	ug/L	22.4	112	67.7 - 134		9/8/2020
1,1,2-Trichloroethane	20.0	ug/L	21.1	106	70 - 129		9/8/2020
1,1-Dichloroethane	20.0	ug/L	19.4	97.0	60.1 - 133		9/8/2020
1,1-Dichloroethene	20.0	ug/L	20.4	102	59.9 - 127		9/8/2020
1,2-Dichlorobenzene	20.0	ug/L	22.0	110	70.3 - 128		9/8/2020
1,2-Dichloroethane	20.0	ug/L	22.2	111	62.8 - 144		9/8/2020
1,2-Dichloropropane	20.0	ug/L	20.5	103	68.1 - 121		9/8/2020
1,3-Dichlorobenzene	20.0	ug/L	20.9	105	65.7 - 124		9/8/2020
1,4-Dichlorobenzene	20.0	ug/L	20.0	100	65.2 - 122		9/8/2020
Benzene	20.0	ug/L	22.2	111	71.3 - 128		9/8/2020
Bromodichloromethane	20.0	ug/L	20.7	104	63.6 - 126		9/8/2020
Bromoform	20.0	ug/L	18.2	91.2	52.2 - 120		9/8/2020
Bromomethane	20.0	ug/L	25.4	127	59.6 - 147		9/8/2020
Carbon Tetrachloride	20.0	ug/L	21.1	105	59 - 136		9/8/2020
Chlorobenzene	20.0	ug/L	21.3	107	70.2 - 125		9/8/2020

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QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Chloroethane	20.0	ug/L	25.0	125	59.9 - 137		9/8/2020
Chloroform	20.0	ug/L	21.7	108	66.2 - 134		9/8/2020
Chloromethane	20.0	ug/L	25.5	127	46.8 - 172		9/8/2020
cis-1,3-Dichloropropene	20.0	ug/L	17.7	88.3	57.8 - 115		9/8/2020
Dibromochloromethane	20.0	ug/L	20.3	102	61.9 - 130		9/8/2020
Ethylbenzene	20.0	ug/L	20.7	104	68.1 - 131		9/8/2020
Methylene chloride	20.0	ug/L	24.0	120	56.2 - 136		9/8/2020
Tetrachloroethene	20.0	ug/L	17.2	86.2	60.6 - 139		9/8/2020
Toluene	20.0	ug/L	22.5	112	74.6 - 129		9/8/2020
trans-1,2-Dichloroethene	20.0	ug/L	22.8	114	66.4 - 133		9/8/2020
trans-1,3-Dichloropropene	20.0	ug/L	17.3	86.7	50.2 - 118		9/8/2020
Trichloroethene	20.0	ug/L	21.0	105	72.2 - 122		9/8/2020
Trichlorofluoromethane	20.0	ug/L	22.2	111	59.5 - 154		9/8/2020
Vinyl chloride	20.0	ug/L	21.9	109	60.8 - 149		9/8/2020

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QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Method Reference(s)	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
	EPA 8260C							
	EPA 5030C							
	Data File: x73119.D							
	QC Number: LCS 1							
	QC Batch ID: QC200908voaw							

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QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Spike		LCS		LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
	Added	Units	Result	Result				
1,1,1-Trichloroethane	20.0	ug/L	16.6	82.9	63.1 - 132		9/10/2020	
1,1,2,2-Tetrachloroethane	20.0	ug/L	16.9	84.5	67.7 - 134		9/10/2020	
1,1,2-Trichloroethane	20.0	ug/L	16.0	80.2	70 - 129		9/10/2020	
1,1-Dichloroethane	20.0	ug/L	16.1	80.5	60.1 - 133		9/10/2020	
1,1-Dichloroethene	20.0	ug/L	16.5	82.6	59.9 - 127		9/10/2020	
1,2-Dichlorobenzene	20.0	ug/L	18.4	91.9	70.3 - 128		9/10/2020	
1,2-Dichloroethane	20.0	ug/L	16.8	83.9	62.8 - 144		9/10/2020	
1,2-Dichloropropane	20.0	ug/L	15.9	79.5	68.1 - 121		9/10/2020	
1,3-Dichlorobenzene	20.0	ug/L	17.5	87.7	65.7 - 124		9/10/2020	
1,4-Dichlorobenzene	20.0	ug/L	19.0	95.2	65.2 - 122		9/10/2020	
Benzene	20.0	ug/L	17.5	87.6	71.3 - 128		9/10/2020	
Bromodichloromethane	20.0	ug/L	15.8	79.2	63.6 - 126		9/10/2020	
Bromoform	20.0	ug/L	13.5	67.7	52.2 - 120		9/10/2020	
Bromomethane	20.0	ug/L	19.5	97.3	59.6 - 147		9/10/2020	
Carbon Tetrachloride	20.0	ug/L	16.8	84.2	59 - 136		9/10/2020	
Chlorobenzene	20.0	ug/L	17.2	86.1	70.2 - 125		9/10/2020	

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QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Chloroethane	20.0	ug/L	19.5	97.7	59.9 - 137		9/10/2020
Chloroform	20.0	ug/L	16.5	82.5	66.2 - 134		9/10/2020
Chloromethane	20.0	ug/L	20.6	103	46.8 - 172		9/10/2020
cis-1,3-Dichloropropene	20.0	ug/L	13.5	67.6	57.8 - 115		9/10/2020
Dibromochloromethane	20.0	ug/L	15.3	76.4	61.9 - 130		9/10/2020
Ethylbenzene	20.0	ug/L	19.5	97.3	68.1 - 131		9/10/2020
Methylene chloride	20.0	ug/L	12.3	61.4	56.2 - 136		9/10/2020
Tetrachloroethene	20.0	ug/L	15.4	76.8	60.6 - 139		9/10/2020
Toluene	20.0	ug/L	18.4	92.2	74.6 - 129		9/10/2020
trans-1,2-Dichloroethene	20.0	ug/L	17.3	86.3	66.4 - 133		9/10/2020
trans-1,3-Dichloropropene	20.0	ug/L	13.9	69.4	50.2 - 118		9/10/2020
Trichloroethene	20.0	ug/L	16.6	82.9	72.2 - 122		9/10/2020
Trichlorofluoromethane	20.0	ug/L	19.9	99.6	59.5 - 154		9/10/2020
Vinyl chloride	20.0	ug/L	18.7	93.4	60.8 - 149		9/10/2020

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Method Reference(s)	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
	EPA 8260C							
	EPA 5030C							
	Data File: x73185.D							
	QC Number: LCS 1							
	QC Batch ID: QC200910voaw							

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QC Report for Matrix Spike and Matrix Spike Duplicate

SDG #: 4166-01
Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Lab Sample ID: 204166-02
Sample Identifier: MW-3
Matrix: Groundwater
Date Sampled: 9/2/2020
Date Received: 9/2/2020
Date Analyzed: 9/10/2020

Volatile Organics

Analyte	Sample Result	MS Added	MS Result	MS Added	MS Result	MS % Recovery	MSD Added	MSD Result	MSD Recovery	% Rec. Limits	MS Outlier	MSD Outlier	Relative % Diff.	RPD Limit	RPD Outlier
1,1,1-Trichloroethane	< 2.00	ug/L	50.0	50.6	101	50.0	53.3	107	63.1 - 132				5.17	31.8	
1,1,2,2-Tetrachloroethane	< 2.00	ug/L	50.0	47.9	95.7	50.0	49.4	98.7	67.7 - 134				3.10	31.2	
1,1,2-Trichloroethane	< 2.00	ug/L	50.0	56.1	112	50.0	59.2	118	70 - 129				5.38	28.5	
1,1-Dichloroethane	< 2.00	ug/L	50.0	47.5	95.0	50.0	50.0	99.9	60.1 - 133				5.04	30.5	
1,1-Dichloroethene	< 2.00	ug/L	50.0	47.3	94.7	50.0	50.5	101	59.9 - 127				6.38	33.3	
1,2-Dichlorobenzene	< 2.00	ug/L	50.0	52.2	104	50.0	53.8	108	70.3 - 128				3.11	29.0	
1,2-Dichloroethane	< 2.00	ug/L	50.0	48.1	96.1	50.0	48.8	97.5	62.8 - 144				1.47	29.9	
1,2-Dichloropropane	< 2.00	ug/L	50.0	50.8	102	50.0	52.2	104	68.1 - 121				2.76	23.5	
1,3-Dichlorobenzene	< 2.00	ug/L	50.0	52.2	104	50.0	54.1	108	65.7 - 124				3.52	29.4	
1,4-Dichlorobenzene	< 2.00	ug/L	50.0	53.7	107	50.0	56.5	113	65.2 - 122				5.16	30.4	
Benzene	1.29	ug/L	50.0	52.5	102	50.0	54.9	107	71.3 - 128				4.59	25.0	
Bromodichloromethane	< 2.00	ug/L	50.0	51.3	103	50.0	53.1	106	63.6 - 126				3.41	25.5	
Bromoform	< 5.00	ug/L	50.0	43.6	87.3	50.0	44.9	89.8	52.2 - 120				2.83	34.3	
Bromomethane	< 2.00	ug/L	50.0	55.1	110	50.0	58.8	118	59.6 - 147				6.45	31.9	

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QC Report for Matrix Spike and Matrix Spike Duplicate

