

# Periodic Review Report

*1050-1088 NIAGARA STREET SITE  
BCP SITE NO. C915277  
BUFFALO, NEW YORK*

July 2019

0136-013-005

Prepared For: 9271 Group, LLC



Prepared By:



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# PERIODIC REVIEW REPORT

**1050-1088 NIAGARA STREET SITE  
SITE No. C915277**

**BUFFALO, NEW YORK**

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Prepared for:

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**PERIODIC REVIEW REPORT**  
**1050-1088 Niagara Street Site (C915277)**  
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**PERIODIC REVIEW REPORT**  
**1050-1088 Niagara Street Site (C915277)**

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Appendix C	SVE System Inspection Logs
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## 1.0 INTRODUCTION

Benchmark Environmental Engineering and Science, PLLC (Benchmark), in association with TurnKey Environmental Restoration, LLC (TurnKey) has prepared this Periodic Review Report (PRR), on behalf of 9271 Group, LLC to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C915277, located in the City of Buffalo, Erie County, New York (Site; see Figures 1 and 2).

This PRR has been prepared for the 1050-1088 Niagara Street Site in accordance with NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* (May 2010). The NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Form has been completed for the Site (see Appendix A).

This PRR and the associated inspection forms (have been completed for the December 29, 2017 to April 29, 2019 reporting period.

### 1.1 Site Background

The Site consists of three (3) adjoining parcels, identified as 1050, 1054, and 1088 Niagara Street, totaling 2.7 acres, located in the City of Buffalo, Erie County, New York. The Site is currently improved with an existing building located on the 1050-1054 Niagara Street parcels; a recently constructed building and parking lot on the 1088 Niagara Street parcel; and associated parking and landscaped areas (see Figures 1 and 2). The Site has a long history of being used for commercial and industrial operations since at least 1889. The International Brewing Company and American Gelatine Corp. operated on-Site in the early 1900s. The northern portion of the Site (1088 Niagara Street parcel) included a filling station from at least the 1920s through at least 1960. Gulf Oil Corporation and/or Hygrade Petroleum Co. were identified as on-Site operators from at least the 1920s through at least 1960. The Niagara Lithograph Company, a commercial printing company, was located on the 1050 Niagara Street parcel of the Site from at least 1930 through at least 1990; and Miken Companies, also a commercial printing company, was located on-Site until at least 2000.

## 1.2 Remedial History

After acceptance into the NYS BCP in October 2013, a Remedial Investigation/Interim Remedial Measures/Alternatives Analysis (IR/IRM/AA) Work Plan and supplemental work plans were prepared and submitted to the NYSDEC for review and approval. Interim Remedial Measures (IRM) activities were completed to address the removal of multiple abandoned USTs, appurtenant piping, and hydraulic lifts; excavation of petroleum, PCB, PAH, and metals impacted soils; groundwater management; and excavation backfilling. A Remedial Action Work Plan (RAWP) was prepared and approved by the NYSDEC detailing the soil vapor extraction (SVE) system, and site-wide cover system. The cleanup was successful in achieving the remedial objectives for the Site. The Site Management Plan (SMP) and Final Engineering Report (FER) were approved by the Department in December 2017. The NYSDEC issued a COC for the Site on December 29, 2017.

## 1.3 Modifications

9271 Group, LLC subdivided the three (3) individual parcels into two (2) tax parcels for redevelopment purposes. Copies of the municipal records and survey are provided in Appendix A.

### Original parcels

- 1050 Niagara Street; SBL 99.49-6-2;
- 1054 Niagara Street; SBL 99.49-6-10;
- 1088 Niagara Street, SBL 99.41-1-15;

### Subdivided parcels

- 1050 Niagara Street – SBL yet to be assigned by Erie Co.; 2.03 acres (Parcel “1” on survey)
- 1088 Niagara Street, SBL 99.41-1-15.1; 0.67 acres (Parcel “2” on survey)

## 1.4 Compliance

The Site is in general compliance with the SMP. Completed IC/EC form is included in Appendix A and a Site photo log is included in Appendix B.

## 1.5 Recommendations

Based on the performance of the SVE system, it is recommended to modify the SVE System operation from continuous to intermittent pulsed operation. Details provided below.

No other changes are recommended at this time.

## 2.0 SITE OVERVIEW

Previous investigations identified environmental contamination on-Site that required remediation. 9271 Group, LLC entered into a Brownfield Cleanup Agreement (BCA) with the NYSDEC to remediate the Site. BCP investigations and remediation were completed between 2014 and 2017.

The remedial activities included:

- Excavation, cleaning, and removal of four (4) underground storage tanks (USTs) and appurtenant piping;
- Excavation and off-site disposal of non-hazardous soil/fill exceeding the Part 375 Restricted Residential Use Soil Cleanup Objectives (SCOs);
- Delineation, excavation and off-site disposal of hazardous PCB impacted soil/fill;
- Installation of a Soil Vapor Extraction (SVE) system to mitigate nuisance petroleum VOCs within the subsurface soil/fill and petroleum related VOCs and SVOCs in groundwater;
- Construction and maintenance of a cover system consisting of the existing building, new building, asphalt and concrete pavement, sidewalks; and minimum 24-inches soil cover of approved clean material placed on top of demarcation layer, to prevent human exposure to remaining soil/fill exceeding RRSCOs.
- Placement of an environmental easement to (1) implement, maintain, and monitor Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and (3) limit the use and development of the Site to Restricted Residential, Commercial, or Industrial uses only.

Remedial activities were completed in September 2017. The FER and SMP for the Site were approved by the Department in December 2017. The Certificate of Completion (COC) was issued for the Site on December 29, 2017.



### 3.0 REMEDY PERFORMANCE

Post-remedial inspections, groundwater monitoring, and operation and maintenance of the SVE system have been completed at the Site.

Groundwater sample analytical results are summarized on Table 1. Groundwater contaminant concentrations including TICs show a decreasing trend after construction of the cover and SVE systems. Groundwater levels have decreased, particularly on the 1088 Niagara portion of the Site after completion of the cover system. The cover system is in place and effective in limiting exposure to underlying remaining contamination.

The completed IC/EC Certification form and site photographs are included in Appendix A and Appendix B, respectively. SVE Inspection logs are included in Appendix C; and, Long-term groundwater monitoring results are summarized on Table 1, included in Appendix D.

## 4.0 SITE MANAGEMENT PLAN

A SMP was prepared for the Site and approved by the Department in December 2017. The SMP includes an Institutional and Engineering Control (IC/EC) Plan, Operation, Monitoring and Maintenance (OM&M) Plan, an Excavation Work Plan (EWP), and a copy of the Environmental Easements. A brief description of the components of the SMP is presented below.

### 4.1 Operation, Monitoring and Maintenance Plan

The OM&M Plan consists of three major components, including the Soil Vapor Extraction (SVE) system; the Long-Term Groundwater Monitoring (LTGWM) Plan; and the Annual Inspection & Certification Program.

#### 4.1.1 SVE System

The SVE system is comprised of three (3) SVE wells, one (1) vacuum monitoring point (VMP), and SVE remedial system in an enclosed trailer. SVE system emissions are controlled using two (2) vapor-phase granulated active carbon (GAC) vessels.

Installation of the SVE system was completed between June and September 2017. System startup and optimization was completed between September and November 2017.

Routine SVE system monitoring was completed during the reporting period, including field measurements of system influent, system and effluent photoionization detector (PID), vacuum readings on the SVE wells and VMP, and routine system maintenance. Influent PID readings have decreased since start up to low-levels and effluent air PID readings have consistently been 0.0 ppm. No condensate has been detected in the knockout tank. System shutdown due to weather related issues (freezing) and electrical issues are noted on the system inspection log (see Appendix C).

#### SVE System Operation Modification

Based on the low-level steady state influent concentrations to the SVE system, it is recommended to modify the SVE System operation from continuous to an intermittent (pulsed) operation. Pulsed operation would include shutting off the SVE System for a 14-day period. After 14-days, the SVE would be restarted with vacuum being applied to one (1) well for approximately 2-4 weeks with the other two (2) wells closed. Vacuum application

would be rotated between the wells in an effort to enhance volatilization into the pore space during non-vacuum intervals and increase volatile removal rates. Field vacuum and PID measurements will be recorded and influent air sampling will be completed after the initial restart.

#### ***4.1.2 Long-Term Groundwater Monitoring Plan***

Long-term groundwater monitoring (LTGWM) has been conducted during the reporting period, with sampling completed on November 2017, May 2018 and April 2019; and one (1) sampling event during Fall 2018 was not completed in accordance with the SMP.

Groundwater analytical results are summarized on Table 1. Analytical results show a decreasing trend in constituent concentrations, including TICs, since completion of the IRMs and remedial actions.

It should be noted that MW-4 and MW-5R have been dry since completion of the cover system. Wells are checked during sampling events and will be sampled if recoverable volume is present during future sampling events.

The next sampling event is planned for the September-October 2019.

#### ***4.1.3 Annual Inspection and Certification Program***

The Annual Inspection and Certification Program outlines the requirements for the Site, to certify and attest that the institutional controls and/or engineering controls employed at the Site are unchanged from the previous certification. The Annual Certification will primarily consist of an annual Site Inspection to complete the NYSDEC's IC/EC Certification Form. The Site inspection will verify that the IC/ECs:

- Are in place and effective.
- Are performing as designed.
- That nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- That nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls.
- Access is available to the Site to evaluate continued maintenance of such controls.

Site inspections were completed throughout the reporting period during routine O&M of the SVE System. The property is being used in accordance with the Restricted Residential Use (mixed-use commercial and residential apartments), with surface parking, paved walkways and landscaped areas. No observable indication of intrusive activities was noted during the Site inspection. No observable use of groundwater was noted during the reporting period.

The completed Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form is included in Appendix A. A photolog of the Site inspection is included in Appendix B.

## 4.2 Excavation Work Plan

An Excavation Work Plan (EWP) was included in the approved-SMP for the Site. The EWP provides guidelines for the management of soil and fill material during any future intrusive activities.

No intrusive activities requiring management of on-Site soil or fill material; or the placement of backfill materials occurred during the monitoring period.

## 4.3 Engineering and Institutional Control Requirements and Compliance

As detailed in the Environmental Easements, several IC/ECs need to be maintained as a requirement of the BCAs for the Site.

### 4.3.1 Institutional Controls

- Groundwater-Use Restriction – the use of groundwater for potable and non-potable purposes is prohibited without water quality treatment as determined by the NYSDOH;
- Land-Use Restriction: The controlled property may be used for restricted residential, commercial and/or industrial use; and
- Implementation of the SMP.

#### ***4.3.2 Engineering Controls***

- All engineering controls must be operated, maintained, and inspected as specified in the SMP;
- Soil Vapor Extraction – SVE System has been operated maintained.
- Cover System – The cover system, including buildings, concrete sidewalks, asphalt, and landscaped vegetated areas are being maintained in compliance with the SMP.

At the time of the site inspection, the Site was compliant with the engineering and institutional control requirements.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### Conclusions:

The Site was in general compliance with the SMP.

### Recommendations:

- Modify operation of the SVE System from continuous to intermittent pulsed operation.
- No other changes are recommended at this time.

## 6.0 DECLARATION/LIMITATION

Benchmark-TurnKey personnel conducted the annual site inspections for the 1050-1088 Niagara Street BCP Site No. C915277, located in Buffalo, New York, according to generally accepted practices. This report complied with the scope of work provided to 9271 Group, LLC by Benchmark TurnKey.

This report has been prepared for the exclusive use of 9271 Group, LLC. The contents of this report are limited to information available at the time of the site inspection. The findings herein may be relied upon only at the discretion of 9271 Group, LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark-TurnKey.

# TABLE





**TABLE 1**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**1050-1088 NIAGARA STREET SITE**  
**BUFFALO, NEW YORK**