SDG #: 4166-01
Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Lab Sample ID: 204166-02
Sample Identifier: MW-3
Matrix: Groundwater
Date Sampled: 9/2/2020
Date Received: 9/2/2020
Date Analyzed: 9/10/2020

Volatile Organics

Analyte	Sample Result	MS Added	MS Result	MS % Recovery	MSD Added	MSD Result	MSD % Recovery	%Rec. Limits	MS Outlier	MSD Outlier	Relative %Diff.	RPD Limit	RPD Outlier
Carbon Tetrachloride	< 2.00	ug/L	50.0	50.8	102	50.0	53.3	107	59 - 136		4.80	33.2	
Chlorobenzene	< 2.00	ug/L	50.0	48.3	96.7	50.0	49.5	99.1	70.2 - 125		2.46	28.2	
Chloroethane	< 2.00	ug/L	50.0	56.1	112	50.0	59.4	119	59.9 - 137		5.57	31.0	
Chloroform	< 2.00	ug/L	50.0	48.6	97.2	50.0	50.4	101	66.2 - 134		3.60	26.8	
Chloromethane	< 2.00	ug/L	50.0	60.1	120	50.0	63.0	126	46.8 - 172		4.76	34.5	
cis-1,3-Dichloropropene	< 2.00	ug/L	50.0	49.9	99.8	50.0	52.8	106	57.8 - 115		5.63	25.4	
Dibromochloromethane	< 2.00	ug/L	50.0	52.8	106	50.0	54.8	110	61.9 - 130		3.64	29.1	
Ethylbenzene	< 2.00	ug/L	50.0	56.3	113	50.0	58.6	117	68.1 - 131		4.12	31.7	
Methylene chloride	< 5.00	ug/L	50.0	45.3	90.5	50.0	47.7	95.3	56.2 - 136		5.16	31.8	
Tetrachloroethene	< 2.00	ug/L	50.0	43.7	87.3	50.0	45.8	91.6	60.6 - 139		4.83	33.4	
Toluene	< 2.00	ug/L	50.0	54.8	110	50.0	57.6	115	74.6 - 129		5.15	23.7	
trans-1,2-Dichloroethene	< 2.00	ug/L	50.0	50.8	102	50.0	53.4	107	66.4 - 133		4.95	30.6	
trans-1,3-Dichloropropene	< 2.00	ug/L	50.0	48.2	96.5	50.0	50.6	101	50.2 - 118		4.82	28.0	
Trichloroethene	< 2.00	ug/L	50.0	50.5	101	50.0	53.3	107	72.2 - 122		5.32	24.8	

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QC Report for Matrix Spike and Matrix Spike Duplicate

SDG #: 4166-01
Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Lab Sample ID: 204166-02
Sample Identifier: MW-3
Matrix: Groundwater
Date Sampled: 9/2/2020
Date Received: 9/2/2020
Date Analyzed: 9/10/2020

Volatile Organics

Analyte	Result	Units	MS Added	MS Result	MS	MS %	MSD Recovery Added	MSD Result	MSD %	MSD Recovery	% Rec. Limits	MS Outlier	MSD Outlier	Relative % Diff.	RPD Limit	RPD Outlier
Trichlorofluoromethane	< 2.00	ug/L	50.0	57.4	57.4	115	50.0	59.7	119	119	59.5 - 154			4.03	37.4	
Vinyl chloride	< 2.00	ug/L	50.0	53.7	53.7	107	50.0	56.9	114	114	60.8 - 149			5.87	35.0	
Method Reference(s):																
EPA 8260C																
EPA 5030C																
Data File(s):																
x73193.D																
x73194.D																
x73192.D																
QC Batch ID:																
1																
QC200910voaw																

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VOLATILE METHOD BLANK SUMMARY

Lab Name:	<u>Paradigm Environmental Services</u>	Sample ID:	<u>Blk 1</u>
Lab Project #:	<u>204166</u>	Lab File ID:	<u>x73120.D</u>
Client Name:	<u>City of Rochester</u>	Date Extracted:	<u>9/8/2020</u>
Client Project Name:	<u>1200 East Main Street</u>	Date Analyzed:	<u>9/8/2020</u>
Client Project #:	<u>N/A</u>	Time Analyzed:	<u>15:07</u>
SDG No.:	<u>4166-01</u>	Matrix:	<u>Groundwater</u>
		QC Batch:	<u>QC200908voaw</u>
Instrument ID:	<u>Instrument1</u>		
GC Column 1:	<u>DB-624</u>	ID (mm):	<u>0.20</u>

This Method Blank applies to the following Samples and QC

	LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1	N/A	x73119.D	9/8/2020 14:44
02	204166-01	MW-1	x73129.D	9/8/2020 18:28
03	204166-03	MW-8	x73133.D	9/8/2020 19:58
04	204166-06	Blind Duplicate	x73136.D	9/8/2020 21:07
05				
06				
07				
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25				



Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	<2.00	ug/L		9/8/2020 15:07
1,1,2,2-Tetrachloroethane	<2.00	ug/L		9/8/2020 15:07
1,1,2-Trichloroethane	<2.00	ug/L		9/8/2020 15:07
1,1-Dichloroethane	<2.00	ug/L		9/8/2020 15:07
1,1-Dichloroethene	<2.00	ug/L		9/8/2020 15:07
1,2,3-Trichlorobenzene	<5.00	ug/L		9/8/2020 15:07
1,2,4-Trichlorobenzene	<5.00	ug/L		9/8/2020 15:07
1,2-Dibromo-3-Chloropropane	<10.0	ug/L		9/8/2020 15:07
1,2-Dibromoethane	<2.00	ug/L		9/8/2020 15:07
1,2-Dichlorobenzene	<2.00	ug/L		9/8/2020 15:07
1,2-Dichloroethane	<2.00	ug/L		9/8/2020 15:07
1,2-Dichloropropane	<2.00	ug/L		9/8/2020 15:07
1,3-Dichlorobenzene	<2.00	ug/L		9/8/2020 15:07
1,4-Dichlorobenzene	<2.00	ug/L		9/8/2020 15:07
1,4-Dioxane	<20.0	ug/L		9/8/2020 15:07
2-Butanone	<10.0	ug/L		9/8/2020 15:07
2-Hexanone	<5.00	ug/L		9/8/2020 15:07
4-Methyl-2-pentanone	<5.00	ug/L		9/8/2020 15:07
Acetone	<10.0	ug/L		9/8/2020 15:07
Benzene	<1.00	ug/L		9/8/2020 15:07
Bromochloromethane	<5.00	ug/L		9/8/2020 15:07
Bromodichloromethane	<2.00	ug/L		9/8/2020 15:07
Bromoform	<5.00	ug/L		9/8/2020 15:07
Bromomethane	<2.00	ug/L		9/8/2020 15:07
Carbon disulfide	<2.00	ug/L		9/8/2020 15:07
Carbon Tetrachloride	<2.00	ug/L		9/8/2020 15:07
Chlorobenzene	<2.00	ug/L		9/8/2020 15:07

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Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Chloroethane	<2.00	ug/L		9/8/2020	15:07
Chloroform	<2.00	ug/L		9/8/2020	15:07
Chloromethane	<2.00	ug/L		9/8/2020	15:07
cis-1,2-Dichloroethene	<2.00	ug/L		9/8/2020	15:07
cis-1,3-Dichloropropene	<2.00	ug/L		9/8/2020	15:07
Cyclohexane	<10.0	ug/L		9/8/2020	15:07
Dibromochloromethane	<2.00	ug/L		9/8/2020	15:07
Dichlorodifluoromethane	<2.00	ug/L		9/8/2020	15:07
Ethylbenzene	<2.00	ug/L		9/8/2020	15:07
Freon 113	<2.00	ug/L		9/8/2020	15:07
Isopropylbenzene	<2.00	ug/L		9/8/2020	15:07
m,p-Xylene	<2.00	ug/L		9/8/2020	15:07
Methyl acetate	<2.00	ug/L		9/8/2020	15:07
Methyl tert-butyl Ether	<2.00	ug/L		9/8/2020	15:07
Methylcyclohexane	<2.00	ug/L		9/8/2020	15:07
Methylene chloride	3.07	ug/L	J	9/8/2020	15:07
o-Xylene	<2.00	ug/L		9/8/2020	15:07
Styrene	<5.00	ug/L		9/8/2020	15:07
Tetrachloroethene	<2.00	ug/L		9/8/2020	15:07
Toluene	<2.00	ug/L		9/8/2020	15:07
trans-1,2-Dichloroethene	<2.00	ug/L		9/8/2020	15:07
trans-1,3-Dichloropropene	<2.00	ug/L		9/8/2020	15:07
Trichloroethene	<2.00	ug/L		9/8/2020	15:07
Trichlorofluoromethane	<2.00	ug/L		9/8/2020	15:07
Vinyl chloride	<2.00	ug/L		9/8/2020	15:07

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Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	107	70.9 - 139		9/8/2020	15:07
4-Bromofluorobenzene	77.3	59.5 - 129		9/8/2020	15:07
Pentafluorobenzene	103	89.3 - 117		9/8/2020	15:07
Toluene-D8	91.1	82.9 - 115		9/8/2020	15:07

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73120.D
QC Batch ID: QC200908voaw
QC Number: Blk 1

VOLATILE METHOD BLANK SUMMARY

Lab Name:	<u>Paradigm Environmental Services</u>	Sample ID:	<u>Blk 1</u>
Lab Project #:	<u>204166</u>	Lab File ID:	<u>x73186.D</u>
Client Name:	<u>City of Rochester</u>	Date Extracted:	<u>9/10/2020</u>
Client Project Name:	<u>1200 East Main Street</u>	Date Analyzed:	<u>9/10/2020</u>
Client Project #:	<u>N/A</u>	Time Analyzed:	<u>11:33</u>
SDG No.:	<u>4166-01</u>	Matrix:	<u>Groundwater</u>
		QC Batch:	<u>QC200910voaw</u>
Instrument ID:	<u>Instrument1</u>		
GC Column 1:	<u>DB-624</u>	ID (mm):	<u>0.20</u>

This Method Blank applies to the following Samples and QC

	LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1	N/A	x73185.D	9/10/2020 11:11
02	204166-02	MW-3	x73192.D	9/10/2020 13:49
03	204166-02MS	MW-3	x73193.D	9/10/2020 14:11
04	204166-02MSD	MW-3	x73194.D	9/10/2020 14:34
05	204166-04	MW-11	x73195.D	9/10/2020 14:56
06	204166-05	MW-7R	x73196.D	9/10/2020 15:18
07	204166-07	Trip Blank T1004	x73197.D	9/10/2020 15:41
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Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	<2.00	ug/L		9/10/2020 11:33
1,1,2,2-Tetrachloroethane	<2.00	ug/L		9/10/2020 11:33
1,1,2-Trichloroethane	<2.00	ug/L		9/10/2020 11:33
1,1-Dichloroethane	<2.00	ug/L		9/10/2020 11:33
1,1-Dichloroethene	<2.00	ug/L		9/10/2020 11:33
1,2,3-Trichlorobenzene	<5.00	ug/L		9/10/2020 11:33
1,2,4-Trichlorobenzene	<5.00	ug/L		9/10/2020 11:33
1,2-Dibromo-3-Chloropropane	<10.0	ug/L		9/10/2020 11:33
1,2-Dibromoethane	<2.00	ug/L		9/10/2020 11:33
1,2-Dichlorobenzene	<2.00	ug/L		9/10/2020 11:33
1,2-Dichloroethane	<2.00	ug/L		9/10/2020 11:33
1,2-Dichloropropane	<2.00	ug/L		9/10/2020 11:33
1,3-Dichlorobenzene	<2.00	ug/L		9/10/2020 11:33
1,4-Dichlorobenzene	<2.00	ug/L		9/10/2020 11:33
1,4-Dioxane	<20.0	ug/L		9/10/2020 11:33
2-Butanone	<10.0	ug/L		9/10/2020 11:33
2-Hexanone	<5.00	ug/L		9/10/2020 11:33
4-Methyl-2-pentanone	<5.00	ug/L		9/10/2020 11:33
Acetone	<10.0	ug/L		9/10/2020 11:33
Benzene	<1.00	ug/L		9/10/2020 11:33
Bromochloromethane	<5.00	ug/L		9/10/2020 11:33
Bromodichloromethane	<2.00	ug/L		9/10/2020 11:33
Bromoform	<5.00	ug/L		9/10/2020 11:33
Bromomethane	<2.00	ug/L		9/10/2020 11:33
Carbon disulfide	<2.00	ug/L		9/10/2020 11:33
Carbon Tetrachloride	<2.00	ug/L		9/10/2020 11:33
Chlorobenzene	<2.00	ug/L		9/10/2020 11:33

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Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Chloroethane	<2.00	ug/L		9/10/2020	11:33
Chloroform	<2.00	ug/L		9/10/2020	11:33
Chloromethane	<2.00	ug/L		9/10/2020	11:33
cis-1,2-Dichloroethene	<2.00	ug/L		9/10/2020	11:33
cis-1,3-Dichloropropene	<2.00	ug/L		9/10/2020	11:33
Cyclohexane	<10.0	ug/L		9/10/2020	11:33
Dibromochloromethane	<2.00	ug/L		9/10/2020	11:33
Dichlorodifluoromethane	<2.00	ug/L		9/10/2020	11:33
Ethylbenzene	<2.00	ug/L		9/10/2020	11:33
Freon 113	<2.00	ug/L		9/10/2020	11:33
Isopropylbenzene	<2.00	ug/L		9/10/2020	11:33
m,p-Xylene	<2.00	ug/L		9/10/2020	11:33
Methyl acetate	<2.00	ug/L		9/10/2020	11:33
Methyl tert-butyl Ether	<2.00	ug/L		9/10/2020	11:33
Methylcyclohexane	<2.00	ug/L		9/10/2020	11:33
Methylene chloride	<5.00	ug/L		9/10/2020	11:33
o-Xylene	<2.00	ug/L		9/10/2020	11:33
Styrene	<5.00	ug/L		9/10/2020	11:33
Tetrachloroethene	<2.00	ug/L		9/10/2020	11:33
Toluene	<2.00	ug/L		9/10/2020	11:33
trans-1,2-Dichloroethene	<2.00	ug/L		9/10/2020	11:33
trans-1,3-Dichloropropene	<2.00	ug/L		9/10/2020	11:33
Trichloroethene	<2.00	ug/L		9/10/2020	11:33
Trichlorofluoromethane	<2.00	ug/L		9/10/2020	11:33
Vinyl chloride	<2.00	ug/L		9/10/2020	11:33

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	106	70.9 - 139		9/10/2020	11:33
4-Bromofluorobenzene	76.0	59.5 - 129		9/10/2020	11:33
Pentafluorobenzene	103	89.3 - 117		9/10/2020	11:33
Toluene-D8	88.2	82.9 - 115		9/10/2020	11:33

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x73186.D
QC Batch ID: QC200910voaw
QC Number: Blk 1

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE(BFB)

Lab Name: Paradigm Environmental Services Sample ID: BFB
 Lab Project #: 204166 Lab File ID: x73108.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/8/2020
 Client Project #: N/A Time Analyzed: 10:36
 SDG No.: 4166-01

Instrument ID: Instrument1
 GC Column 1: DB-624 ID (mm): 0.20 Detector: MSD

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0-40.0% of mass 95	16.7
75	30.0-60.0% of mass 95	44.6
95	Base peak, 100%relative abundance	100.0
96	5.0-9.0% of mass 95	7.1
173	Less then 2.0% of mass 174	0.3 (0.4) *1
174	50.0-100.0% of mass 95	89.5
175	5.0-9.0% of mass 174	6.4 (7.2) *1
176	95.0-101.0% of mass 174	85.2 (95.2) *1
177	5.0-9.0% of mass176	6.0 (6.7) *2

1: Value is % mass 174, 2: Value is % mass 176

This check applies to the following Samples, MS, MSD, Blanks & Standards

LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	1 ppb iCal	N/A	x73109.D 9/8/2020 10:59
2	5 ppb iCal	N/A	x78110.D 9/8/2020 11:21
3	20 ppb iCal	N/A	x78111.D 9/8/2020 11:44
4	50 ppb iCal	N/A	x78112.D 9/8/2020 12:06
5	100 ppb iCal	N/A	x78113.D 9/8/2020 12:29
6	150 ppb iCal	N/A	x78114.D 9/8/2020 12:51
7	200 ppb iCal	N/A	x78115.D 9/8/2020 13:14
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE(BFB)

Lab Name:	<u>Paradigm Environmental Services</u>	Sample ID:	<u>BFB</u>
Lab Project #:	<u>204166</u>	Lab File ID:	<u>x73108.D</u>
Client Name:	<u>City of Rochester</u>	Date Analyzed:	<u>9/8/2020</u>
Client Project Name:	<u>1200 East Main Street</u>	Time Analyzed:	<u>10:36</u>
Client Project #:	<u>N/A</u>	QC Batch:	<u>QC200908voaw</u>
SDG No.:	<u>4166-01</u>		
Instrument ID:	<u>Instrument1</u>		
GC Column 1:	<u>DB-624</u>	ID (mm):	<u>0.20</u>
		Detector:	<u>MSD</u>

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0-40.0% of mass 95	16.7
75	30.0-60.0% of mass 95	44.6
95	Base peak, 100%relative abundance	100.0
96	5.0-9.0% of mass 95	7.1
173	Less then 2.0% of mass 174	0.3 (0.4) *1
174	50.0-100.0% of mass 95	89.5
175	5.0-9.0% of mass 174	6.4 (7.2) *1
176	95.0-101.0% of mass 174	85.2 (95.2) *1
177	5.0-9.0% of mass176	6.0 (6.7) *2

1: Value is % mass 174, 2: Value is % mass 176

This check applies to the following Samples, MS, MSD, Blanks & Standards

LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	CCV	N/A	x73112.D 9/8/2020 12:06
2	Bik 1	N/A	x73120.D 9/8/2020 15:07
3	LCS 1	N/A	x73119.D 9/8/2020 14:44
4	204166-01	MW-1	x73129.D 9/8/2020 18:28
5	204166-03	MW-8	x73133.D 9/8/2020 19:58
6	204166-06	Blind Duplicate	x73136.D 9/8/2020 21:07
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE(BFB)

Lab Name: Paradigm Environmental Services Sample ID: BFB
 Lab Project #: 204166 Lab File ID: x73150.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/9/20/20
 Client Project #: N/A Time Analyzed: 14:02
 SDG No.: 4166-01