Parameters <sup>1</sup>	Class GA GWQS <sup>2</sup>	MW-4					MW-5R			MW-6			
		2/12/15	5/8/17	11/15/17	5/12/18	4/6/19	11/15/17	5/12/18	4/6/19	11/8/14	11/15/17	5/12/18	4/6/19
Volatile Organic Compounds (VOCs) - ug/L													
1,1 Dichloroethane	5	0.59 J	ND	---	---	---	---	---	---	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	12 D	ND	---	---	---	---	---	---	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	9.2 J, D	ND	---	---	---	---	---	---	ND	ND	ND	ND
2-Butanone (MEK)	50	6.5 J	ND	---	---	---	---	---	---	ND	ND	ND	ND
2-Hexanone	50	4.9 J	ND	---	---	---	---	---	---	ND	ND	ND	ND
4-Isopropyltoluene	5	2.4	ND	---	---	---	---	---	---	ND	ND	ND	ND
Acetone	50	17	5.4	---	---	---	---	---	---	ND	ND	ND	ND
Benzene	1	370 D	66	---	---	---	---	---	---	ND	ND	ND	ND
Carbon disulfide	60	1	ND	---	---	---	---	---	---	ND	ND	ND	ND
Cyclohexane	---	240 D	33	---	---	---	---	---	---	ND	ND	ND	ND
Ethylbenzene	5	6.2	0.75 J	---	---	---	---	---	---	ND	ND	ND	ND
Isopropylbenzene	5	120 D	9	---	---	---	---	---	---	ND	ND	ND	ND
Methylcyclohexane	---	240 D	14	---	---	---	---	---	---	ND	ND	ND	ND
Methylene Chloride	5	5	ND	---	---	---	---	---	---	ND	ND	ND	ND
n-Butylbenzene	5	23 D	ND	---	---	---	---	---	---	ND	ND	ND	ND
n-Propylbenzene	5	130 D	ND	---	---	---	---	---	---	ND	ND	ND	ND
sec-Butylbenzene	5	25 D	ND	---	---	---	---	---	---	ND	ND	ND	ND
tert-butylbenzene	5	3	ND	---	---	---	---	---	---	ND	ND	ND	ND
Toluene	5	12 D	1.2 J	---	---	---	---	---	---	ND	ND	ND	ND
Xylene, Total	5	19 J, D	1 J	---	---	---	---	---	---	ND	ND	ND	ND
Total VOCs	1000	1263.79	130.35	---	---	---	---	---	---	---	---	---	---
VOCs Tentatively Identified Compounds (TICs)- ug/L													
Butane, 2-Methyl-	---	ND	2.22 NJ	---	---	---	---	---	---	---	---	ND	ND
Benzene, cyclopropyl-	---	150 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Benzene, 1-methyl-2-(1-methylethyl)-	---	120 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Cyclohexane, 1,1,3-trimethyl-	---	ND	2.46 NJ	---	---	---	---	---	---	---	---	ND	ND
Cyclopentane	---	48 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Cyclopentane, methyl-	---	81 NJ	14.9 NJ	---	---	---	---	---	---	---	---	ND	ND
Cyclohexane, 4-methyl-	---	ND	4.35 NJ	---	---	---	---	---	---	---	---	ND	ND
Cyclohexane, ethyl-	---	56 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Cyclobutane, (1-methylethylidene)-	---	39 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Cyclohexene, 1-methyl-	---	ND	ND	---	---	---	---	---	---	---	---	ND	ND
Cyclohexene, 3-methyl-	---	66 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Cyclohexene, 4-methyl-	---	47 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Indan, 1-methyl-	---	194 NJ	ND	---	---	---	---	---	---	---	---	ND	ND
Indane	---	ND	26 NJ	---	---	---	---	---	---	---	---	ND	ND
Pentane	---	ND	1.79 NJ	---	---	---	---	---	---	---	---	ND	ND
Unknown Benzene	---	ND	11.92 J	---	---	---	---	---	---	---	---	ND	ND
Unknown Aromatic	---	ND	13.58 J	---	---	---	---	---	---	---	---	ND	ND
Unknown Cycloalkane	---	ND	4.06 J	---	---	---	---	---	---	---	---	ND	ND
Unknown	---	ND	17.01 J	---	---	---	---	---	---	---	---	1.41 J	ND
Total TICs	---	801	98.3 J	---	---	---	---	---	---	---	---	1.41	ND
Semi-volatile Organic Compounds (SVOCs) - ug/L													
2-Methylnaphthalene	---	0.94 J	---	---	---	---	---	---	---	ND	---	ND	ND
Acetophenone	---	6	---	---	---	---	---	---	---	---	---	ND	ND
Benzaldehyde	---	ND	---	---	---	---	---	---	---	0.54 J,B	---	ND	ND
Bis(2-ethylhexyl) phthalate	5	ND	---	---	---	---	---	---	---	4.5 J,B	---	6.4 B	ND
Chrysene	0.002	ND	---	---	---	---	---	---	---	ND	---	ND	0.02 J
Fluorene	50	0.7 J	---	---	---	---	---	---	---	ND	---	ND	0.03 J
Phenanthrene	50	0.63 J	---	---	---	---	---	---	---	ND	---	ND	0.07 J
Total SVOCs	---	8.27	---	---	---	---	---	---	---	5.04	---	6.4	0.12
SVOCs Tentatively Identified Compounds (TICs)- ug/L													
1h-Indene, 2,3-dihydro-5-methyl-	---	17 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Aldol Condensates	---	ND	---	---	---	---	---	---	---	---	---	31.7 J	226.5 J
Benzene, 1-ethyl-2,3-dimethyl-	---	52 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Benzene, (1-methylethyl)-	---	31 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Benzene, (1-methylpropyl)-	---	15 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Benzene, 1,2,4,5-tetramethyl-	---	38 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Benzene, 1,3-diethyl-	---	16 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Benzene, 1,4-diethyl-	---	23 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Benzene, propyl-	---	30 NJ	---	---	---	---	---	---	---	---	---	ND	ND
Erucylamide	---	19 NJB	---	---	---	---	---	---	---	---	---	ND	ND
Indane	---	80 NJ	---	---	---	---	---	---	---	---	---	ND	ND
n-Hexadecanoic acid	---	16 NJB	---	---	---	---	---	---	---	---	---	ND	ND
Unknown Organic Acid	---	ND	---	---	---	---	---	---	---	---	---	ND	1.93 J
Unknown	---	318 JB	---	---	---	---	---	---	---	---	---	ND	1.64 J
Total TICs	---	655	---	---	---	---	---	---	---	---	---	31.7	238

**Notes:**  
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detected.  
2. Values per NYSDEC TOGS 1.1.1 Class GA Groundwater Quality Standards.  
3. MW-5 was not sampled during May 2017 sampling due to damage to the well. MW-4 and MW-5R has have been routinely dry.

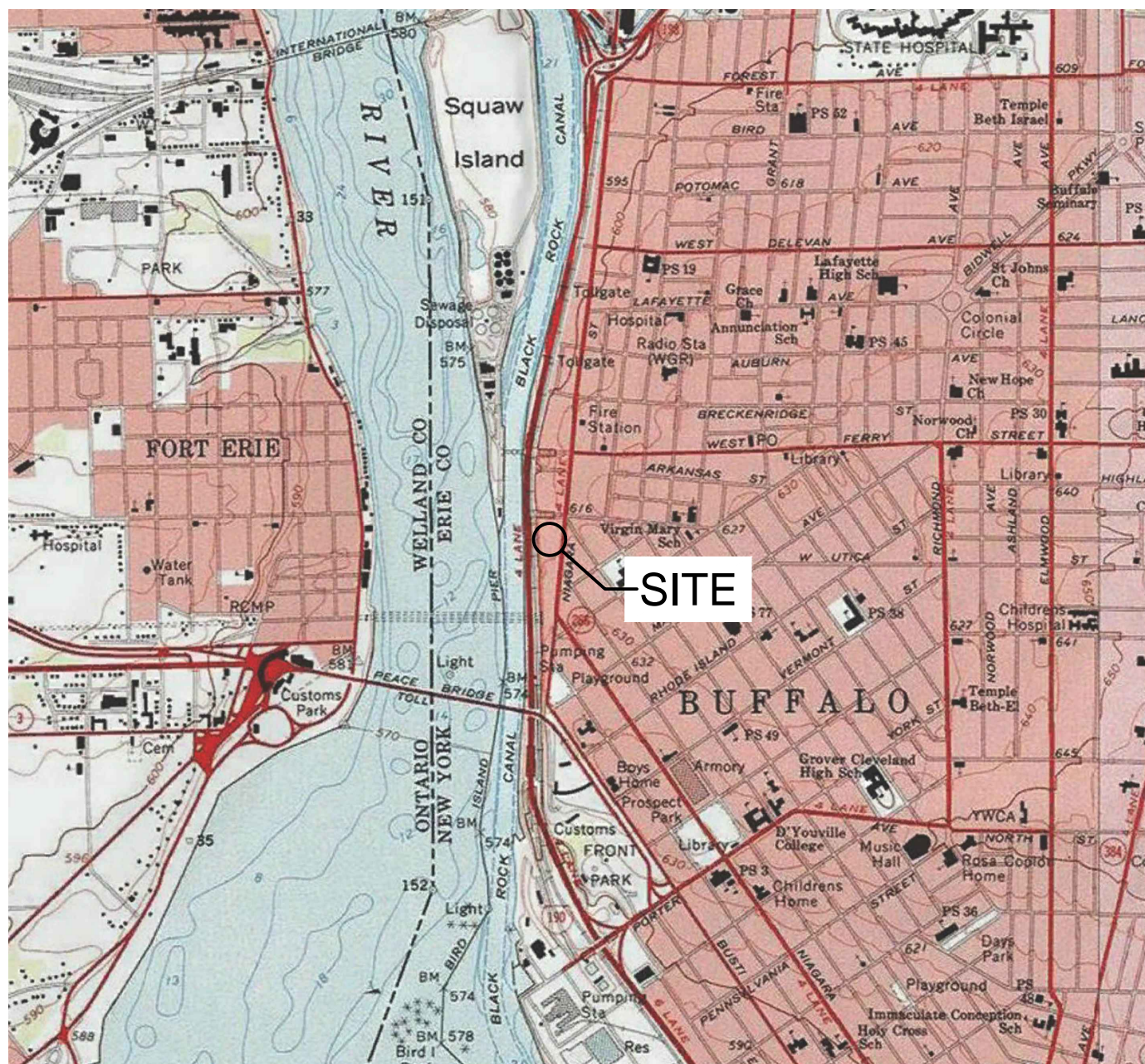
**Qualifiers:**  
D = Dilution required due to high concentration of target analyte above the laboratory reporting limit.  
ND = Parameter not detected above laboratory detection limit.  
"---" = Sample not analyzed for parameter or no GWQS available for the parameter.  
J = Estimated Value - Below calibration range  
NJ = Estimated concentration for Tentatively Identified Compounds (TICs),  
B = Compound was found in the blank and sample.

**BOLD** = Result exceeds GWQS.

## FIGURES



FIGURE 1



SCALE: 1 INCH = 2000 FEET  
SCALE IN FEET  
(approximate)



## SITE LOCATION AND VICINITY MAP

PERIODIC REVIEW REPORT

1050-1088 NIAGARA STREET SITE

BCP SITE NO. C915277

BUFFALO, NEW YORK

PREPARED FOR

9271 GROUP, LLC



IN ASSOCIATION WITH



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

PROJECT NO.: 0136-013-005

DATE: MAY 2019

DRAFTED BY: CMS

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PARCEL BOUNDARY

NOTE:

- PARCEL INFORMATION PER SURVEY BY KHEOPS ARCHITECTURE, ENGINEERING & SURVEY, DPC REVISED MAY 16, 2017.
- ERIE COUNTY REAL ESTATE ONLY REVISES TAX MAPS AND ISSUES S.B.L. NUMBERS BI-ANNUALLY, AND AT THE TIME OF THIS REPORT, THE NEWLY RECONFIGURED PARCELS HAVE NOT BEEN UPDATED BY ERIE COUNTY. WHEN ERIE COUNTY UPDATES THE DATABASE, A COPY OF THE PARCEL REPORTS WILL BE PROVIDED TO THE DEPARTMENT.
- AERIAL IMAGE PROVIDED BY GOOGLE EARTH DATED SEPTEMBER 2018.



SCALE: 1 INCH = 50 FEET  
SCALE IN FEET  
(approximate)



# **SITE PLAN (AERIAL)**

PERIODIC REVIEW REPORT  
1050-1088 NIAGARA STREET  
BCP SITE NO. C915277  
BUFFALO, NEW YORK  
PREPARED FOR  
9271 GROUP, LLC

PREPARED FOR  
9271 GROUP, LLC



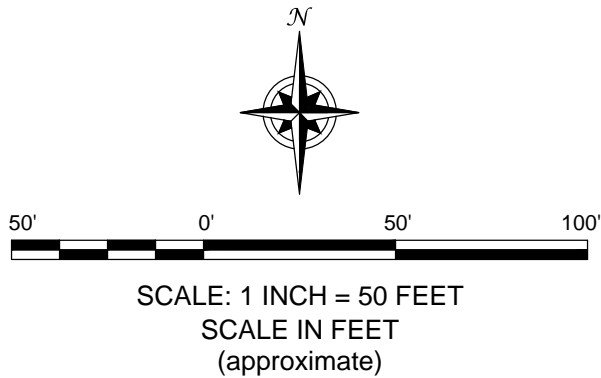
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0136-013-005

## FIGURE 2

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LEGEND:

- BCP PROPERTY BOUNDARY
- PARCEL BOUNDARY
- FENCE
- RAILROAD
- BUILDING
- SOIL COVER AREA
- STONE COVER AREA
- CONCRETE AREA



COVER SYETM LAYOUT

PERIODIC REVIEW REPORT  
1050-1088 NIAGARA STREET  
BCP SITE NO. C915277  
BUFFALO, NEW YORK  
PREPARED FOR  
9271 GROUP, LLC