Instrument ID: Instrument1
 GC Column 1: DB-624 ID (mm): 0.20 Detector: MSD

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0-40.0% of mass 95	16.4
75	30.0-60.0% of mass 95	52.9
95	Base peak, 100%relative abundance	100.0
96	5.0-9.0% of mass 95	8.1
173	Less then 2.0% of mass 174	0.9 (1.1) *1
174	50.0-100.0% of mass 95	81.4
175	5.0-9.0% of mass 174	6.2 (7.6) *1
176	95.0-101.0% of mass 174	81.5 (100.1) *1
177	5.0-9.0% of mass176	6.8 (8.4) *2

1: Value is % mass 174, 2: Value is % mass 176

This check applies to the following Samples, MS, MSD, Blanks & Standards

LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	1 ppb iCal	N/A	x73152.D 9/9/2020 14:46
2	5 ppb iCal	N/A	x73153.D 9/9/2020 15:09
3	20 ppb iCal	N/A	x73154.D 9/9/2020 15:31
4	50 ppb iCal	N/A	x73155.D 9/9/2020 15:54
5	100 ppb iCal	N/A	x73156.D 9/9/2020 16:16
6	150 ppb iCal	N/A	x73157.D 9/9/2020 16:38
7	200 ppb iCal	N/A	x73158.D 9/9/2020 17:01
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE(BFB)

Lab Name:	<u>Paradigm Environmental Services</u>	Sample ID:	<u>BFB</u>
Lab Project #:	<u>204166</u>	Lab File ID:	<u>x73181.D</u>
Client Name:	<u>City of Rochester</u>	Date Analyzed:	<u>9/10/2020</u>
Client Project Name:	<u>1200 East Main Street</u>	Time Analyzed:	<u>09:41</u>
Client Project #:	<u>N/A</u>	QC Batch:	<u>QC200910voaw</u>
SDG No.:	<u>4166-01</u>		
Instrument ID:	<u>Instrument1</u>		
GC Column 1:	<u>DB-624</u>	ID (mm):	<u>0.20</u>
		Detector:	<u>MSD</u>

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0-40.0% of mass 95	20.0
75	30.0-60.0% of mass 95	42.4
95	Base peak, 100%relative abundance	100.0
96	5.0-9.0% of mass 95	7.1
173	Less then 2.0% of mass 174	1.2 (1.7) *1
174	50.0-100.0% of mass 95	80.4
175	5.0-9.0% of mass 174	6.5 (8.1) *1
176	95.0-101.0% of mass 174	76.5 (95.2) *1
177	5.0-9.0% of mass176	6.8 (8.5) *2

1: Value is % mass 174, 2: Value is % mass 176

This check applies to the following Samples, MS, MSD, Blanks & Standards

LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	CCV	N/A	x73184.D 9/10/2020 10:49
2	Bik 1	N/A	x73186.D 9/10/2020 11:33
3	LCS 1	N/A	x73185.D 9/10/2020 11:11
4	204166-02	MW-3	x73192.D 9/10/2020 13:49
5	204166-02MS	MW-3	x73193.D 9/10/2020 14:11
6	204166-02MSD	MW-3	x73194.D 9/10/2020 14:34
7	204166-04	MW-11	x73195.D 9/10/2020 14:56
8	204166-05	MW-7R	x73196.D 9/10/2020 15:18
9	204166-07	Trip Blank T1004	x73197.D 9/10/2020 15:41
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VOLATILE INTERNAL STANDARD AREA and RT SUMMARY

Lab Name: Paradigm Environmental Services Sample ID: CCV
 Lab Project #: 204166 Lab File ID: x73112.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/8/2020
 Client Project #: N/A Time Analyzed: 12:06
 SDG No.: 4166-01 QC Batch: QC200908voaw
 Instrument ID: Instrument1
 GC Column 1: DV-624 ID (mm): 0.20 Detector: MSD

CCV	IS1: FB		IS2: CBd5		IS3: 14DCBd4	
	Area	RT	Area	RT	AREA	RT
12 Hour Standard	195077	5.01	151210	7.95	89125	10.48
Upper Limit	390154	5.51	302420	8.45	178250	10.98
Lower Limit	97539	4.51	75605	7.45	44563	9.98

This CCV applies to the following Samples and QC

Lab Sample No.	Client Sample ID	IS1: FB		IS2: CBd5		IS3: 14DCBd4		
		Area	RT	Area	RT	AREA	RT	
1	Bik1	N/A	169883	5.01	130441	7.96	60498	10.49
2	LCS1	N/A	181656	5.01	143212	7.95	86533	10.49
3	204166-01	MW-1	171111	5.01	132540	7.95	64118	10.49
4	204166-03	MW-8	150977	5.01	117951	7.96	54834	10.49
5	204166-06	Blind Duplicate	159020	5.01	124780	7.95	59101	10.49
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IS1: FB = Fluorobenzene
 IS2: CBd5 = Chlorobenzene-d5
 IS3: 14DCBd4 = 1,4-Dichlorobenzene-d4

Notes: * Values outside of current required QC limits
 Area Limits = -50% to +100% of 12 Hour Standard area
 RT Limits = -0.50 to +0.50 minutes of 12 Hour Standard retention times

VOLATILE INTERNAL STANDARD AREA and RT SUMMARY

Lab Name: Paradigm Environmental Services Sample ID: CCV
 Lab Project #: 204166 Lab File ID: x73184.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/10/2020
 Client Project #: N/A Time Analyzed: 10:49
 SDG No.: 4166-01 QC Batch: QC200910voaw

Instrument ID: Instrument1
 GC Column 1: DV-624 ID (mm): 0.20 Detector: MSD

CCV	IS1: FB		IS2: CBd5		IS3: 14DCBd4	
	Area	RT	Area	RT	AREA	RT
12 Hour Standard	150328	5.01	117715	7.95	75683	10.49
Upper Limit	300656	5.51	235430	8.45	151366	10.99
Lower Limit	75164	4.51	58858	7.45	37842	9.99

This CCV applies to the following Samples and QC

Lab Sample No.	Client Sample ID	IS1: FB		IS2: CBd5		IS3: 14DCBd4		
		Area	RT	Area	RT	AREA	RT	
1	Bik1	N/A	132158	5.01	101237	7.95	43516	10.49
2	LCS1	N/A	178726	5.01	141466	7.95	87750	10.49
3	204166-02	MW-3	138492	5.01	122737	7.96	67566	10.49
4	204166-02MS	MW-3	157347	5.01	133886	7.95	76653	10.49
5	204166-02MSD	MW-3	152477	5.01	129906	7.95	74579	10.49
6	204166-04	MW-11	141933	5.01	114688	7.95	54995	10.49
7	204166-05	MW-7R	157286	5.01	122439	7.95	55168	10.49
8	204166-07	Trip Blank T1004	130647	5.01	102896	7.96	44840	10.49
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IS1: FB = Fluorobenzene
 IS2: CBd5 = Chlorobenzene-d5
 IS3: 14DCBd4 = 1,4-Dichlorobenzene-d4

Notes: * Values outside of current required QC limits
 Area Limits = -50% to +100% of 12 Hour Standard area
 RT Limits = -0.50 to +0.50 minutes of 12 Hour Standard retention times



Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Matrix: Groundwater

Date Sampled: 9/2/2020

Date Received: 9/2/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 05:27
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:27
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 05:27
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 05:27
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 05:27
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 05:27
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 05:27
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 05:27
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 05:27
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:27
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:27
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 05:27
2-Chlorophenol	< 10.0	ug/L		9/9/2020 05:27
2-Methylnaphthalene	< 10.0	ug/L		9/9/2020 05:27
2-Methylphenol	< 10.0	ug/L		9/9/2020 05:27
2-Nitroaniline	< 20.0	ug/L		9/9/2020 05:27
2-Nitrophenol	< 10.0	ug/L		9/9/2020 05:27
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 05:27
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 05:27

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street
Sample Identifier: MW-1
Lab Sample ID: 204166-01
Matrix: Groundwater

Date Sampled: 9/2/2020
Date Received: 9/2/2020

3-Nitroaniline	< 20.0	ug/L	9/9/2020 05:27
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020 05:27
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020 05:27
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020 05:27
4-Chloroaniline	< 10.0	ug/L	9/9/2020 05:27
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020 05:27
4-Nitroaniline	< 20.0	ug/L	9/9/2020 05:27
4-Nitrophenol	< 20.0	ug/L	9/9/2020 05:27
Acenaphthene	< 10.0	ug/L	9/9/2020 05:27
Acenaphthylene	< 10.0	ug/L	9/9/2020 05:27
Acetophenone	< 10.0	ug/L	9/9/2020 05:27
Anthracene	< 10.0	ug/L	9/9/2020 05:27
Atrazine	< 10.0	ug/L	9/9/2020 05:27
Benzaldehyde	< 10.0	ug/L	9/9/2020 05:27
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020 05:27
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020 05:27
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020 05:27
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020 05:27
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020 05:27
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020 05:27
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020 05:27
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020 05:27
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020 05:27
Caprolactam	< 10.0	ug/L	9/9/2020 05:27
Carbazole	< 10.0	ug/L	9/9/2020 05:27