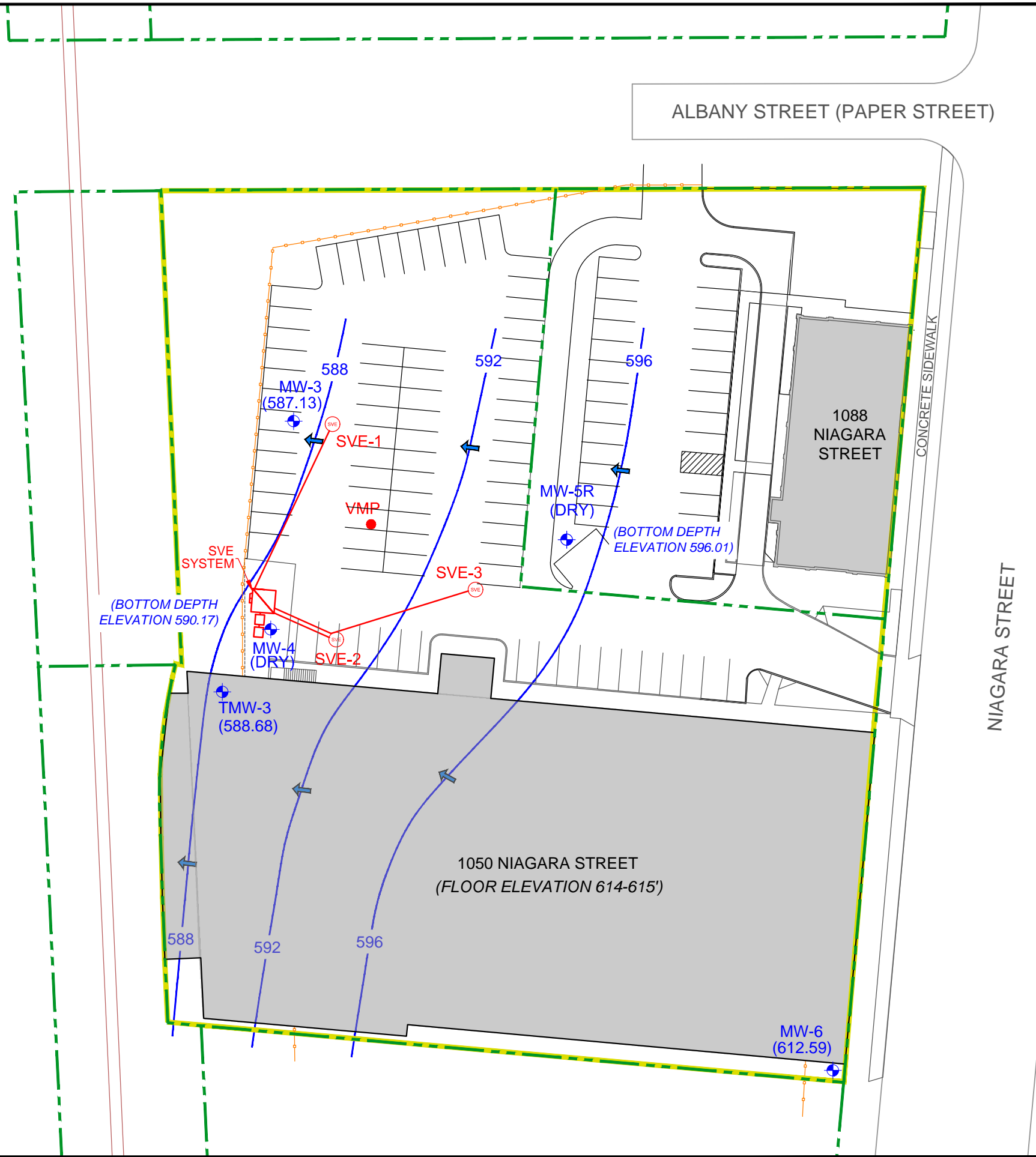
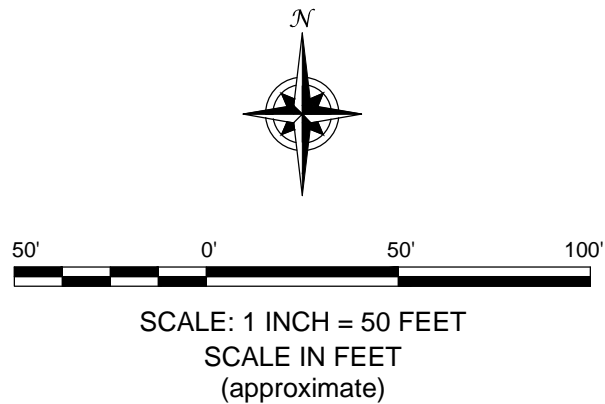
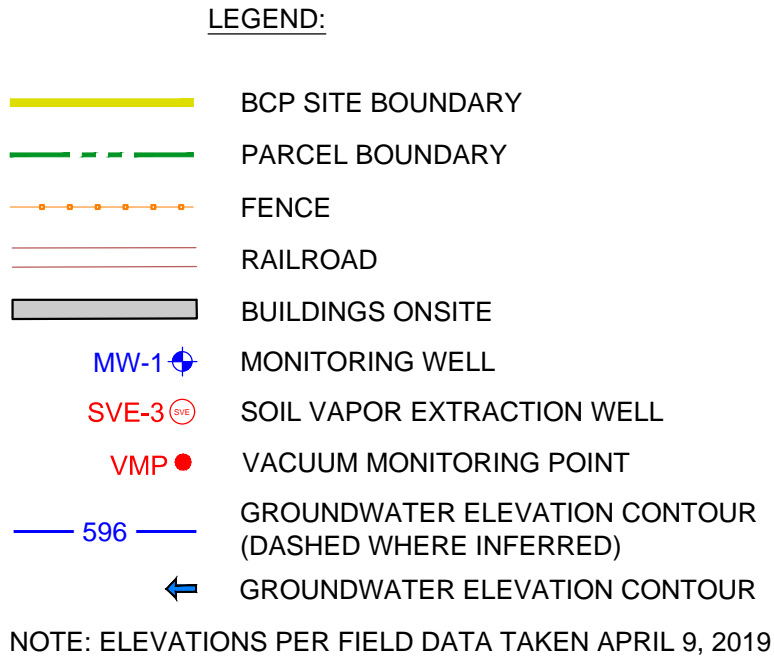


2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0136-013-005

FIGURE 3

DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC. IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC & TURNKEY ENVIRONMENTAL RESTORATION, LLC.



## GROUNDWATER AND SVE WELL NETWORK

PERIODIC REVIEW REPORT  
1050-1088 NIAGARA STREET SITE  
BCP SITE NO. C915277  
BUFFALO, NEW YORK  
PREPARED FOR  
9271 GROUP, LLC



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

JOB NO.: 0136-013-005

FIGURE 4

DISCLAIMER: PROPERTY OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC. & TURNKEY ENVIRONMENTAL RESTORATION, LLC. IMPORTANT: THIS DRAWING PRINT IS LOANED FOR MUTUAL ASSISTANCE AND AS SUCH IS SUBJECT TO RECALL AT ANY TIME. INFORMATION CONTAINED HEREON IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY FORM FOR THE BENEFIT OF PARTIES OTHER THAN NECESSARY SUBCONTRACTORS & SUPPLIERS WITHOUT THE WRITTEN CONSENT OF BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC & TURNKEY ENVIRONMENTAL RESTORATION, LLC.

# APPENDIX A

## INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORM





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



**Site No.**                      **C915277**                      **Site Details**                      **Box 1**

**Site Name** 1050-1088 Niagara Street Site

Site Address: 1050-1088 Niagara Street      Zip Code: 14213

City/Town: Buffalo

County: Erie

Site Acreage: 2.700

Reporting Period: December 29, 2017 to April 29, 2019

	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.

See Figure 2

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input checked="" type="checkbox"/> <input 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? Restricted-Residential, Commercial, and Industrial	<input checked="" type="checkbox"/> <input type="checkbox"/>

7. Are all ICs/ECs 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

**Box 2A**

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

☐☒

**If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.**

9. Are the assumptions in the Qualitative Exposure Assessment still valid?  
(The Qualitative Exposure Assessment must be certified every five years)

☒☐

**If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.**

**SITE NO. C915277****Box 3****Description of Institutional Controls**

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
<b>99.49-1-15</b>	9271 Group, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Building Use Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan
<ul style="list-style-type: none"> <li>• Prohibition against well installation (or use of gw without treatment)</li> <li>• Compliance with the Site Management Plan</li> <li>• Compliance with the Soils Management Plan</li> <li>• Annual monitoring of groundwater</li> <li>• Highest land use is restricted to restricted residential</li> </ul>		
<b>99.49-6-10</b>	9271 Group, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan IC/EC Plan
<ul style="list-style-type: none"> <li>• Prohibition against well installation (or use of gw without treatment)</li> <li>• Compliance with the Site Management Plan</li> <li>• Compliance with the Soils Management Plan</li> <li>• Annual monitoring of groundwater</li> <li>• Highest land use is restricted to restricted residential</li> </ul>		
<b>99.49-6-2</b>	9271 Group, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan IC/EC Plan
<ul style="list-style-type: none"> <li>• Prohibition against well installation (or use of gw without treatment)</li> <li>• Compliance with the Site Management Plan</li> <li>• Compliance with the Soils Management Plan</li> <li>• Annual monitoring of groundwater</li> <li>• Highest land use is restricted to restricted residential</li> </ul>		
		Building Use Restriction Monitoring Plan

#### Box 4

#### Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
<b>99.49-1-15</b>	Cover System Air Sparging/Soil Vapor Extraction Monitoring Wells
<ul style="list-style-type: none"> <li>• Cover consisting of hardscape or clean soil</li> <li>• In-situ plume reduction measure</li> </ul>	
<b>99.49-6-10</b>	Cover System
<ul style="list-style-type: none"> <li>• Cover consisting of hardscape or clean soil</li> <li>• In-situ plume reduction measure</li> </ul>	
<b>99.49-6-2</b>	Cover System Monitoring Wells

Parcel

Engineering Control

- Cover consisting of hardscape or clean soil
- In-situ plume reduction measure

**Box 5**

**Periodic Review Report (PRR) Certification Statements**

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

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

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

YES NO

☒ ☐

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

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

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

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

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

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

YES NO

☒ ☐

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

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

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date

IC CERTIFICATIONS  
SITE NO. C915277

Box 6

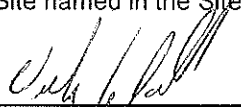
**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

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 William Paladino at 9271 Group, LLC  
print name print business address

am certifying as Authorized Member (Owner or Remedial Party)

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

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

7/23/19  
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

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

I Thomas H. Forbes, P.E. at Benchmark Environmental Engineering  
print name 2538 Hamburg TPK  
Buffalo, NY 14218 print business address

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

Thomas H. Forbes  
Signature of Professional Engineer, for the Owner or  
Remedial Party, Rendering Certification



Date



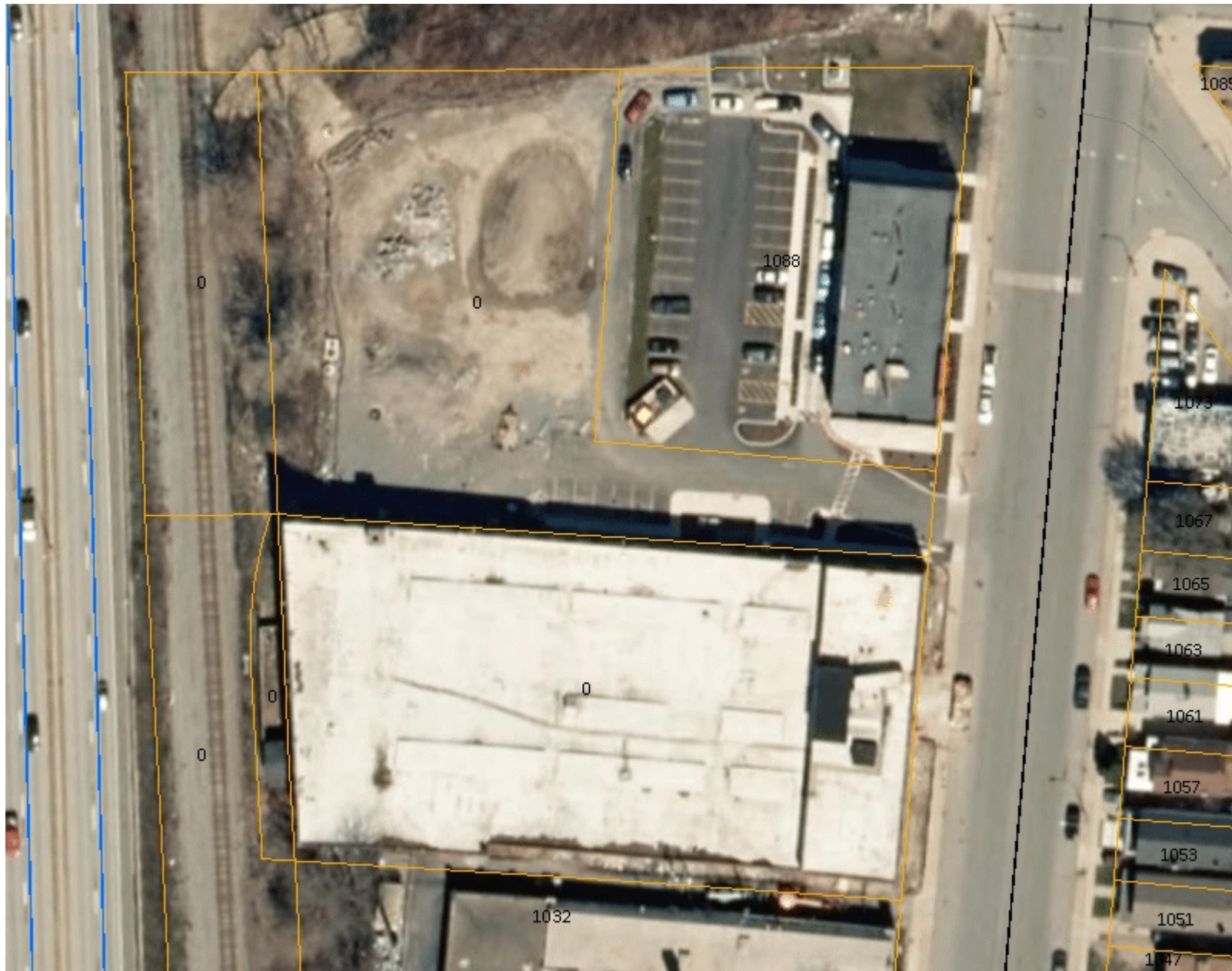


# Erie County On-Line Mapping Application



## Legend

- Parcels
- Streets and Highways
  - Interstate
  - Primary State Road
  - Secondary State Road
  - County Road
  - Local Road



0 0.02 0.0 Miles

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
THIS MAP IS NOT TO BE USED FOR NAVIGATION