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Chrysene	< 10.0	ug/L	9/9/2020 05:27
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 05:27
Dibenzofuran	< 10.0	ug/L	9/9/2020 05:27
Diethyl phthalate	< 10.0	ug/L	9/9/2020 05:27
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 05:27
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 05:27
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 05:27
Fluoranthene	< 10.0	ug/L	9/9/2020 05:27
Fluorene	< 10.0	ug/L	9/9/2020 05:27
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 05:27
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 05:27
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 05:27
Hexachloroethane	< 10.0	ug/L	9/9/2020 05:27
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 05:27
Isophorone	< 10.0	ug/L	9/9/2020 05:27
Naphthalene	< 10.0	ug/L	9/9/2020 05:27
Nitrobenzene	< 10.0	ug/L	9/9/2020 05:27
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 05:27
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 05:27
Pentachlorophenol	< 20.0	ug/L	9/9/2020 05:27
Phenanthrene	< 10.0	ug/L	9/9/2020 05:27
Phenol	< 10.0	ug/L	9/9/2020 05:27
Pyrene	< 10.0	ug/L	9/9/2020 05:27

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-1

Lab Sample ID: 204166-01

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>	
2,4,6-Tribromophenol	81.6	53.8 - 116		9/9/2020	05:27
2-Fluorobiphenyl	61.5	36.5 - 95.3		9/9/2020	05:27
2-Fluorophenol	36.2	11.1 - 99.3		9/9/2020	05:27
Nitrobenzene-d5	73.6	49.4 - 100		9/9/2020	05:27
Phenol-d5	27.0	10 - 103		9/9/2020	05:27
Terphenyl-d14	81.6	54.3 - 109		9/9/2020	05:27

Method Reference(s): EPA 8270D

EPA 3510C

Preparation Date: 9/3/2020

Data File: B49277.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 05:56
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 05:56
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 05:56
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 05:56
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 05:56
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 05:56
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 05:56
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 05:56
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 05:56
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:56
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 05:56
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 05:56
2-Chlorophenol	< 10.0	ug/L		9/9/2020 05:56
2-Methylnapthalene	< 10.0	ug/L		9/9/2020 05:56
2-Methylphenol	< 10.0	ug/L		9/9/2020 05:56
2-Nitroaniline	< 20.0	ug/L		9/9/2020 05:56
2-Nitrophenol	< 10.0	ug/L		9/9/2020 05:56
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 05:56
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 05:56

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

3-Nitroaniline	< 20.0	ug/L	9/9/2020 05:56
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020 05:56
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020 05:56
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020 05:56
4-Chloroaniline	< 10.0	ug/L	9/9/2020 05:56
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020 05:56
4-Nitroaniline	< 20.0	ug/L	9/9/2020 05:56
4-Nitrophenol	< 20.0	ug/L	9/9/2020 05:56
Acenaphthene	< 10.0	ug/L	9/9/2020 05:56
Acenaphthylene	< 10.0	ug/L	9/9/2020 05:56
Acetophenone	< 10.0	ug/L	9/9/2020 05:56
Anthracene	< 10.0	ug/L	9/9/2020 05:56
Atrazine	< 10.0	ug/L	9/9/2020 05:56
Benzaldehyde	< 10.0	ug/L	9/9/2020 05:56
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020 05:56
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020 05:56
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020 05:56
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020 05:56
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020 05:56
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020 05:56
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020 05:56
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020 05:56
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020 05:56
Caprolactam	< 10.0	ug/L	9/9/2020 05:56
Carbazole	< 10.0	ug/L	9/9/2020 05:56

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Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Chrysene	< 10.0	ug/L	9/9/2020 05:56
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 05:56
Dibenzofuran	< 10.0	ug/L	9/9/2020 05:56
Diethyl phthalate	< 10.0	ug/L	9/9/2020 05:56
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 05:56
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 05:56
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 05:56
Fluoranthene	< 10.0	ug/L	9/9/2020 05:56
Fluorene	< 10.0	ug/L	9/9/2020 05:56
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 05:56
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 05:56
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 05:56
Hexachloroethane	< 10.0	ug/L	9/9/2020 05:56
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 05:56
Isophorone	< 10.0	ug/L	9/9/2020 05:56
Naphthalene	< 10.0	ug/L	9/9/2020 05:56
Nitrobenzene	< 10.0	ug/L	9/9/2020 05:56
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 05:56
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 05:56
Pentachlorophenol	< 20.0	ug/L	9/9/2020 05:56
Phenanthrene	< 10.0	ug/L	9/9/2020 05:56
Phenol	< 10.0	ug/L	9/9/2020 05:56
Pyrene	< 10.0	ug/L	9/9/2020 05:56

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-3

Lab Sample ID: 204166-02

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	81.5	53.8 - 116		9/9/2020	05:56
2-Fluorobiphenyl	58.5	36.5 - 95.3		9/9/2020	05:56
2-Fluorophenol	33.6	11.1 - 99.3		9/9/2020	05:56
Nitrobenzene-d5	69.6	49.4 - 100		9/9/2020	05:56
Phenol-d5	24.8	10 - 103		9/9/2020	05:56
Terphenyl-d14	79.3	54.3 - 109		9/9/2020	05:56

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49278.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Matrix: Groundwater

Date Sampled: 9/2/2020

Date Received: 9/2/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 07:25
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:25
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 07:25
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 07:25
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 07:25
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 07:25
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 07:25
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 07:25
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 07:25
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:25
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:25
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 07:25
2-Chlorophenol	< 10.0	ug/L		9/9/2020 07:25
2-Methylnaphthalene	< 10.0	ug/L		9/9/2020 07:25
2-Methylphenol	< 10.0	ug/L		9/9/2020 07:25
2-Nitroaniline	< 20.0	ug/L		9/9/2020 07:25
2-Nitrophenol	< 10.0	ug/L		9/9/2020 07:25
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 07:25
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 07:25

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

3-Nitroaniline	< 20.0	ug/L	9/9/2020 07:25
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020 07:25
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:25
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020 07:25
4-Chloroaniline	< 10.0	ug/L	9/9/2020 07:25
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:25
4-Nitroaniline	< 20.0	ug/L	9/9/2020 07:25
4-Nitrophenol	< 20.0	ug/L	9/9/2020 07:25
Acenaphthene	< 10.0	ug/L	9/9/2020 07:25
Acenaphthylene	< 10.0	ug/L	9/9/2020 07:25
Acetophenone	< 10.0	ug/L	9/9/2020 07:25
Anthracene	< 10.0	ug/L	9/9/2020 07:25
Atrazine	< 10.0	ug/L	9/9/2020 07:25
Benzaldehyde	< 10.0	ug/L	9/9/2020 07:25
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020 07:25
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020 07:25
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020 07:25
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020 07:25
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020 07:25
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020 07:25
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020 07:25
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020 07:25
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020 07:25
Caprolactam	< 10.0	ug/L	9/9/2020 07:25
Carbazole	< 10.0	ug/L	9/9/2020 07:25

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Chrysene	< 10.0	ug/L	9/9/2020 07:25
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 07:25
Dibenzofuran	< 10.0	ug/L	9/9/2020 07:25
Diethyl phthalate	< 10.0	ug/L	9/9/2020 07:25
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 07:25
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 07:25
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 07:25
Fluoranthene	< 10.0	ug/L	9/9/2020 07:25
Fluorene	< 10.0	ug/L	9/9/2020 07:25
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 07:25
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 07:25
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 07:25
Hexachloroethane	< 10.0	ug/L	9/9/2020 07:25
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 07:25
Isophorone	< 10.0	ug/L	9/9/2020 07:25
Naphthalene	< 10.0	ug/L	9/9/2020 07:25
Nitrobenzene	< 10.0	ug/L	9/9/2020 07:25
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 07:25
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 07:25
Pentachlorophenol	< 20.0	ug/L	9/9/2020 07:25
Phenanthrene	< 10.0	ug/L	9/9/2020 07:25
Phenol	< 10.0	ug/L	9/9/2020 07:25
Pyrene	< 10.0	ug/L	9/9/2020 07:25

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: MW-11

Lab Sample ID: 204166-04

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>	
2,4,6-Tribromophenol	88.5	53.8 - 116		9/9/2020	07:25
2-Fluorobiphenyl	57.8	36.5 - 95.3		9/9/2020	07:25
2-Fluorophenol	35.9	11.1 - 99.3		9/9/2020	07:25
Nitrobenzene-d5	74.7	49.4 - 100		9/9/2020	07:25
Phenol-d5	26.5	10 - 103		9/9/2020	07:25
Terphenyl-d14	80.9	54.3 - 109		9/9/2020	07:25

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49281.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/9/2020 07:54
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,2-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,3-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
1,4-Dichlorobenzene	< 10.0	ug/L		9/9/2020 07:54
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/9/2020 07:54
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/9/2020 07:54
2,4,5-Trichlorophenol	< 20.0	ug/L		9/9/2020 07:54
2,4,6-Trichlorophenol	< 10.0	ug/L		9/9/2020 07:54
2,4-Dichlorophenol	< 10.0	ug/L		9/9/2020 07:54
2,4-Dimethylphenol	< 20.0	ug/L		9/9/2020 07:54
2,4-Dinitrophenol	< 20.0	ug/L		9/9/2020 07:54
2,4-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:54
2,6-Dinitrotoluene	< 10.0	ug/L		9/9/2020 07:54
2-Chloronaphthalene	< 10.0	ug/L		9/9/2020 07:54
2-Chlorophenol	< 10.0	ug/L		9/9/2020 07:54
2-Methylnapthalene	< 10.0	ug/L		9/9/2020 07:54
2-Methylphenol	< 10.0	ug/L		9/9/2020 07:54
2-Nitroaniline	< 20.0	ug/L		9/9/2020 07:54
2-Nitrophenol	< 10.0	ug/L		9/9/2020 07:54
3&4-Methylphenol	< 10.0	ug/L		9/9/2020 07:54
3,3'-Dichlorobenzidine	< 10.0	ug/L		9/9/2020 07:54

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PARADIGM

ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

3-Nitroaniline	< 20.0	ug/L	9/9/2020 07:54
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/9/2020 07:54
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:54
4-Chloro-3-methylphenol	< 10.0	ug/L	9/9/2020 07:54
4-Chloroaniline	< 10.0	ug/L	9/9/2020 07:54
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/9/2020 07:54
4-Nitroaniline	< 20.0	ug/L	9/9/2020 07:54
4-Nitrophenol	< 20.0	ug/L	9/9/2020 07:54
Acenaphthene	< 10.0	ug/L	9/9/2020 07:54
Acenaphthylene	< 10.0	ug/L	9/9/2020 07:54
Acetophenone	< 10.0	ug/L	9/9/2020 07:54
Anthracene	< 10.0	ug/L	9/9/2020 07:54
Atrazine	< 10.0	ug/L	9/9/2020 07:54
Benzaldehyde	< 10.0	ug/L	9/9/2020 07:54
Benzo (a) anthracene	< 10.0	ug/L	9/9/2020 07:54
Benzo (a) pyrene	< 10.0	ug/L	9/9/2020 07:54
Benzo (b) fluoranthene	< 10.0	ug/L	9/9/2020 07:54
Benzo (g,h,i) perylene	< 10.0	ug/L	9/9/2020 07:54
Benzo (k) fluoranthene	< 10.0	ug/L	9/9/2020 07:54
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/9/2020 07:54
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/9/2020 07:54
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/9/2020 07:54
Butylbenzylphthalate	< 10.0	ug/L	9/9/2020 07:54
Caprolactam	< 10.0	ug/L	9/9/2020 07:54
Carbazole	< 10.0	ug/L	9/9/2020 07:54

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Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

Chrysene	< 10.0	ug/L	9/9/2020 07:54
Dibenz (a,h) anthracene	< 10.0	ug/L	9/9/2020 07:54
Dibenzofuran	< 10.0	ug/L	9/9/2020 07:54
Diethyl phthalate	< 10.0	ug/L	9/9/2020 07:54
Dimethyl phthalate	< 20.0	ug/L	9/9/2020 07:54
Di-n-butyl phthalate	< 10.0	ug/L	9/9/2020 07:54
Di-n-octylphthalate	< 10.0	ug/L	9/9/2020 07:54
Fluoranthene	< 10.0	ug/L	9/9/2020 07:54
Fluorene	< 10.0	ug/L	9/9/2020 07:54
Hexachlorobenzene	< 10.0	ug/L	9/9/2020 07:54
Hexachlorobutadiene	< 10.0	ug/L	9/9/2020 07:54
Hexachlorocyclopentadiene	< 10.0	ug/L	9/9/2020 07:54
Hexachloroethane	< 10.0	ug/L	9/9/2020 07:54
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/9/2020 07:54
Isophorone	< 10.0	ug/L	9/9/2020 07:54
Naphthalene	< 10.0	ug/L	9/9/2020 07:54
Nitrobenzene	< 10.0	ug/L	9/9/2020 07:54
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/9/2020 07:54
N-Nitrosodiphenylamine	< 10.0	ug/L	9/9/2020 07:54
Pentachlorophenol	< 20.0	ug/L	9/9/2020 07:54
Phenanthrene	< 10.0	ug/L	9/9/2020 07:54
Phenol	< 10.0	ug/L	9/9/2020 07:54
Pyrene	< 10.0	ug/L	9/9/2020 07:54

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PARADIGM

ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 204166

Client: City of Rochester

Project Reference: 1200 East Main Street

Sample Identifier: Blind Duplicate

Lab Sample ID: 204166-06

Date Sampled: 9/2/2020

Matrix: Groundwater

Date Received: 9/2/2020

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>	
2,4,6-Tribromophenol	85.6	53.8 - 116		9/9/2020	07:54
2-Fluorobiphenyl	60.4	36.5 - 95.3		9/9/2020	07:54
2-Fluorophenol	35.1	11.1 - 99.3		9/9/2020	07:54
Nitrobenzene-d5	75.0	49.4 - 100		9/9/2020	07:54
Phenol-d5	26.3	10 - 103		9/9/2020	07:54
Terphenyl-d14	80.0	54.3 - 109		9/9/2020	07:54

Method Reference(s): EPA 8270D

EPA 3510C

Preparation Date: 9/3/2020

Data File: B49282.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services
 Lab Project #: 204166
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street
 Client Project #: N/A
 SDG No.: 4166-01 Matrix: Groundwater
 QC Batch: QC200903ABNW
 Instrument ID: Instrument1
 GC Column: DB-5 ID (mm): 0.25 Detector: MSD

LAB SAMPLE NO.	CLIENT SAMPLE ID	2FP (%Recovery)	Pd5 (%Recovery)	NBd5 (%Recovery)	Total Out	
1	Blk 1	N/A	48.0	33.6	79.7	0
2	LCS 1	N/A	43.1	32.2	78.8	0
3	204166-01	MW-1	36.2	27.0	73.6	0
4	204166-02	MW-3	33.6	24.8	69.6	0
5	204166-02MS	MW-3	34.5	24.5	77.7	0
6	204166-02MSD	MW-3	32.9	24.1	75.2	0
7	204166-04	MW-11	35.9	26.5	74.7	0
8	204166-06	Blind Duplicate	35.1	26.3	75.0	0
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

QC LIMITS %
 2FP = 2-Fluorophenol (11.1 - 99.3)
 Pd5 = Phenol-d5 (10 - 103)
 NBd5 = Nitrobenzene-d5 (49.4 - 100)

* Values outside of current required QC limits
 D Surrogate diluted out

SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services
 Lab Project #: 204166
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street
 Client Project #: N/A
 SDG No.: 4166-01 Matrix: Groundwater
 QC Batch: QC200903ABNW
 Instrument ID: Instrument1
 GC Column: DB-5 ID (mm): 0.25 Detector: MSD

LAB SAMPLE NO.	CLIENT SAMPLE ID	2FBP (%Recovery)	246TBP (%Recovery)	TPd14 (%Recovery)	Total Out	
1	Blk 1	N/A	66.9	89.0	93.7	0
2	LCS 1	N/A	62.6	89.6	82.6	0
3	204166-01	MW-1	61.5	81.6	81.6	0
4	204166-02	MW-3	58.5	81.5	79.3	0
5	204166-02MS	MW-3	61.3	83.4	76.0	0
6	204166-02MSD	MW-3	60.2	83.5	78.6	0
7	204166-04	MW-11	57.8	88.5	80.9	0
8	204166-06	Blind Duplicate	60.4	85.6	80.0	0
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

2FBP = 2-Fluorobiphenyl (36.5 - 95.3)
 246TBP = 2,4,6-Tribromophenol (53.8 - 116)
 TPd14 = Terphenyl-d14 (54.3 - 109)

* Values outside of current required QC limits
 D Surrogate diluted out



QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike		LCS	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
	Added	Units					
1,2,4-Trichlorobenzene	50.0	ug/L	27.5	54.9	32.2 - 92.6		9/9/2020
1,4-Dichlorobenzene	50.0	ug/L	24.2	48.4	22.8 - 90.1		9/9/2020
2,3,4,6-Tetrachlorophenol	75.0	ug/L	71.7	95.7	61.8 - 102		9/9/2020
2,4,6-Trichlorophenol	75.0	ug/L	72.6	96.8	66.2 - 109		9/9/2020
2,4-Dichlorophenol	75.0	ug/L	61.5	82.0	62 - 101		9/9/2020
2,4-Dimethylphenol	75.0	ug/L	59.0	78.7	45.9 - 125		9/9/2020
2,4-Dinitrophenol	75.0	ug/L	53.1	70.8	12.9 - 118		9/9/2020
2,4-Dinitrotoluene	50.0	ug/L	44.9	89.9	58.7 - 105		9/9/2020
2-Chlorophenol	75.0	ug/L	55.5	74.0	50.6 - 98.5		9/9/2020
2-Nitrophenol	75.0	ug/L	63.7	85.0	60.3 - 101		9/9/2020
4,6-Dinitro-2-methylphenol	75.0	ug/L	53.8	71.7	18.9 - 136		9/9/2020
4-Chloro-3-methylphenol	75.0	ug/L	63.0	84.0	59.6 - 107		9/9/2020
4-Nitrophenol	75.0	ug/L	26.1	34.8	10 - 116		9/9/2020
Acenaphthene	50.0	ug/L	40.0	79.9	56.2 - 97.4		9/9/2020
N-Nitroso-di-n-propylamine	50.0	ug/L	44.6	89.2	58.1 - 102		9/9/2020
Pentachlorophenol	75.0	ug/L	69.5	92.7	35.8 - 159		9/9/2020

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PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike		Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
	Added	Units						
Phenol	75.0	ug/L	25.7	34.3	10 - 105		9/9/2020	
Pyrene	50.0	ug/L	46.4	92.7	61 - 104		9/9/2020	