ERIE COUNTY  
DEPARTMENT OF ENVIRONMENT & PLANNING  
OFFICE OF GIS

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

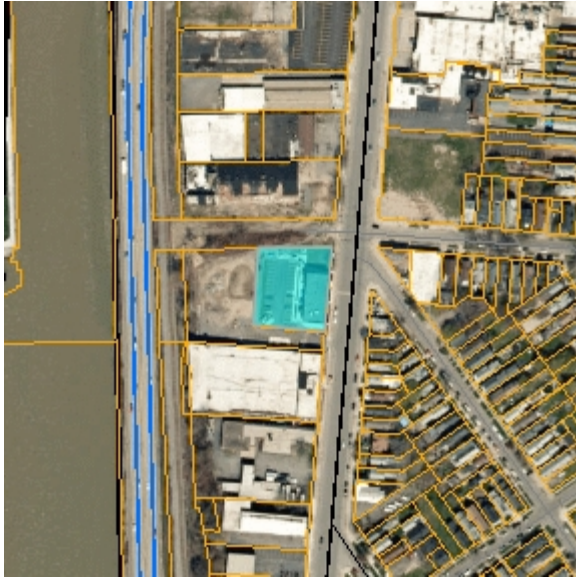
1: 1,128



# Erie County On-Line Mapping System

## Parcel Detail Report

Report generated:  
6/10/2019 9:15:16 AM



Parcel Overview Map



Parcel Detail Map

**PIN:** 1402000994100001015100

**SBL:** 99.41-1-15.1

**Address:** 1088 NIAGARA

**Owner 1:** 9271 GROUP LLC

**Owner 2:**

**Mailing Address:** 295 MAIN ST

**City/Zip:** BUFFALO NY 14203

**Municipality:** City of Buffalo

**Property Class:** 482

**Class Description:** C - Det row bldg

**Front:** 188.92

**Depth:** 163.05

**Deed Roll:** 1

**Deed Book:** 11316

**Deed Page:** 9724

**Deed Date:**

**Acreage:** 0.67238189955

**Total Assessment:** \$1,080,000

**Land Assessment:** \$46,000

**County Taxes:** \$1,080,000

**Town Taxes:** \$0

**School Taxes:** \$0

**Village Taxes:** \$0

**School District:** CITY OF BUFFALO

**Year Built:** 0

**Sqft Living Area:** 0

**Condition:** 0

**Heating:** 0

**Basement:** 0

**Fireplace:** 0

**Beds:** 0

**Baths:** 0



# Erie County On-Line Mapping System

## Parcel Detail Report

Report generated:  
6/10/2019 9:15:58 AM



Parcel Overview Map



Parcel Detail Map

**PIN:** 1402000994100001015200

**SBL:** 99.41-1-15.2

**Address:** 0

**Owner 1:**

**Owner 2:**

**Mailing Address:**

**City/Zip:**

**Municipality:** City of Buffalo

**Property Class:** 0

**Class Description:** -

**Front:** 0

**Depth:** 0

**Deed Roll:** 0

**Deed Book:**

**Deed Page:**

**Deed Date:**

**Acreage:** 0.91808836374

**Total Assessment:** \$0

**Land Assessment:** \$0

**County Taxes:** \$0

**Town Taxes:** \$0

**School Taxes:** \$0

**Village Taxes:** \$0

**School District:**

**Year Built:** 0

**Sqft Living Area:** 0

**Condition:** 0

**Heating:** 0

**Basement:** 0

**Fireplace:** 0

**Beds:** 0

**Baths:** 0

# Erie County On-Line Mapping System

## Parcel Detail Report

Report generated:  
6/10/2019 9:16:50 AM



Parcel Overview Map



Parcel Detail Map

**PIN:** 1402000994900006002000

**SBL:** 99.49-6-2

**Address:** 0

**Owner 1:**

**Owner 2:**

**Mailing Address:**

**City/Zip:**

**Municipality:** City of Buffalo

**Property Class:** 0

**Class Description:** -

**Front:** 0

**Depth:** 0

**Deed Roll:** 0

**Deed Book:**

**Deed Page:**

**Deed Date:**

**Acreage:** 1.07874269997

**Total Assessment:** \$0

**Land Assessment:** \$0

**County Taxes:** \$0

**Town Taxes:** \$0

**School Taxes:** \$0

**Village Taxes:** \$0

**School District:**

**Year Built:** 0

**Sqft Living Area:** 0

**Condition:** 0

**Heating:** 0

**Basement:** 0

**Fireplace:** 0

**Beds:** 0

**Baths:** 0

# Erie County On-Line Mapping System

## Parcel Detail Report

Report generated:  
6/10/2019 9:17:38 AM



Parcel Overview Map



Parcel Detail Map

**PIN:** 1402000994900006010000

**SBL:** 99.49-6-10

**Address:** 0

**Owner 1:**

**Owner 2:**

**Mailing Address:**

**City/Zip:**

**Municipality:** City of Buffalo

**Property Class:** 0

**Class Description:** -

**Front:** 0

**Depth:** 0

**Deed Roll:** 0

**Deed Book:**

**Deed Page:**

**Deed Date:**

**Acreage:** 0.05079049442

**Total Assessment:** \$0

**Land Assessment:** \$0

**County Taxes:** \$0

**Town Taxes:** \$0

**School Taxes:** \$0

**Village Taxes:** \$0

**School District:**

**Year Built:** 0

**Sqft Living Area:** 0

**Condition:** 0

**Heating:** 0

**Basement:** 0

**Fireplace:** 0

**Beds:** 0

**Baths:** 0




MAP  
NUMBER:  
**59710-SPLIT**  
Sheet 1 of 1

[illegible]

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NOTES:  
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THESE PLANS ARE NOT SUITABLE FOR MACHINE GUIDANCE USE OR PURPOSES.

	Designed by:	MT	Project Date:	2-15-17
	Drawn by:	MMW	Job No.	16W1158
	Checked by:	DRH	Book:	391
			Map:	59710-SPLT
	Dwg. Scale:		File Name:	
	Horiz: 1"=20'			
	Vert:			59710-AS Bldg.T

CITY OF BUFFALO COUNTY OF ERIE NEW YORK

**PARCEL SPLIT No.'s 1050-1088 NIAGARA STREET  
BEING PART OF LOTS 1, 2, 3, 4, 5 OF THE STEVENS SURVEY**

## APPENDIX B

### SITE PHOTO LOG

## SITE PHOTOGRAPHS

**Photo 1:**



**Photo 2:**



**Photo 3:**



**Photo 4:**



Photo 1: View of the existing asphalt parking area/cover system – facing southeast

Photo 2: View of the existing asphalt parking area/cover system – facing southwest

Photo 3: View of the asphalt cover and stone cover transition area with the existing SVE trailer (right) – facing south

Photo 4: View of a typical transition area of asphalt parking/cover system and stabilized vegetated cover along the northern portion of the Site – facing west

**1050-1088 Niagara Street Site**  
**BCP Site No. C915277**

Photo Date: April 6-7, 2019



## SITE PHOTOGRAPHS

Photo 5:



Photo 6:



Photo 7:



Photo 8:



Photo 5: View of vegetated cover and drive-thru area along the northern portion of the Site – facing east

Photo 6: View of landscaping and drive-thru area – facing north

Photo 7: View of the stabilized bank along the western portion of the Site – facing southeast

Photo 8: View of the stabilized bank along the northern portion of the Site at Albany Street – facing west

**1050-1088 Niagara Street Site**  
**BCP Site No. C915277**

Photo Date: April 6-7, 2019





## SITE PHOTOGRAPHS

Photo 9:



Photo 10:



Photo 11:



Photo 12:



Photo 9: View of the stabilized bank at the northwest corner of the Site – facing southeast (storm sewer is offsite)

Photo 10: View of the stabilized bank and stone cover south of the existing 1050 Niagara Street building – facing east

Photo 11: View of the exterior of the existing SVE trailer and piping configuration – facing southeast

Photo 12: View of the exterior of the existing SVE trailer, piping configuration, and activated carbon vessels – facing northeast

**1050-1088 Niagara Street Site**  
**BCP Site No. C915277**

Photo Date: April 6-7, 2019





## SITE PHOTOGRAPHS

Photo 13:



Photo 14:



Photo 15:



Photo 16:



Photo 13: View of well location SVE-3 – facing northwest

Photo 14: View of well location SVE-1 – facing west

Photo 15: View of interior of MW-3 (typical)

Photo 16: View of well location MW-6 – facing northeast

**1050-1088 Niagara Street Site**  
**BCP Site No. C915277**

Photo Date: April 6-7, 2019



## APPENDIX C

### SVE SYSTEM INSPECTION LOGS

1050-1088 NIAGARA STREET SITE

SVE SYSTEM LOG

SHEET 1 OF 2

Date	Time	Inspector's Initials	System Running on Arrival? (Y or N)	Intake Vacuum at Knockout (in. WC)	Air Flow Gauge (in.WC)	Velocity (FPS)	Approx Flow CFM	Pressure Gauge (exhaust) (in. WC)	Influent PID Reading (PPM)	Effluent PID Reading (PPM)	Greased Blower? (Y or N)	Condensate Water Present (Y or N)
9/6/2017	16:11	BMG	Y	90	1	3976	195	3	0.4	0	Y	N
9/8/2017	9:00	BMG	N	70	0.62	3080	151	1.8	0	0	N	N
9/12/2017	8:00	BMG	Y	70	0.6	3080	151	1.8	0.1	0	N	N
9/20/2017	15:45	BMG	Y	70	0.62	3080	151	1.8	0	0	N	N
9/25/2017	12:00	NAS	Y	70	0.58	3080	151	1.8	0	0	Y	N
10/30/2017	14:26	NAS	Y	70	0.51	3080	151	1.8	0	0	N	N
11/2/2017	8:00	NAS	N	79	0.1	1129	55.81	0.01	2.2	0	N	N
11/2/2017	10:50	NAS	Y	70	0.1	1257	61	0.01	16.7	0	N	N
11/3/2017	10:00	NAS	Y	84	0.1	1257	61	0.01	0	0	N	N
11/6/2017	15:25	NAS	N	66	0.1	1257	61	0.01	0	0	N	N
11/7/2017	8:00	NAS	Y	67	0.2	1778	87.25	0.01	0	0	N	N
11/22/2017	15:15	NAS	Y	65	0.1	1257	61	0.01	0	0	N	N
11/27/2017	13:00	CMS	Y	70	0.1	1124	55	0.01	0	0	N	N
12/16/2017	11:00	CMS	Y	72	0.1	1257	61	0.01	0	0	N	N
12/20/2017	13:23	CMS	Y	74	0.1	1124	55	0.01	0.1	0	N	N
1/9/2018	12:16	NAS	Y	78	0.1	1124	55	0.01	0	0	Y	N
1/18/2018	14:16	NAS	Y	76	0.1	1124	55	0.02	0.2	0	N	N
2/9/2018	13:05	NAS	N	79	0.1	1257	61	0.01	0	0	Y	N
2/21/2018	9:00	NAS	N	61	0.1	1257	61	0.01	0	0	Y	N
3/14/2018	8:00	NAS	N	20	0.1	1257	61	0.01	0	0	Y	N
3/14/2018	9:00	NAS	Y	44	0.1	1257	61	0.01	0	0	N	N
3/15/2018	15:15	NAS	Y	45	0.1	1257	61	0.01	0	0	N	N
3/21/2018	14:45	CMS	Y	65	0.1	1257	61	0.01	0	0	N	N
3/30/2018	15:15	CMS	Y	64	0.1	1257	61	0.01	0	0	Y	N
4/18/2018	15:10	CMS	Y	25	0.1	1257	61	0.01	0	0	N	N
4/30/2018	16:15	CMS	Y	27	0.1	1257	61	0.01	0	0	Y	N
5/13/2018	12:30	CMS	Y	27	0.1	1257	61	0.01	0	0	N	N
5/30/2018	15:00	CMS	Y	41	0.1	1257	61	0.01	0	0	N	N
6/18/2018	15:45	CMS	Y	41	0.1	1257	61	0.01	0	0	Y	N
6/28/2018	16:05	CMS	Y	41	0.1	1257	61	0.01	0	0	N	N
7/12/2018	16:30	CMS	N	41	0.1	1257	61	0.01	0	0	Y	N
7/19/2018	8:15	CMS	Y	26	0.1	1257	61	0.01	0	0	N	N
7/31/2018	16:15	CMS	Y	35	0.1	1257	61	0.01	0	0	Y	N
8/4/2018	10:30	CMS	Y	50	0.1	1257	61	0.01	0	0	N	N
9/4/2018	16:40	CMS	Y	45	0.1	1257	61	0.01	0	0	Y	N
9/20/2018	9:55	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
10/11/2018	16:11	CMS	Y	57	0.1	1257	61	0.01	0	0	N	N
10/20/2018	10:15	CMS	Y	55	0.1	1257	61	0.01	0	0	N	N
10/26/2018	9:15	CMS	Y	56	0.1	1257	61	0.01	0	0	Y	N
11/2/2018	8:00	CMS	Y	61	0.1	1257	61	0.01	0	0	N	N
11/5/2018	16:15	CMS	Y	65	0.1	1257	61	0.01	0	0	N	N
11/16/2018	16:30	CMS	Y	59	0.1	1257	61	0.01	0	0	N	N
11/17/2018	9:00	CMS	Y	62	0.1	1257	61	0.01	0	0	Y	N
11/21/2018	17:00	CMS	Y	57	0.1	1257	61	0.01	0	0	N	N
11/27/2018	17:00	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
12/5/2018	17:00	CMS	N	54	0.1	1257	61	0.01	0	0	Y	N
12/6/2018	17:00	CMS	Y	62	0.1	1257	61	0.01	0	0	N	N
12/13/2018	17:00	CMS	Y	63	0.1	1257	61	0.01	0	0	N	N
12/17/2018	17:00	CMS	Y	61	0.1	1257	61	0.01	0	0	Y	N
12/20/2018	17:00	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
12/22/2018	10:30	CMS	Y	61	0.1	1257	61	0.01	0	0	N	N
12/27/2018	16:15	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
1/2/2019	16:30	CMS	Y	63	0.1	1257	61	0.01	0	0	Y	N
1/4/2019	16:30	CMS	Y	58	0.1	1257	61	0.01	0	0	N	N
1/7/2019	8:00	CMS	N	52	0.1	1257	61	0.01	0	0	Y	N
1/8/2019	8:00	CMS	Y	63	0.1	1257	61	0.01	0	0	N	N
1/14/2019	16:15	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
1/23/2019	17:00	CMS	Y	59	0.1	1257	61	0.01	0	0	Y	N
1/26/2019	9:00	CMS	Y	62	0.1	1257	61	0.01	0	0	Y	N
1/29/2019	17:00	CMS	Y	58	0.1	1257	61	0.01	0	0	N	N
2/4/2019	10:15	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
2/7/2019	17:00	CMS	Y	62	0.1	1257	61	0.01	0	0	Y	N
2/15/2019	16:30	CMS	Y	58	0.1	1257	61	0.01	0	0	N	N
2/18/2019	10:15	CMS	N	51	0.1	1257	61	0.01	0	0	Y	N
2/20/2019	17:00	CMS	Y	62	0.1	1257	61	0.01	0	0	N	N
3/1/2019	16:15	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
3/4/2019	8:00	CMS	Y	61	0.1	1257	61	0.01	0	0	Y	N
3/12/2019	16:15	CMS	Y	61	0.1	1257	61	0.01	0	0	N	N
3/16/2019	10:00	CMS	Y	62	0.1	1257	61	0.01	0	0	Y	N
3/22/2019	17:00	CMS	Y	56	0.1	1257	61	0.01	0	0	N	N
3/29/2019	17:00	CMS	Y	60	0.1	1257	61	0.01	0	0	Y	N
4/3/2019	8:00	CMS	N	55	0.1	1257	61	0.01	0	0	Y	N
4/4/2019	8:00	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
4/10/2019	16:30	CMS	Y	52	0.1	1257	61	0.01	0	0	N	N
4/12/2019	17:00	CMS	Y	58	0.1	1257	61	0.01	0	0	Y	N
4/19/2019	8:00	CMS	Y	62	0.1	1257	61	0.01	0	0	N	N

4/22/2019	8:00	CMS	Y	65	0.1	1257	61	0.01	0	0	N	N
4/24/2019	16:15	CMS	Y	60	0.1	1257	61	0.01	0	0	Y	N
5/3/2019	16:30	CMS	Y	60	0.1	1257	61	0.01	0	0	N	N
5/6/2019	16:00	CMS	Y	54	0.1	1257	61	0.01	0	0	N	N
5/7/2019	16:00	CMS	Y	52	0.1	1257	61	0.01	0	0	N	N
5/8/2019	16:00	CMS	Y	66	0.1	1257	61	0.01	0	0	Y	N
5/13/2019	16:00	CMS	Y	64	0.1	1257	61	0.01	0	0	N	N
5/16/2019	16:00	CMS	Y	66	0.1	1257	61	0.01	0	0	N	N
5/17/2019	16:00	CMS	Y	69	0.1	1257	61	0.01	0	0	N	N
5/18/2019	10:30	CMS	Y	70	0.1	1257	61	0.01	0	0	Y	N
<b>NOTES :</b>												
9/6/2017	Start system at 13:00											
9/8/2017	EOS = overload protection (too much AMPs) maybe a power outage too. May need to be below 13.28 AMPs											
9/8/2017	left system 12.7 A, 25 Hz, 755 RPM, 99 V											
9/12/2017	system at 12.5 A, 25 Hz, 755 RPM, 99 V, no influenced VMP, had 0.1" H2O at MW-4											
2/21/2018	EOS Error restore system turned down AMP to 12											
3/9/2018	power to trailer is off											
3/14/2018	restarted system 9.5 AMPs - running very slow, will tweak next time, testing if it runs											
	turned up to 12 AMPs running better											
3/15/2018	EOS error turned AMPs to 10.2 let run											
7/12/2018	Turned back on, set AMPs to 10.3											
7/16/2018	System running at 9.8 A											
7/31/2018	Hot inside trailer, greased blower, motor seems to be running loud, turned fan on, ran at 10.4 A											
8/4/2018	Oiled motor											
8/31/2018	System running, sounds a little better, added more oil, running at 10.2 A											
12/15/2018	restarted at 9.8 AMPS											
1/7/2019	restarted at 9.6 AMPS											
2/18/2019	restarted at 9.6 AMPS											
4/3/2019	no power. Breaker inside building reconfigured and was in off position. Breaker is no in sub-basement location.											
5/6 and 5/7/2019	Blower seems to be running a little slow. Added oil. Intake a little low. AMPs at 9.3. Will check 5/8...OK											

[illegible]

Date \_\_\_\_\_

[illegible]

## APPENDIX D

### ANALYTICAL LABORATORY REPORTS



## ANALYTICAL REPORT

Lab Number:	L1817441
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Nate Munley
Phone:	(716) 856-0599
Project Name:	1050-1088 NIAGARA ST.
Project Number:	T0136-013-055
Report Date:	05/23/18

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** 1050-1088 NIAGARA ST.  
**Project Number:** T0136-013-055

**Lab Number:** L1817441  
**Report Date:** 05/23/18

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1817441-01	MW-3	WATER	1050-1088 NIAGARA ST.	05/12/18 10:52	05/14/18
L1817441-02	TMW-3	WATER	1050-1088 NIAGARA ST.	05/12/18 11:16	05/14/18
L1817441-03	MW-6	WATER	1050-1088 NIAGARA ST.	05/12/18 12:15	05/14/18
L1817441-04	TRIP BLANK	WATER	1050-1088 NIAGARA ST.	05/12/18 00:00	05/14/18



**Project Name:** 1050-1088 NIAGARA ST.  
**Project Number:** T0136-013-055

**Lab Number:** L1817441  
**Report Date:** 05/23/18

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

**Project Name:** 1050-1088 NIAGARA ST.  
**Project Number:** T0136-013-055

**Lab Number:** L1817441  
**Report Date:** 05/23/18

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

L1817441-04: A sample identified as "TRIP BLANK" was received but not listed on the Chain of Custody. This sample was not analyzed.

#### Volatile Organics

L1817441-01: The surrogate recovery is outside the acceptance criteria for 4-bromofluorobenzene (159%); however, the sample was not re-analyzed due to coelution with an obvious interference. A copy of the chromatogram is included as an attachment to this report. The results are not considered to be biased.

#### Semivolatile Organics

The WG1116375-1 Method Blank, associated with L1817441-01, -02 and -03, has a concentration above the reporting limit for Bis(2-ethylhexyl)phthalate. The results of the original analysis are reported and are qualified with a "B" for any associated sample concentrations that are less than 10x the blank concentration for this analyte.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Melissa Cripps

Title: Technical Director/Representative

Date: 05/23/18

# ORGANICS

# **VOLATILES**

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-01 D  
 Client ID: MW-3  
 Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 10:52  
 Date Received: 05/14/18  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 05/21/18 13:14

Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	ND		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	31		ug/l	1.0	0.32	2
Toluene	2.4	J	ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	ND		ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	ND		ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2
Trichloroethene	ND		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-01 D

Date Collected: 05/12/18 10:52

Client ID: MW-3

Date Received: 05/14/18

Sample Location: 1050-1088 NIAGARA ST.

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	3.6	J	ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	ND		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Isopropylbenzene	27		ug/l	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl Acetate	ND		ug/l	4.0	0.47	2
Cyclohexane	160		ug/l	20	0.54	2
1,4-Dioxane	ND		ug/l	500	120	2
Freon-113	ND		ug/l	5.0	1.4	2
Methyl cyclohexane	210		ug/l	20	0.79	2

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-01 D

Date Collected: 05/12/18 10:52

Client ID: MW-3

Date Received: 05/14/18

Sample Location: 1050-1088 NIAGARA ST.

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

## Tentatively Identified Compounds

Total TIC Compounds	926	J	ug/l			2
Unknown Cycloalkane	103	J	ug/l			2
Unknown	63.1	J	ug/l			2
Unknown Aromatic	77.3	J	ug/l			2
Unknown Cycloalkane	66.8	J	ug/l			2
Unknown Cyclohexane	159	J	ug/l			2
Cyclopentane, 1,3-dimethyl-	89.2	NJ	ug/l			2
Unknown	101	J	ug/l			2
Pentane, 2-methyl-	111	NJ	ug/l			2
Unknown Cycloalkane	68.3	J	ug/l			2
Cyclopentane, Methyl-	87.4	NJ	ug/l			2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	128		70-130
Toluene-d8	115		70-130
4-Bromofluorobenzene	159	Q	70-130
Dibromofluoromethane	94		70-130

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-02  
 Client ID: TMW-3  
 Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 11:16  
 Date Received: 05/14/18  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 05/19/18 17:10  
 Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-02**Date Collected:** 05/12/18 11:16**Client ID:** TMW-3**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.4	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	1.4	J	ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	0.47	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	0.96	J	ug/l	10	0.40	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-02**Date Collected:** 05/12/18 11:16**Client ID:** TMW-3**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

## Tentatively Identified Compounds

Total TIC Compounds	26.5	J	ug/l	1
Unknown Cycloalkane	1.70	J	ug/l	1
Unknown Aromatic	4.07	J	ug/l	1
Unknown	1.76	J	ug/l	1
Unknown	3.40	J	ug/l	1
Unknown Benzene	1.81	J	ug/l	1
Unknown Cycloalkane	2.06	J	ug/l	1
Cyclohexane, 1,1,3-trimethyl-	3.09	NJ	ug/l	1
Unknown Aromatic	1.46	J	ug/l	1
Unknown Benzene	2.76	J	ug/l	1
Unknown Cycloalkane	4.41	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	101		70-130

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-03  
 Client ID: MW-6  
 Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 12:15  
 Date Received: 05/14/18  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 05/19/18 16:35  
 Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-03**Date Collected:** 05/12/18 12:15**Client ID:** MW-6**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

**Tentatively Identified Compounds**

Total TIC Compounds	1.41	J	ug/l	1
Unknown	1.41	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	100		70-130

Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/19/18 10:32  
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-03 Batch: WG1117732-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/19/18 10:32  
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-03 Batch: WG1117732-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

#### Tentatively Identified Compounds

No Tentatively Identified Compounds

ND

ug/l



**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C

Analytical Date: 05/19/18 10:32

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-03 Batch: WG1117732-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130



Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/21/18 08:57  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1117912-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/21/18 08:57  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1117912-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

#### Tentatively Identified Compounds

No Tentatively Identified Compounds

ND

ug/l

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/21/18 08:57  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1117912-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	94		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** 1050-1088 NIAGARA ST.

**Lab Number:** L1817441

**Project Number:** T0136-013-055

**Report Date:** 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03 Batch: WG1117732-3 WG1117732-4								
Methylene chloride	93		99		70-130	6		20
1,1-Dichloroethane	96		100		70-130	4		20
Chloroform	96		100		70-130	4		20
Carbon tetrachloride	99		110		63-132	11		20
1,2-Dichloropropane	98		100		70-130	2		20
Dibromochloromethane	89		94		63-130	5		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	90		97		70-130	7		20
Chlorobenzene	92		100		75-130	8		20
Trichlorofluoromethane	81		90		62-150	11		20
1,2-Dichloroethane	99		100		70-130	1		20
1,1,1-Trichloroethane	96		110		67-130	14		20
Bromodichloromethane	98		100		67-130	2		20
trans-1,3-Dichloropropene	95		98		70-130	3		20
cis-1,3-Dichloropropene	99		100		70-130	1		20
Bromoform	86		89		54-136	3		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	96		100		70-130	4		20
Toluene	92		99		70-130	7		20
Ethylbenzene	96		100		70-130	4		20
Chloromethane	58	Q	62	Q	64-130	7		20
Bromomethane	82		97		39-139	17		20
Vinyl chloride	67		74		55-140	10		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: 1050-1088 NIAGARA ST.

Project Number: T0136-013-055

Lab Number: L1817441

Report Date: 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03 Batch: WG1117732-3 WG1117732-4								
Chloroethane	78		86		55-138	10		20
1,1-Dichloroethene	84		94		61-145	11		20
trans-1,2-Dichloroethene	94		99		70-130	5		20
Trichloroethene	98		110		70-130	12		20
1,2-Dichlorobenzene	94		100		70-130	6		20
1,3-Dichlorobenzene	94		100		70-130	6		20
1,4-Dichlorobenzene	94		100		70-130	6		20
Methyl tert butyl ether	97		100		63-130	3		20
p/m-Xylene	95		105		70-130	10		20
o-Xylene	100		105		70-130	5		20
cis-1,2-Dichloroethene	98		110		70-130	12		20
Styrene	100		110		70-130	10		20
Dichlorodifluoromethane	43		47		36-147	9		20
Acetone	110		100		58-148	10		20
Carbon disulfide	74		81		51-130	9		20
2-Butanone	110		110		63-138	0		20
4-Methyl-2-pentanone	100		110		59-130	10		20
2-Hexanone	100		110		57-130	10		20
Bromochloromethane	98		100		70-130	2		20
1,2-Dibromoethane	95		99		70-130	4		20
1,2-Dibromo-3-chloropropane	95		98		41-144	3		20
Isopropylbenzene	93		100		70-130	7		20
1,2,3-Trichlorobenzene	200	Q	260	Q	70-130	26	Q	20

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 1050-1088 NIAGARA ST.

**Lab Number:** L1817441

**Project Number:** T0136-013-055

**Report Date:** 05/23/18

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03 Batch: WG1117732-3 WG1117732-4								
1,2,4-Trichlorobenzene	120		130		70-130	8		20
Methyl Acetate	100		110		70-130	10		20
Cyclohexane	90		100		70-130	11		20
1,4-Dioxane	114		144		56-162	23	Q	20
Freon-113	91		100		70-130	9		20
Methyl cyclohexane	92		100		70-130	8		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	106		104		70-130
Toluene-d8	95		95		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	102		104		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 1050-1088 NIAGARA ST.

**Project Number:** T0136-013-055

**Lab Number:** L1817441

**Report Date:** 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1117912-3 WG1117912-4								
Methylene chloride	95		100		70-130	5		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	98		97		70-130	1		20
Carbon tetrachloride	91		99		63-132	8		20
1,2-Dichloropropane	98		100		70-130	2		20
Dibromochloromethane	85		97		63-130	13		20
1,1,2-Trichloroethane	88		98		70-130	11		20
Tetrachloroethene	78		84		70-130	7		20
Chlorobenzene	95		100		75-130	5		20
Trichlorofluoromethane	91		98		62-150	7		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	94		100		67-130	6		20
Bromodichloromethane	95		100		67-130	5		20
trans-1,3-Dichloropropene	92		100		70-130	8		20
cis-1,3-Dichloropropene	99		110		70-130	11		20
Bromoform	91		100		54-136	9		20
1,1,2,2-Tetrachloroethane	110		120		67-130	9		20
Benzene	96		100		70-130	4		20
Toluene	83		91		70-130	9		20
Ethylbenzene	96		100		70-130	4		20
Chloromethane	93		100		64-130	7		20
Bromomethane	64		70		39-139	9		20
Vinyl chloride	92		100		55-140	8		20



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 1050-1088 NIAGARA ST.