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49266.D
QC Number: LCS 1
QC Batch ID: QC200903ABNW

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QC Report for Matrix Spike and Matrix Spike Duplicate

SDG #: 4166-01
Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Lab Sample ID: 204166-02
Sample Identifier: MW-3
Matrix: Groundwater
Date Sampled: 9/2/2020
Date Received: 9/2/2020
Date Analyzed: 9/9/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Sample Result	MS Added	MS Result	MS % Recovery	MSD Added	MSD Result	MSD % Recovery	% Rec. Limits	MS Outlier	MSD Outlier	Relative % Diff.	RPD Limit	RPD Outlier
1,2,4-Trichlorobenzene	< 10.0	50.7	34.2	67.4	50.5	32.2	63.8	32.2 - 92.6			5.42	62.9	
1,4-Dichlorobenzene	< 10.0	50.7	30.8	60.7	50.5	29.0	57.4	22.8 - 90.1			5.62	74.7	
2,3,4,6-Tetrachlorophenol	< 10.0	76.1	68.1	89.5	75.8	67.4	88.9	61.8 - 102			0.630	28.8	
2,4,6-Trichlorophenol	< 10.0	76.1	67.4	88.6	75.8	65.6	86.6	66.2 - 109			2.19	26.8	
2,4-Dichlorophenol	< 10.0	76.1	58.6	77.0	75.8	54.2	71.5	62 - 101			7.43	30.9	
2,4-Dimethylphenol	< 20.0	76.1	46.6	61.3	75.8	42.6	56.3	45.9 - 125			8.50	50.2	
2,4-Dinitrophenol	< 20.0	76.1	54.3	71.4	75.8	51.7	68.3	12.9 - 118			4.53	101	
2,4-Dinitrotoluene	< 10.0	50.7	42.4	83.6	50.5	42.5	84.2	58.7 - 105			0.710	34.5	
2-Chlorophenol	< 10.0	76.1	51.1	67.1	75.8	44.9	59.3	50.6 - 98.5			12.5	42	
2-Nitrophenol	< 10.0	76.1	64.9	85.4	75.8	59.9	79.1	60.3 - 101			7.61	28.6	
4,6-Dinitro-2-methylphenol	< 20.0	76.1	55.4	72.9	75.8	51.8	68.4	18.9 - 136			6.27	104	
4-Chloro-3-methylphenol	< 10.0	76.1	57.4	75.5	75.8	51.3	67.7	59.6 - 107			10.9	35.4	
4-Nitrophenol	< 20.0	76.1	20.5	26.9	75.8	21.3	28.2	10 - 116			4.54	152	
Acenaphthene	< 10.0	50.7	39.0	76.9	50.5	38.9	77.1	56.2 - 97.4			0.249	33	

Any estimated values are displayed, and derived values calculated, based on numeric result only. See primary analytical report for data flags.

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QC Report for Matrix Spike and Matrix Spike Duplicate

SDG #: 4166-01
Lab Project ID: 204166

Client: City of Rochester
Project Reference: 1200 East Main Street

Lab Sample ID: 204166-02
Sample Identifier: MW-3
Matrix: Groundwater
Date Sampled: 9/2/2020
Date Received: 9/2/2020
Date Analyzed: 9/9/2020

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Sample Result	MS Result	MS Added	MS Result	MS% Recovery	MSD Added	MSD Result	MSD % Recovery	MSD %	% Rec. Limits	MS	MSD	Relative	RPD	RPD	Outlier
											Outlier	Outlier	% Diff.	Limit	Outlier	
N-Nitroso-di-n-propylamine	< 10.0	ug/L	50.7	42.2	83.2	50.5	42.3	83.8	58.1 - 102	58.1 - 102	0.733	25.5	0.733	25.5		
Pentachlorophenol	< 20.0	ug/L	76.1	71.5	94.0	75.8	69.6	91.8	35.8 - 159	35.8 - 159	2.37	61	2.37	61		
Phenol	< 10.0	ug/L	76.1	19.7	25.9	75.8	19.3	25.4	10 - 105	10 - 105	1.91	148	1.91	148		
Pyrene	< 10.0	ug/L	50.7	43.7	86.3	50.5	45.5	90.0	61 - 104	61 - 104	4.24	29.7	4.24	29.7		

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File(s): B49279.D
B49280.D
B49278.D
QC Batch ID: QC200903ABNW

Any estimated values are displayed, and derived values calculated, based on numeric result only. See primary analytical report for data flags. This report is part of a multiple document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	<10.0	ug/L		9/8/2020 23:33
1,2,4,5-Tetrachlorobenzene	<10.0	ug/L		9/8/2020 23:33
1,2,4-Trichlorobenzene	<10.0	ug/L		9/8/2020 23:33
1,2-Dichlorobenzene	<10.0	ug/L		9/8/2020 23:33
1,3-Dichlorobenzene	<10.0	ug/L		9/8/2020 23:33
1,4-Dichlorobenzene	<10.0	ug/L		9/8/2020 23:33
2,2-Oxybis (1-chloropropane)	<10.0	ug/L		9/8/2020 23:33
2,3,4,6-Tetrachlorophenol	<10.0	ug/L		9/8/2020 23:33
2,4,5-Trichlorophenol	<20.0	ug/L		9/8/2020 23:33
2,4,6-Trichlorophenol	<10.0	ug/L		9/8/2020 23:33
2,4-Dichlorophenol	<10.0	ug/L		9/8/2020 23:33
2,4-Dimethylphenol	<20.0	ug/L		9/8/2020 23:33
2,4-Dinitrophenol	<20.0	ug/L		9/8/2020 23:33
2,4-Dinitrotoluene	<10.0	ug/L		9/8/2020 23:33
2,6-Dinitrotoluene	<10.0	ug/L		9/8/2020 23:33
2-Chloronaphthalene	<10.0	ug/L		9/8/2020 23:33
2-Chlorophenol	<10.0	ug/L		9/8/2020 23:33
2-Methylnapthalene	<10.0	ug/L		9/8/2020 23:33
2-Methylphenol	<10.0	ug/L		9/8/2020 23:33
2-Nitroaniline	<20.0	ug/L		9/8/2020 23:33
2-Nitrophenol	<10.0	ug/L		9/8/2020 23:33
3&4-Methylphenol	<10.0	ug/L		9/8/2020 23:33
3,3'-Dichlorobenzidine	<10.0	ug/L		9/8/2020 23:33
3-Nitroaniline	<20.0	ug/L		9/8/2020 23:33
4,6-Dinitro-2-methylphenol	<20.0	ug/L		9/8/2020 23:33
4-Bromophenyl phenyl ether	<10.0	ug/L		9/8/2020 23:33
4-Chloro-3-methylphenol	<10.0	ug/L		9/8/2020 23:33

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Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
4-Chloroaniline	<10.0	ug/L		9/8/2020 23:33
4-Chlorophenyl phenyl ether	<10.0	ug/L		9/8/2020 23:33
4-Nitroaniline	<20.0	ug/L		9/8/2020 23:33
4-Nitrophenol	<20.0	ug/L		9/8/2020 23:33
Acenaphthene	<10.0	ug/L		9/8/2020 23:33
Acenaphthylene	<10.0	ug/L		9/8/2020 23:33
Acetophenone	<10.0	ug/L		9/8/2020 23:33
Anthracene	<10.0	ug/L		9/8/2020 23:33
Atrazine	<10.0	ug/L		9/8/2020 23:33
Benzaldehyde	<10.0	ug/L		9/8/2020 23:33
Benzo (a) anthracene	<10.0	ug/L		9/8/2020 23:33
Benzo (a) pyrene	<10.0	ug/L		9/8/2020 23:33
Benzo (b) fluoranthene	<10.0	ug/L		9/8/2020 23:33
Benzo (g,h,i) perylene	<10.0	ug/L		9/8/2020 23:33
Benzo (k) fluoranthene	<10.0	ug/L		9/8/2020 23:33
Bis (2-chloroethoxy) methane	<10.0	ug/L		9/8/2020 23:33
Bis (2-chloroethyl) ether	<10.0	ug/L		9/8/2020 23:33
Bis (2-ethylhexyl) phthalate	<10.0	ug/L		9/8/2020 23:33
Butylbenzylphthalate	<10.0	ug/L		9/8/2020 23:33
Caprolactam	<10.0	ug/L		9/8/2020 23:33
Carbazole	<10.0	ug/L		9/8/2020 23:33
Chrysene	<10.0	ug/L		9/8/2020 23:33
Dibenz (a,h) anthracene	<10.0	ug/L		9/8/2020 23:33
Dibenzofuran	<10.0	ug/L		9/8/2020 23:33
Diethyl phthalate	<10.0	ug/L		9/8/2020 23:33
Dimethyl phthalate	<20.0	ug/L		9/8/2020 23:33
Di-n-butyl phthalate	<10.0	ug/L		9/8/2020 23:33
Di-n-octylphthalate	<10.0	ug/L		9/8/2020 23:33