**Project Number:** T0136-013-055

**Lab Number:** L1817441

**Report Date:** 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1117912-3 WG1117912-4								
Chloroethane	69		73		55-138	6		20
1,1-Dichloroethene	84		100		61-145	17		20
trans-1,2-Dichloroethene	98		100		70-130	2		20
Trichloroethene	92		99		70-130	7		20
1,2-Dichlorobenzene	97		110		70-130	13		20
1,3-Dichlorobenzene	98		100		70-130	2		20
1,4-Dichlorobenzene	96		100		70-130	4		20
Methyl tert butyl ether	110		120		63-130	9		20
p/m-Xylene	95		100		70-130	5		20
o-Xylene	95		100		70-130	5		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Styrene	95		100		70-130	5		20
Dichlorodifluoromethane	96		100		36-147	4		20
Acetone	120		110		58-148	9		20
Carbon disulfide	87		100		51-130	14		20
2-Butanone	97		110		63-138	13		20
4-Methyl-2-pentanone	91		110		59-130	19		20
2-Hexanone	120		140	Q	57-130	15		20
Bromochloromethane	96		100		70-130	4		20
1,2-Dibromoethane	86		110		70-130	24	Q	20
1,2-Dibromo-3-chloropropane	97		120		41-144	21	Q	20
Isopropylbenzene	100		110		70-130	10		20
1,2,3-Trichlorobenzene	82		100		70-130	20		20

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 1050-1088 NIAGARA ST.

**Lab Number:** L1817441

**Project Number:** T0136-013-055

**Report Date:** 05/23/18

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1117912-3 WG1117912-4								
1,2,4-Trichlorobenzene	90		100		70-130	11		20
Methyl Acetate	120		130		70-130	8		20
Cyclohexane	110		120		70-130	9		20
1,4-Dioxane	146		138		56-162	6		20
Freon-113	84		98		70-130	15		20
Methyl cyclohexane	90		94		70-130	4		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	117		115		70-130
Toluene-d8	89		92		70-130
4-Bromofluorobenzene	115		115		70-130
Dibromofluoromethane	95		94		70-130

# SEMIVOLATILES

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-01

Date Collected: 05/12/18 10:52

Client ID: MW-3

Date Received: 05/14/18

Sample Location: 1050-1088 NIAGARA ST.

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 3510C

Analytical Method: 1,8270D

Extraction Date: 05/16/18 12:26

Analytical Date: 05/19/18 11:44

Analyst: ALS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	7.2	B	ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-01**Date Collected:** 05/12/18 10:52**Client ID:** MW-3**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	1.6	J	ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-01**Date Collected:** 05/12/18 10:52**Client ID:** MW-3**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

## Tentatively Identified Compounds

Total TIC Compounds	334	J	ug/l			1
Unknown Benzene	14.0	J	ug/l			1
Unknown	20.5	J	ug/l			1
Unknown Cycloalkane	13.7	J	ug/l			1
Unknown	44.5	J	ug/l			1
Unknown	14.7	J	ug/l			1
Unknown Alkane	25.6	J	ug/l			1
Unknown	16.5	J	ug/l			1
Unknown	33.1	J	ug/l			1
Unknown	21.0	J	ug/l			1
Unknown Alkane	15.0	J	ug/l			1
Unknown Benzene	15.0	J	ug/l			1
Unknown Benzene	16.4	J	ug/l			1
Unknown	51.6	J	ug/l			1
Unknown	14.5	J	ug/l			1
Unknown Benzene	17.7	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	61		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	61		41-149



**Project Name:** 1050-1088 NIAGARA ST.**Project Number:** T0136-013-055**Lab Number:** L1817441**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-01

Client ID: MW-3

Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 10:52

Date Received: 05/14/18

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8270D-SIM

Analytical Date: 05/17/18 14:51

Analyst: DV

Extraction Method: EPA 3510C

Extraction Date: 05/16/18 12:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.07	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.23		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.09	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.08	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.13		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.05	J	ug/l	0.10	0.01	1
Chrysene	0.13		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.05	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01	1
Fluorene	0.06	J	ug/l	0.10	0.01	1
Phenanthrene	0.20		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.05	J	ug/l	0.10	0.01	1
Pyrene	0.22		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.04	J	ug/l	0.10	0.02	1
Pentachlorophenol	0.11	J	ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-01

Date Collected: 05/12/18 10:52

Client ID: MW-3

Date Received: 05/14/18

Sample Location: 1050-1088 NIAGARA ST.

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	49		15-120
2,4,6-Tribromophenol	75		10-120
4-Terphenyl-d14	54		41-149

**Project Name:** 1050-1088 NIAGARA ST.**Project Number:** T0136-013-055**Lab Number:** L1817441**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-02  
 Client ID: TMW-3  
 Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 11:16  
 Date Received: 05/14/18  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 05/19/18 12:12  
 Analyst: ALS

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	8.2	B	ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	0.73	J	ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-02**Date Collected:** 05/12/18 11:16**Client ID:** TMW-3**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

**Tentatively Identified Compounds**

Total TIC Compounds	205	J	ug/l	1
Unknown Organic Acid	6.29	J	ug/l	1
Unknown Organic Acid	146	J	ug/l	1
Unknown	1.49	J	ug/l	1
Unknown	2.47	J	ug/l	1
Unknown	1.78	J	ug/l	1
Unknown Organic Acid	9.20	J	ug/l	1
Aldol Condensate	34.0	J	ug/l	1
Unknown	1.49	J	ug/l	1
Unknown	2.76	J	ug/l	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-02

Date Collected: 05/12/18 11:16

Client ID: TMW-3

Date Received: 05/14/18

Sample Location: 1050-1088 NIAGARA ST.

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		21-120
Phenol-d6	44		10-120
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	55		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	60		41-149

**Project Name:** 1050-1088 NIAGARA ST.**Project Number:** T0136-013-055**Lab Number:** L1817441**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-02  
 Client ID: TMW-3  
 Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 11:16  
 Date Received: 05/14/18  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 05/17/18 15:19  
 Analyst: DV

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.07	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.03	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.06	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1



**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-02

Date Collected: 05/12/18 11:16

Client ID: TMW-3

Date Received: 05/14/18

Sample Location: 1050-1088 NIAGARA ST.

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	77		10-120
4-Terphenyl-d14	57		41-149

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-03  
 Client ID: MW-6  
 Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 12:15  
 Date Received: 05/14/18  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 05/19/18 12:40  
 Analyst: ALS

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	6.4	B	ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-03**Date Collected:** 05/12/18 12:15**Client ID:** MW-6**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

## Tentatively Identified Compounds

Total TIC Compounds	31.7	J	ug/l	1
Aldol Condensate	31.7	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	48		23-120
2-Fluorobiphenyl	51		15-120
2,4,6-Tribromophenol	59		10-120
4-Terphenyl-d14	62		41-149

**Project Name:** 1050-1088 NIAGARA ST.**Project Number:** T0136-013-055**Lab Number:** L1817441**Report Date:** 05/23/18**SAMPLE RESULTS**

Lab ID: L1817441-03

Client ID: MW-6

Sample Location: 1050-1088 NIAGARA ST.

Date Collected: 05/12/18 12:15

Date Received: 05/14/18

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8270D-SIM

Analytical Date: 05/17/18 15:46

Analyst: DV

Extraction Method: EPA 3510C

Extraction Date: 05/16/18 12:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**SAMPLE RESULTS****Lab ID:** L1817441-03**Date Collected:** 05/12/18 12:15**Client ID:** MW-6**Date Received:** 05/14/18**Sample Location:** 1050-1088 NIAGARA ST.**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		21-120
Phenol-d6	35		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	52		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	59		41-149

Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 05/19/18 10:20  
 Analyst: ALS

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:26

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1116375-1					
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Isophorone	ND		ug/l	5.0	1.2
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	6.4		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35

Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 05/19/18 10:20  
 Analyst: ALS

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:26

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1116375-1					
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Carbazole	ND		ug/l	2.0	0.49
Atrazine	ND		ug/l	10	0.76
Benzaldehyde	ND		ug/l	5.0	0.53
Caprolactam	ND		ug/l	10	3.3
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84

#### Tentatively Identified Compounds

Total TIC Compounds	34.6	J	ug/l
Aldol Condensate	34.6	J	ug/l



**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270D  
 Analytical Date: 05/19/18 10:20  
 Analyst: ALS

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:26

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1116375-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	48		15-120
2,4,6-Tribromophenol	37		10-120
4-Terphenyl-d14	61		41-149

Project Name: 1050-1088 NIAGARA ST.

Lab Number: L1817441

Project Number: T0136-013-055

Report Date: 05/23/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D-SIM  
 Analytical Date: 05/17/18 13:02  
 Analyst: KL

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/18 12:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1116378-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.01	J	ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**Method Blank Analysis**  
**Batch Quality Control****Analytical Method:** 1,8270D-SIM  
**Analytical Date:** 05/17/18 13:02  
**Analyst:** KL**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/16/18 12:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1116378-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	49		15-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	56		41-149

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: 1050-1088 NIAGARA ST.

Project Number: T0136-013-055

Lab Number: L1817441

Report Date: 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1116375-2 WG1116375-3								
Bis(2-chloroethyl)ether	58		40		40-140	37	Q	30
3,3'-Dichlorobenzidine	45		37	Q	40-140	20		30
2,4-Dinitrotoluene	80		61		48-143	27		30
2,6-Dinitrotoluene	70		57		40-140	20		30
4-Chlorophenyl phenyl ether	73		58		40-140	23		30
4-Bromophenyl phenyl ether	73		56		40-140	26		30
Bis(2-chloroisopropyl)ether	52		38	Q	40-140	31	Q	30
Bis(2-chloroethoxy)methane	64		47		40-140	31	Q	30
Hexachlorocyclopentadiene	58		41		40-140	34	Q	30
Isophorone	73		53		40-140	32	Q	30
Nitrobenzene	65		43		40-140	41	Q	30
NDPA/DPA	75		55		40-140	31	Q	30
n-Nitrosodi-n-propylamine	68		50		29-132	31	Q	30
Bis(2-ethylhexyl)phthalate	106		81		40-140	27		30
Butyl benzyl phthalate	80		62		40-140	25		30
Di-n-butylphthalate	76		59		40-140	25		30
Di-n-octylphthalate	76		63		40-140	19		30
Diethyl phthalate	78		62		40-140	23		30
Dimethyl phthalate	73		58		40-140	23		30
Biphenyl	66		51		40-140	26		30
4-Chloroaniline	47		44		40-140	7		30
2-Nitroaniline	69		51	Q	52-143	30		30
3-Nitroaniline	64		55		25-145	15		30

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: 1050-1088 NIAGARA ST.

Project Number: T0136-013-055

Lab Number: L1817441

Report Date: 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1116375-2 WG1116375-3								
4-Nitroaniline	72		59		51-143	20		30
Dibenzofuran	69		54		40-140	24		30
1,2,4,5-Tetrachlorobenzene	62		46		2-134	30		30
Acetophenone	65		46		39-129	34	Q	30
2,4,6-Trichlorophenol	61		48		30-130	24		30
p-Chloro-m-cresol	75		55		23-97	31	Q	30
2-Chlorophenol	60		41		27-123	38	Q	30
2,4-Dichlorophenol	71		47		30-130	41	Q	30
2,4-Dimethylphenol	61		48		30-130	24		30
2-Nitrophenol	60		39		30-130	42	Q	30
4-Nitrophenol	69		50		10-80	32	Q	30
2,4-Dinitrophenol	52		46		20-130	12		30
4,6-Dinitro-o-cresol	57		48		20-164	17		30
Phenol	48		37		12-110	26		30
3-Methylphenol/4-Methylphenol	64		50		30-130	25		30
2,4,5-Trichlorophenol	66		52		30-130	24		30
Carbazole	71		56		55-144	24		30
Atrazine	88		71		40-140	21		30
Benzaldehyde	58		37	Q	40-140	44	Q	30
Caprolactam	43		36		10-130	18		30
2,3,4,6-Tetrachlorophenol	70		52		40-140	30		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1116375-2 WG1116375-3

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2-Fluorophenol	53		39		21-120
Phenol-d6	47		37		10-120
Nitrobenzene-d5	59		40		23-120
2-Fluorobiphenyl	57		45		15-120
2,4,6-Tribromophenol	70		54		10-120
4-Terphenyl-d14	65		48		41-149

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 1050-1088 NIAGARA ST.