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Method Blank Report

Client: City of Rochester
Project Reference: 1200 East Main Street
Lab Project ID: 204166
SDG #: 4166-01
Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
Fluoranthene	<10.0	ug/L		9/8/2020 23:33
Fluorene	<10.0	ug/L		9/8/2020 23:33
Hexachlorobenzene	<10.0	ug/L		9/8/2020 23:33
Hexachlorobutadiene	<10.0	ug/L		9/8/2020 23:33
Hexachlorocyclopentadiene	<10.0	ug/L		9/8/2020 23:33
Hexachloroethane	<10.0	ug/L		9/8/2020 23:33
Indeno (1,2,3-cd) pyrene	<10.0	ug/L		9/8/2020 23:33
Isophorone	<10.0	ug/L		9/8/2020 23:33
Naphthalene	<10.0	ug/L		9/8/2020 23:33
Nitrobenzene	<10.0	ug/L		9/8/2020 23:33
N-Nitroso-di-n-propylamine	<10.0	ug/L		9/8/2020 23:33
N-Nitrosodiphenylamine	<10.0	ug/L		9/8/2020 23:33
Pentachlorophenol	<20.0	ug/L		9/8/2020 23:33
Phenanthrene	<10.0	ug/L		9/8/2020 23:33
Phenol	<10.0	ug/L		9/8/2020 23:33
Pyrene	<10.0	ug/L		9/8/2020 23:33

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	89.0	53.8 - 116		9/8/2020 23:33
2-Fluorobiphenyl	66.9	36.5 - 95.3		9/8/2020 23:33
2-Fluorophenol	48.0	11.1 - 99.3		9/8/2020 23:33
Nitrobenzene-d5	79.7	49.4 - 100		9/8/2020 23:33
Phenol-d5	33.6	10 - 103		9/8/2020 23:33
Terphenyl-d14	93.7	54.3 - 109		9/8/2020 23:33

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/3/2020
Data File: B49265.D
QC Batch ID: QC200903ABNW
QC Number: Blk 1

This report is part of a multi-page document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE(DFTPP)

Lab Name: Paradigm Environmental Services Sample ID: DFTPP
 Lab Project #: 204166 Lab File ID: B49232.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/8/2020
 Client Project #: N/A Time Analyzed: 11:23
 SDG No.: 4166-01

Instrument ID: Instrument1
 GC Column 1: DB-5 ID (mm): 0.25 Detector: MSD

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0-60.0% of mass 198	41.3
68	Less than 2.0% of mass 69	0.0 (0.0) *1
69	Mass 69 relative % abundance of 198	47.6
70	Less than 2.0% of mass 69	0.0 (0.0) *1
127	40.0-60.0% of mass 198	53.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0-9.0% of mass 198	6.5
275	10.0-30.0% of mass 198	29.6
365	Greater than 1.0% of mass 198	3.4
441	Present, but less than mass 443	79.7
442	40.0-100.0% of mass 198	63.5
443	17.0-23.0% of mass 442	12.6 (19.8) *2

*1: Value is % mass 69, *2: Value is % mass 442

This check applies to the following Samples, MS, MSD, Blanks & Standards

LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	5 ppm iCal	N/A	9/8/2020 11:53
2	10 ppm iCal	N/A	9/8/2020 12:22
3	20 ppm iCal	N/A	9/8/2020 12:51
4	50 ppm iCal	N/A	9/8/2020 13:20
5	75 ppm iCal	N/A	9/8/2020 13:49
6	100 ppm iCal	N/A	9/8/2020 14:18
7	150 ppm iCal	N/A	9/8/2020 14:47
8	200 ppm iCal	N/A	9/8/2020 15:16
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SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE(DFTPP)

Lab Name: Paradigm Environmental Services Sample ID: DFTPP
 Lab Project #: 204166 Lab File ID: B49259.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/8/2020
 Client Project #: N/A Time Analyzed: 20:36
 SDG No.: 4166-01 QC Batch: QC200903ABNW
 Instrument ID: Instrument1
 GC Column 1: DB-5 ID (mm): 0.25 Detector: MSD

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0-60.0% of mass 198	49.6
68	Less than 2.0% of mass 69	0.0 (0.0) *1
69	Mass 69 relative % abundance of 198	53.8
70	Less than 2.0% of mass 69	0.0 (0.0) *1
127	40.0-60.0% of mass 198	57.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0-9.0% of mass 198	7.0
275	10.0-30.0% of mass 198	27.8
365	Greater than 1.0% of mass 198	3.3
441	Present, but less than mass 443	79.7
442	40.0-100.0% of mass 198	57.0
443	17.0-23.0% of mass 442	11.5 (20.1) *2

*1: Value is % mass 69, *2: Value is % mass 442

This check applies to the following Samples, MS, MSD, Blanks & Standards

LAB SAMPLE NO.	CLIENT SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	CCV	N/A	B49260.D 9/8/2020 21:09
2	Blk 1	N/A	B49265.D 9/8/2020 23:33
3	LCS 1	N/A	B49266.D 9/9/2020 00:02
4	204166-01	MW-1	B49277.D 9/9/2020 05:27
5	204166-02	MW-3	B49278.D 9/9/2020 05:56
6	204166-02MS	MW-3	B49279.D 9/9/2020 06:26
7	204166-02MSD	MW-3	B49280.D 9/9/2020 06:55
8	204166-04	MW-11	B49281.D 9/9/2020 07:25
9	204166-06	Blind Duplicate	B49282.D 9/9/2020 07:54
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SEMI-VOLATILE INTERNAL STANDARD AREA and RT SUMMARY

Lab Name: Paradigm Environmental Services Sample ID: CCV
 Lab Project #: 204166 Lab File ID: B49260.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/8/2020
 Client Project #: N/A Time Analyzed: 21:05
 SDG No.: 4166-01 QC Batch: QC200903ABNW
 Instrument ID: Instrument1
 GC Column: DB-5 ID (mm): 0.25 Detector: MSD

CCV	IS1: 14DCBd4		IS2: Nd8		IS3: ANd10	
	Area	RT	Area	RT	AREA	RT
12 Hour Standard	111576	7.38	453906	9.29	241756	11.93
Upper Limit	223152	7.88	907812	9.79	483512	12.43
Lower Limit	55788	6.88	226953	8.79	120878	11.43

This CCV applies to the following Samples and QC

LAB SAMPLE NO.	CLIENT SAMPLE ID	IS1: 14DCBd4		IS2: Nd8		IS3: ANd10	
		AREA	RT	AREA	RT	AREA	RT
1 Bik1	N/A	93751	7.38	383733	9.29	206703	11.96
2 LCS1	N/A	111466	7.38	460132	9.29	246797	11.96
3 204166-01	MW-1	122284	7.38	499832	9.28	276869	11.96
4 204166-02	MW-3	114457	7.38	467695	9.28	256300	11.96
5 204166-02MS	MW-3	123636	7.38	502922	9.29	275999	11.96
6 204166-02MSD	MW-3	110079	7.38	448309	9.29	240441	11.96
7 204166-04	MW-11	159983	7.38	652911	9.29	357255	11.96
8 204166-06	Blind Duplicate	162857	7.38	656065	9.28	362107	11.96
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IS1: 14DCBd4 = 1,4-Dichlorobenzene-d4

IS2: Nd8 = Napthalene-d8

IS3: ANd10 = Acenaphthene-d10

Notes: * Values outside of method specified limits
 Area Limits = -50% to +100% of 12 Hour Standard area
 RT Limits = -0.50 to +0.50 minutes of 12 Hour Standard retention times

SEMI-VOLATILE INTERNAL STANDARD AREA and RT SUMMARY

Lab Name: Paradigm Environmental Services Sample ID: CCV
 Lab Project #: 204166 Lab File ID: B49260.D
 Client Name: City of Rochester
 Client Project Name: 1200 East Main Street Date Analyzed: 9/8/2020
 Client Project #: N/A Time Analyzed: 21:05
 SDG No.: 4166-01 QC Batch: QC200903ABNW

Instrument ID: Instrument1
 GC Column: DB-5 ID (mm): 0.25 Detector: MSD

CCV	IS4: Pd10		IS5: Cd13		IS6: Pd12	
	Area	RT	Area	RT	AREA	RT
12 Hour Standard	415466	14.20	449194	18.40	419848	20.29
Upper Limit	830932	14.70	898388	18.90	839696	20.79
Lower Limit	207733	13.70	224597	17.90	209924	19.79

This CCV applies to the following Samples and QC

LAB SAMPLE NO.	CLIENT SAMPLE ID	IS4: Pd10		IS5: Cd13		IS6: Pd12	
		AREA	RT	Area	RT	AREA	RT
1 Blk1	N/A	370435	14.19	369242	18.40	357050	20.29
2 LCS1	N/A	439806	14.19	444677	18.40	438307	20.29
3 204166-01	MW-1	490954	14.19	496840	18.40	488205	20.29
4 204166-02	MW-3	446484	14.19	460579	18.40	462672	20.29
5 204166-02MS	MW-3	479364	14.19	500418	18.40	503973	20.29
6 204166-02MSD	MW-3	431253	14.19	438508	18.40	448384	20.29
7 204166-04	MW-11	628398	14.19	646813	18.40	660471	20.29
8 204166-06	Blind Duplicate	638972	14.19	659458	18.40	650816	20.29
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IS4: Pd10 = Phenanthrene-d10

IS5: Cd12 = Chrysene-d12

IS6: Pd12 = Perylene-d12

Notes: * Values outside of method specified limits
 Area Limits = -50% to +100% of 12 Hour Standard area
 RT Limits = -0.50 to +0.50 minutes of 12 Hour Standard retention times