**Lab Number:** L1817441

**Project Number:** T0136-013-055

**Report Date:** 05/23/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1116378-2 WG1116378-3								
Acenaphthene	65		62		40-140	5		40
2-Chloronaphthalene	55		52		40-140	6		40
Fluoranthene	67		62		40-140	8		40
Hexachlorobutadiene	46		43		40-140	7		40
Naphthalene	51		48		40-140	6		40
Benzo(a)anthracene	76		71		40-140	7		40
Benzo(a)pyrene	60		59		40-140	2		40
Benzo(b)fluoranthene	64		59		40-140	8		40
Benzo(k)fluoranthene	63		58		40-140	8		40
Chrysene	66		62		40-140	6		40
Acenaphthylene	61		58		40-140	5		40
Anthracene	65		61		40-140	6		40
Benzo(ghi)perylene	60		56		40-140	7		40
Fluorene	69		64		40-140	8		40
Phenanthrene	66		61		40-140	8		40
Dibenzo(a,h)anthracene	63		59		40-140	7		40
Indeno(1,2,3-cd)pyrene	63		60		40-140	5		40
Pyrene	69		66		40-140	4		40
2-Methylnaphthalene	54		52		40-140	4		40
Pentachlorophenol	63		60		40-140	5		40
Hexachlorobenzene	63		58		40-140	8		40
Hexachloroethane	45		42		40-140	7		40



**Lab Control Sample Analysis****Batch Quality Control****Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1116378-2 WG1116378-3

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2-Fluorophenol	41		39		21-120
Phenol-d6	37		35		10-120
Nitrobenzene-d5	48		45		23-120
2-Fluorobiphenyl	50		47		15-120
2,4,6-Tribromophenol	76		70		10-120
4-Terphenyl-d14	59		53		41-149

**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1817441-01A	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-01B	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-01C	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-01D	Amber 250ml unpreserved	A	7	7	4.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1817441-01E	Amber 250ml unpreserved	A	7	7	4.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1817441-02A	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-02B	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-02C	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-02D	Amber 250ml unpreserved	A	7	7	4.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1817441-02E	Amber 250ml unpreserved	A	7	7	4.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1817441-03A	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-03B	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-03C	Vial HCl preserved	A	NA		4.6	Y	Absent		NYTCL-8260-R2(14)
L1817441-03D	Amber 250ml unpreserved	A	7	7	4.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1817441-03E	Amber 250ml unpreserved	A	7	7	4.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L1817441-04A	Vial HCl preserved	A	NA		4.6	Y	Absent		ARCHIVE()

**Project Name:** 1050-1088 NIAGARA ST.  
**Project Number:** T0136-013-055

**Lab Number:** L1817441  
**Report Date:** 05/23/18

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** 1050-1088 NIAGARA ST.**Lab Number:** L1817441**Project Number:** T0136-013-055**Report Date:** 05/23/18**Data Qualifiers**

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

*Report Format:* DU Report with 'J' Qualifiers

**Project Name:** 1050-1088 NIAGARA ST.  
**Project Number:** T0136-013-055

**Lab Number:** L1817441  
**Report Date:** 05/23/18

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624:** m/p-xylene, o-xylene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 300:** DW: Bromide

**EPA 6860:** SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

**SM 2540D:** TSS

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

**EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E,**

**SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

**EPA 522.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

[illegible]

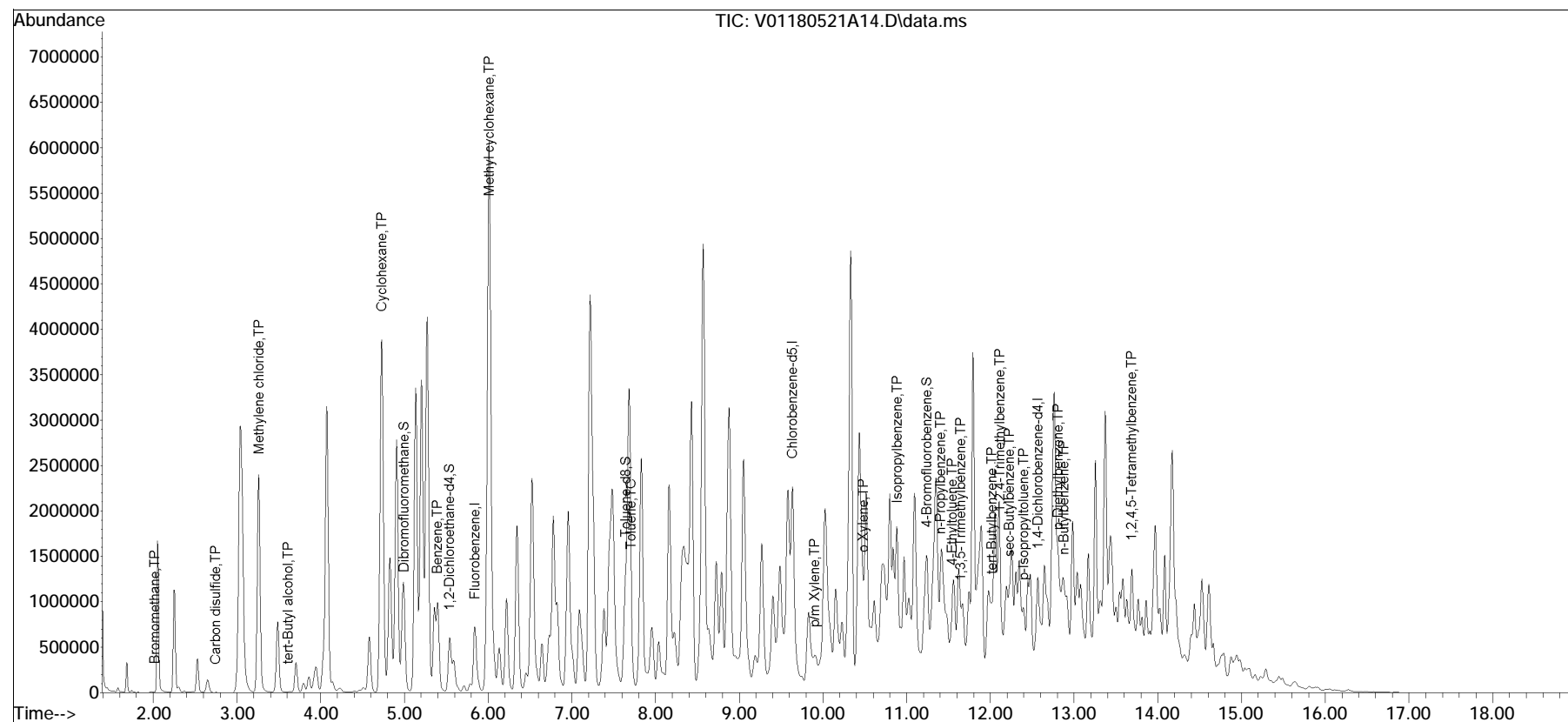


## Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2018\180521A\  
Data File : V01180521A14.D  
Acq On : 21 May 2018 1:14 pm  
Operator : VOA101:JC  
Sample : 11817441-01D,31,5.0,10,,c  
Misc : WG1117912,ICAL14549  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 21 13:38:42 2018  
Quant Method : I:\VOLATILES\VOA101\2018\180521A\V101\_180315A\_8260.m  
Quant Title : VOLATILES BY GC/MS  
QLast Update : Tue Mar 20 11:27:54 2018  
Response via : Initial Calibration

Sub List : 8260-Curve-3 - Megamix plus Diox-IM, Acro, 2Clevel.D•





## ANALYTICAL REPORT

Lab Number:	L1914072
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Nate Munley
Phone:	(716) 856-0599
Project Name:	1050 NIAGARA
Project Number:	T0136-013-005
Report Date:	04/16/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1914072-01	TMW-3	WATER	1050 NIAGARA	04/06/19 11:45	04/08/19
L1914072-02	MW-3	WATER	1050 NIAGARA	04/06/19 12:55	04/08/19
L1914072-03	MW-6	WATER	1050 NIAGARA	04/06/19 13:35	04/08/19

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Case Narrative (continued)

#### Report Submission

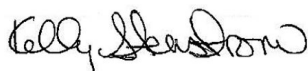
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Volatile Organics

L1914072-02: The sample has elevated detection limits due to the dilution required by the sample matrix (oily).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 04/16/19

# ORGANICS

# **VOLATILES**



**Project Name:** 1050 NIAGARA**Lab Number:** L1914072**Project Number:** T0136-013-005**Report Date:** 04/16/19**SAMPLE RESULTS**

Lab ID: L1914072-01  
 Client ID: TMW-3  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 11:45  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 04/12/19 16:55  
 Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 1050 NIAGARA

Lab Number: L1914072

Project Number: T0136-013-005

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-01

Date Collected: 04/06/19 11:45

Client ID: TMW-3

Date Received: 04/08/19

Sample Location: 1050 NIAGARA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	0.72	J	ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	0.46	J	ug/l	10	0.40	1

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**SAMPLE RESULTS**

**Lab ID:** L1914072-01  
**Client ID:** TMW-3  
**Sample Location:** 1050 NIAGARA

**Date Collected:** 04/06/19 11:45  
**Date Received:** 04/08/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

## Tentatively Identified Compounds

Total TIC Compounds	12.6	J	ug/l			1
Unknown Cyclohexane	1.31	J	ug/l			1
Unknown	1.29	J	ug/l			1
Unknown Aromatic	1.67	J	ug/l			1
Unknown Cyclohexane	1.40	J	ug/l			1
Unknown Benzene	1.31	J	ug/l			1
Unknown Cycloalkane	1.10	J	ug/l			1
Unknown Aromatic	1.20	J	ug/l			1
Unknown Cyclohexane	2.20	J	ug/l			1
Unknown Aromatic	1.16	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	100		70-130

**Project Name:** 1050 NIAGARA**Lab Number:** L1914072**Project Number:** T0136-013-005**Report Date:** 04/16/19**SAMPLE RESULTS**

Lab ID: L1914072-02 D

Date Collected: 04/06/19 12:55

Client ID: MW-3

Date Received: 04/08/19

Sample Location: 1050 NIAGARA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 04/12/19 18:53

Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	10	2.8	4
1,1-Dichloroethane	ND		ug/l	10	2.8	4
Chloroform	ND		ug/l	10	2.8	4
Carbon tetrachloride	ND		ug/l	2.0	0.54	4
1,2-Dichloropropane	ND		ug/l	4.0	0.55	4
Dibromochloromethane	ND		ug/l	2.0	0.60	4
1,1,2-Trichloroethane	ND		ug/l	6.0	2.0	4
Tetrachloroethene	ND		ug/l	2.0	0.72	4
Chlorobenzene	ND		ug/l	10	2.8	4
Trichlorofluoromethane	ND		ug/l	10	2.8	4
1,2-Dichloroethane	ND		ug/l	2.0	0.53	4
1,1,1-Trichloroethane	ND		ug/l	10	2.8	4
Bromodichloromethane	ND		ug/l	2.0	0.77	4
trans-1,3-Dichloropropene	ND		ug/l	2.0	0.66	4
cis-1,3-Dichloropropene	ND		ug/l	2.0	0.58	4
Bromoform	ND		ug/l	8.0	2.6	4
1,1,2,2-Tetrachloroethane	ND		ug/l	2.0	0.67	4
Benzene	39		ug/l	2.0	0.64	4
Toluene	4.2	J	ug/l	10	2.8	4
Ethylbenzene	ND		ug/l	10	2.8	4
Chloromethane	ND		ug/l	10	2.8	4
Bromomethane	ND		ug/l	10	2.8	4
Vinyl chloride	ND		ug/l	4.0	0.28	4
Chloroethane	ND		ug/l	10	2.8	4
1,1-Dichloroethene	ND		ug/l	2.0	0.68	4
trans-1,2-Dichloroethene	ND		ug/l	10	2.8	4
Trichloroethene	ND		ug/l	2.0	0.70	4
1,2-Dichlorobenzene	ND		ug/l	10	2.8	4

**Project Name:** 1050 NIAGARA**Lab Number:** L1914072**Project Number:** T0136-013-005**Report Date:** 04/16/19**SAMPLE RESULTS**

Lab ID: L1914072-02 D

Date Collected: 04/06/19 12:55

Client ID: MW-3

Date Received: 04/08/19

Sample Location: 1050 NIAGARA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	10	2.8	4
1,4-Dichlorobenzene	ND		ug/l	10	2.8	4
Methyl tert butyl ether	ND		ug/l	10	2.8	4
p/m-Xylene	6.2	J	ug/l	10	2.8	4
o-Xylene	ND		ug/l	10	2.8	4
cis-1,2-Dichloroethene	ND		ug/l	10	2.8	4
Styrene	ND		ug/l	10	2.8	4
Dichlorodifluoromethane	ND		ug/l	20	4.0	4
Acetone	ND		ug/l	20	5.8	4
Carbon disulfide	ND		ug/l	20	4.0	4
2-Butanone	ND		ug/l	20	7.8	4
4-Methyl-2-pentanone	ND		ug/l	20	4.0	4
2-Hexanone	ND		ug/l	20	4.0	4
Bromochloromethane	ND		ug/l	10	2.8	4
1,2-Dibromoethane	ND		ug/l	8.0	2.6	4
1,2-Dibromo-3-chloropropane	ND		ug/l	10	2.8	4
Isopropylbenzene	60		ug/l	10	2.8	4
1,2,3-Trichlorobenzene	ND		ug/l	10	2.8	4
1,2,4-Trichlorobenzene	ND		ug/l	10	2.8	4
Methyl Acetate	ND		ug/l	8.0	0.94	4
Cyclohexane	260		ug/l	40	1.1	4
1,4-Dioxane	ND		ug/l	1000	240	4
Freon-113	ND		ug/l	10	2.8	4
Methyl cyclohexane	230		ug/l	40	1.6	4

**Project Name:** 1050 NIAGARA**Lab Number:** L1914072**Project Number:** T0136-013-005**Report Date:** 04/16/19**SAMPLE RESULTS**

Lab ID: L1914072-02 D

Date Collected: 04/06/19 12:55

Client ID: MW-3

Date Received: 04/08/19

Sample Location: 1050 NIAGARA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

## Tentatively Identified Compounds

Total TIC Compounds	896	J	ug/l	4
Unknown Cycloalkane	97.2	J	ug/l	4
Unknown Cyclohexane	90.7	J	ug/l	4
Cyclohexene	93.4	NJ	ug/l	4
Pentane	47.0	NJ	ug/l	4
Unknown Aromatic	48.8	J	ug/l	4
Cyclopentane, Methyl-	150	NJ	ug/l	4
1-Pentene	153	NJ	ug/l	4
Unknown Cycloalkane	77.2	J	ug/l	4
Unknown Aromatic	76.1	J	ug/l	4
Pentane, 3-methyl-	62.8	NJ	ug/l	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	96		70-130

Project Name: 1050 NIAGARA

Lab Number: L1914072

Project Number: T0136-013-005

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-03  
 Client ID: MW-6  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 13:35  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 04/12/19 17:25  
 Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 1050 NIAGARA

Lab Number: L1914072

Project Number: T0136-013-005

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-03  
 Client ID: MW-6  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 13:35  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

## Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	100		70-130



**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 04/12/19 10:33  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1225976-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 04/12/19 10:33  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1225976-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

#### Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 04/12/19 10:33  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1225976-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1225976-3 WG1225976-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		110		63-130	10		20
1,1,2-Trichloroethane	97		100		70-130	3		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	95		95		62-150	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	94		95		70-130	1		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
Bromoform	100		110		54-136	10		20
1,1,2,2-Tetrachloroethane	95		97		67-130	2		20
Benzene	100		100		70-130	0		20
Toluene	100		99		70-130	1		20
Ethylbenzene	100		99		70-130	1		20
Chloromethane	80		81		64-130	1		20
Bromomethane	57		53		39-139	7		20
Vinyl chloride	110		110		55-140	0		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1225976-3 WG1225976-4								
Chloroethane	110		100		55-138	10		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	96		98		70-130	2		20
1,3-Dichlorobenzene	97		96		70-130	1		20
1,4-Dichlorobenzene	96		96		70-130	0		20
Methyl tert butyl ether	95		97		63-130	2		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	130		130		36-147	0		20
Acetone	97		87		58-148	11		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	61	Q	60	Q	63-138	2		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	84		84		57-130	0		20
Bromochloromethane	120		120		70-130	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	97		97		41-144	0		20
Isopropylbenzene	99		98		70-130	1		20
1,2,3-Trichlorobenzene	91		98		70-130	7		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1225976-3 WG1225976-4								
1,2,4-Trichlorobenzene	95		98		70-130	3		20
Methyl Acetate	72		72		70-130	0		20
Cyclohexane	110		110		70-130	0		20
1,4-Dioxane	110		100		56-162	10		20
Freon-113	100		100		70-130	0		20
Methyl cyclohexane	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		94		70-130
Toluene-d8	97		95		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	100		99		70-130

# SEMIVOLATILES

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-01  
 Client ID: TMW-3  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 11:45  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/12/19 05:54  
 Analyst: SZ

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 16:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1



Project Name: 1050 NIAGARA

Lab Number: L1914072

Project Number: T0136-013-005

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-01

Date Collected: 04/06/19 11:45

Client ID: TMW-3

Date Received: 04/08/19

Sample Location: 1050 NIAGARA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

## Tentatively Identified Compounds

Total TIC Compounds	202	J	ug/l	1
Unknown Organic Acid	1.45	J	ug/l	1
Unknown	1.85	J	ug/l	1
Unknown	8.00	J	ug/l	1
Unknown	2.36	J	ug/l	1
Aldol Condensates	125	J	ug/l	1
Aldol Condensates	63.3	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	48		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	51		41-149

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-01  
 Client ID: TMW-3  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 11:45  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 04/15/19 03:05  
 Analyst: DV

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 16:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.07	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.04	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Chrysene	0.04	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.03	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.05	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.03	J	ug/l	0.10	0.01	1
Pyrene	0.07	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**SAMPLE RESULTS**

**Lab ID:** L1914072-01  
**Client ID:** TMW-3  
**Sample Location:** 1050 NIAGARA

**Date Collected:** 04/06/19 11:45  
**Date Received:** 04/08/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	25		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	45		15-120
2,4,6-Tribromophenol	40		10-120
4-Terphenyl-d14	44		41-149

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-02  
 Client ID: MW-3  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 12:55  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/12/19 05:07  
 Analyst: SZ

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 16:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	3.6		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	2.6	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

Project Name: 1050 NIAGARA

Lab Number: L1914072

Project Number: T0136-013-005

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-02

Date Collected: 04/06/19 12:55

Client ID: MW-3

Date Received: 04/08/19

Sample Location: 1050 NIAGARA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**SAMPLE RESULTS**

**Lab ID:** L1914072-02  
**Client ID:** MW-3  
**Sample Location:** 1050 NIAGARA

**Date Collected:** 04/06/19 12:55  
**Date Received:** 04/08/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

## Tentatively Identified Compounds

Total TIC Compounds	1020	J	ug/l			1
Unknown Alkane	27.0	J	ug/l			1
Unknown Alkane	38.2	J	ug/l			1
Unknown Alkane	50.9	J	ug/l			1
Unknown Cyclohexane	26.7	J	ug/l			1
Aldol Condensates	96.3	J	ug/l			1
Unknown Alkane	33.8	J	ug/l			1
Unknown Cyclohexane	65.5	J	ug/l			1
Unknown	35.5	J	ug/l			1
Unknown Alkane	42.9	J	ug/l			1
Unknown Benzene	42.8	J	ug/l			1
Aldol Condensates	279	J	ug/l			1
Unknown	46.6	J	ug/l			1
Unknown	118	J	ug/l			1
Unknown	37.6	J	ug/l			1
Unknown Alkane	79.1	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	50		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	88		10-120
4-Terphenyl-d14	90		41-149

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-02  
 Client ID: MW-3  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 12:55  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 04/15/19 17:49  
 Analyst: DV

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 16:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.13		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.22		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.59		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.10		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.07	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.08	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.07	J	ug/l	0.10	0.01	1
Chrysene	0.15		ug/l	0.10	0.01	1
Acenaphthylene	0.02	J	ug/l	0.10	0.01	1
Anthracene	0.06	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.05	J	ug/l	0.10	0.01	1
Fluorene	0.07	J	ug/l	0.10	0.01	1
Phenanthrene	0.24		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.01	J	ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.04	J	ug/l	0.10	0.01	1
Pyrene	0.22		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.06	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**SAMPLE RESULTS**

**Lab ID:** L1914072-02  
**Client ID:** MW-3  
**Sample Location:** 1050 NIAGARA

**Date Collected:** 04/06/19 12:55  
**Date Received:** 04/08/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		21-120
Phenol-d6	39		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	69		41-149



**Project Name:** 1050 NIAGARA**Project Number:** T0136-013-005**Lab Number:** L1914072**Report Date:** 04/16/19**SAMPLE RESULTS**

Lab ID: L1914072-03  
 Client ID: MW-6  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 13:35  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/12/19 05:32  
 Analyst: SZ

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 16:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

Project Name: 1050 NIAGARA

Lab Number: L1914072

Project Number: T0136-013-005

Report Date: 04/16/19

## SAMPLE RESULTS

Lab ID: L1914072-03  
 Client ID: MW-6  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 13:35  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

## Tentatively Identified Compounds

Total TIC Compounds	238	J	ug/l	1
Unknown	1.64	J	ug/l	1
Aldol Condensates	171	J	ug/l	1
Unknown Organic Acid	1.93	J	ug/l	1
Aldol Condensates	55.5	J	ug/l	1
Unknown	8.00	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	71		10-120
4-Terphenyl-d14	85		41-149

**Project Name:** 1050 NIAGARA**Project Number:** T0136-013-005**Lab Number:** L1914072**Report Date:** 04/16/19**SAMPLE RESULTS**

Lab ID: L1914072-03  
 Client ID: MW-6  
 Sample Location: 1050 NIAGARA

Date Collected: 04/06/19 13:35  
 Date Received: 04/08/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 04/15/19 17:25  
 Analyst: DV

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 16:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.03	J	ug/l	0.10	0.01	1
Phenanthrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**SAMPLE RESULTS**

**Lab ID:** L1914072-03  
**Client ID:** MW-6  
**Sample Location:** 1050 NIAGARA

**Date Collected:** 04/06/19 13:35  
**Date Received:** 04/08/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	77		10-120
4-Terphenyl-d14	73		41-149

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270D  
**Analytical Date:** 04/12/19 14:14  
**Analyst:** JG

**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/11/19 07:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1225312-1					
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Isophorone	ND		ug/l	5.0	1.2
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270D  
**Analytical Date:** 04/12/19 14:14  
**Analyst:** JG

**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/11/19 07:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1225312-1					
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Carbazole	ND		ug/l	2.0	0.49
Atrazine	ND		ug/l	10	0.76
Benzaldehyde	ND		ug/l	5.0	0.53
Caprolactam	ND		ug/l	10	3.3
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84

#### Tentatively Identified Compounds

Total TIC Compounds	53.4	J	ug/l
Aldol Condensates	53.4	J	ug/l

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 04/12/19 14:14  
 Analyst: JG

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 07:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1225312-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	44		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	74		15-120
2,4,6-Tribromophenol	67		10-120
4-Terphenyl-d14	83		41-149

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270D-SIM  
**Analytical Date:** 04/12/19 17:06  
**Analyst:** DV

**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/11/19 07:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1225313-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	0.02	J	ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	0.02	J	ug/l	0.10	0.01
Phenanthrene	0.03	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06



**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270D-SIM  
 Analytical Date: 04/12/19 17:06  
 Analyst: DV

Extraction Method: EPA 3510C  
 Extraction Date: 04/11/19 07:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1225313-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	72		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	73		41-149

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 1050 NIAGARA

**Project Number:** T0136-013-005

**Lab Number:** L1914072

**Report Date:** 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1225312-2 WG1225312-3								
Bis(2-chloroethyl)ether	75		76		40-140	1		30
3,3'-Dichlorobenzidine	50		57		40-140	13		30
2,4-Dinitrotoluene	97		92		48-143	5		30
2,6-Dinitrotoluene	96		94		40-140	2		30
4-Chlorophenyl phenyl ether	86		82		40-140	5		30
4-Bromophenyl phenyl ether	91		85		40-140	7		30
Bis(2-chloroisopropyl)ether	74		73		40-140	1		30
Bis(2-chloroethoxy)methane	84		83		40-140	1		30
Hexachlorocyclopentadiene	71		74		40-140	4		30
Isophorone	88		88		40-140	0		30
Nitrobenzene	78		80		40-140	3		30
NDPA/DPA	91		90		40-140	1		30
n-Nitrosodi-n-propylamine	89		90		29-132	1		30
Bis(2-ethylhexyl)phthalate	76		74		40-140	3		30
Butyl benzyl phthalate	96		88		40-140	9		30
Di-n-butylphthalate	88		82		40-140	7		30
Di-n-octylphthalate	84		80		40-140	5		30
Diethyl phthalate	98		93		40-140	5		30
Dimethyl phthalate	92		92		40-140	0		30
Biphenyl	86		87		40-140	1		30
4-Chloroaniline	65		80		40-140	21		30
2-Nitroaniline	87		86		52-143	1		30
3-Nitroaniline	67		74		25-145	10		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1225312-2 WG1225312-3								
4-Nitroaniline	83		84		51-143	1		30
Dibenzofuran	83		82		40-140	1		30
1,2,4,5-Tetrachlorobenzene	80		82		2-134	2		30
Acetophenone	90		90		39-129	0		30
2,4,6-Trichlorophenol	92		90		30-130	2		30
p-Chloro-m-cresol	94		93		23-97	1		30
2-Chlorophenol	78		78		27-123	0		30
2,4-Dichlorophenol	86		87		30-130	1		30
2,4-Dimethylphenol	61		76		30-130	22		30
2-Nitrophenol	79		78		30-130	1		30
4-Nitrophenol	80		75		10-80	6		30
2,4-Dinitrophenol	83		79		20-130	5		30
4,6-Dinitro-o-cresol	84		79		20-164	6		30
Phenol	58		58		12-110	0		30
3-Methylphenol/4-Methylphenol	78		78		30-130	0		30
2,4,5-Trichlorophenol	91		92		30-130	1		30
Carbazole	94		89		55-144	5		30
Atrazine	130		123		40-140	6		30
Benzaldehyde	83		82		40-140	1		30
Caprolactam	50		49		10-130	2		30
2,3,4,6-Tetrachlorophenol	92		84		40-140	9		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1225312-2 WG1225312-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	61		62		21-120
Phenol-d6	55		56		10-120
Nitrobenzene-d5	79		80		23-120
2-Fluorobiphenyl	82		82		15-120
2,4,6-Tribromophenol	91		87		10-120
4-Terphenyl-d14	89		83		41-149

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 1050 NIAGARA

**Project Number:** T0136-013-005

**Lab Number:** L1914072

**Report Date:** 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1225313-2 WG1225313-3								
Acenaphthene	77		84		40-140	9		40
2-Chloronaphthalene	73		83		40-140	13		40
Fluoranthene	77		73		40-140	5		40
Hexachlorobutadiene	69		72		40-140	4		40
Naphthalene	68		72		40-140	6		40
Benzo(a)anthracene	88		100		40-140	13		40
Benzo(a)pyrene	77		84		40-140	9		40
Benzo(b)fluoranthene	78		84		40-140	7		40
Benzo(k)fluoranthene	82		89		40-140	8		40
Chrysene	88		114		40-140	26		40
Acenaphthylene	75		76		40-140	1		40
Anthracene	82		88		40-140	7		40
Benzo(ghi)perylene	77		82		40-140	6		40
Fluorene	83		108		40-140	26		40
Phenanthrene	77		84		40-140	9		40
Dibenzo(a,h)anthracene	81		86		40-140	6		40
Indeno(1,2,3-cd)pyrene	82		86		40-140	5		40
Pyrene	76		72		40-140	5		40
2-Methylnaphthalene	70		72		40-140	3		40
Pentachlorophenol	65		65		40-140	0		40
Hexachlorobenzene	78		86		40-140	10		40
Hexachloroethane	76		64		40-140	17		40

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 1050 NIAGARA

Project Number: T0136-013-005

Lab Number: L1914072

Report Date: 04/16/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1225313-2 WG1225313-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	48		44		21-120
Phenol-d6	40		40		10-120
Nitrobenzene-d5	84		67		23-120
2-Fluorobiphenyl	67		77		15-120
2,4,6-Tribromophenol	65		75		10-120
4-Terphenyl-d14	68		71		41-149

**Project Name:** 1050 NIAGARA**Lab Number:** L1914072**Project Number:** T0136-013-005**Report Date:** 04/16/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1914072-01A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-01B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-01C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-01D	Amber 250ml unpreserved	A	7	7	3.4	Y	Absent		NYTCL-8270-SIM-LVI(7)
L1914072-01E	Amber 250ml unpreserved	A	7	7	3.4	Y	Absent		NYTCL-8270-LVI(7)
L1914072-02A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-02B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-02C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-02D	Amber 250ml unpreserved	A	7	7	3.4	Y	Absent		NYTCL-8270-SIM-LVI(7)
L1914072-02E	Amber 250ml unpreserved	A	7	7	3.4	Y	Absent		NYTCL-8270-LVI(7)
L1914072-03A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-03B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-03C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L1914072-03D	Amber 250ml unpreserved	A	7	7	3.4	Y	Absent		NYTCL-8270-SIM-LVI(7)
L1914072-03E	Amber 250ml unpreserved	A	7	7	3.4	Y	Absent		NYTCL-8270-LVI(7)

**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

Report Format: DU Report with 'J' Qualifiers





**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** 1050 NIAGARA  
**Project Number:** T0136-013-005

**Lab Number:** L1914072  
**Report Date:** 04/16/19

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**Revision **12**

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**Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**EPA 6860:** SCM: Perchlorate**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg. EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

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