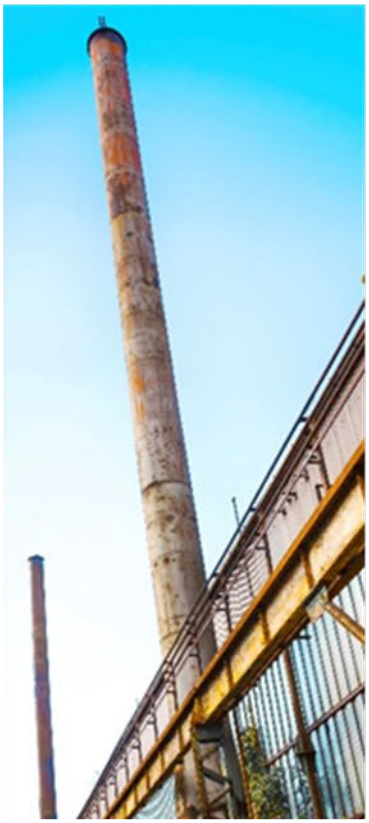
2020 Periodic Review Report

Roblin Steel Site (formerly Wickwire Spencer)
OU-3 – Envirotek II Groundwater
NYSDEC Site No. 915056
4000 River Road
Tonawanda, New York



Niagara River World, Inc.

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1. Introduction

The Roblin Steel Site, formerly Wickwire Spencer, is located at 4000 River Road in Tonawanda, New York (Figure 1). Within the Roblin Steel property is a sub-Site known as the Envirotek II facility (Site) as shown on Figure 2. The Site consists of a 2.5-acre parcel of land located within the larger 62-acre Robin Steel complex, all of which is owned by Niagara River World, Inc. (NRW) and leased to small light industrial/commercial tenants. Operable Unit (OU) 3 addresses the Envirotek II groundwater. Active remediation of the Site was completed in 2003 under the oversight of the New York State Department of Environmental Conservation (NYSDEC) in accordance with Order on Consent #B9-0407-92-05, Site #915056. A Site Management Plan (SMP) was developed upon completion of the active remediation, which called for monitored natural attenuation for residual groundwater impacts to continue through 2025.

1.1 Site History

The history of the Site is interrelated with the history of the Roblin Steel complex, as the Site was formerly leased by Envirotek Ltd. Company (Envirotek) from Roblin Steel for industrial use. Between August 1981 and June 1989, Envirotek operated a solvent recovery operation at the Site located within the Roblin Steel property.

A review of the property history indicates that the Roblin Steel Site was the location of industrial steel production operations beginning in the early 1900s. The property was developed in the early 1900s for the production of steel by the Wickwire Spencer Steel Company (Wickwire). In 1945, the property was sold to the Colorado Fuel and Iron Corporation (Colorado F&I), which subsequently merged with Wickwire, and was operated by Colorado F&I until it went bankrupt in 1963. In the mid to late 1960s, Roblin Steel purchased the property and used it primarily for storage. Roblin Steel also subleased portions of the property to a number of other companies including, but not limited to, Ascension Chemical, Rupp Rental, Freightways Transportation, Envirotek, and Booth Oil.

In 1984, the NYSDEC issued a Resource Conservation and Recovery Act (RCRA) Part B Permit to Envirotek to operate the Site as a hazardous waste treatment, storage, and disposal facility. After violations of this permit in 1985, including improper waste characterization, RCRA drum handling violations, and lack of insurance and financial assurance, Envirotek entered into an Administrative Order of Consent (AOC) with the NYSDEC that required a reduction of Envirotek's hazardous waste inventory.

In 1988, Envirotek submitted a Facility Closure Plan (Envirotek, 1988) to the NYSDEC to remove and dispose of all materials remaining on Site and to take measures to decontaminate the property. The NYSDEC denied approval of the Facility Closure Plan after its review and determined this plan was unacceptable. NYSDEC believed that it contained inaccurate closure costs and proposed the use of unqualified personnel to implement the Site closure.

On February 2, 1989, Envirotek filed a petition under Chapter 11 of the Bankruptcy Code in the United States Bankruptcy Court of the Western District of New York. The current owner of the property, NRW, evicted Envirotek in June 1989, at which time Envirotek abandoned the facility. On November 16, 1989, the NYSDEC formally revoked Envirotek's RCRA Part B Permit to operate on the basis of Envirotek's inability to develop an acceptable Facility Closure Plan.

Following abandonment of the Site, the United States Environmental Protection Agency (USEPA) inspected the Site and confirmed the presence of abandoned and unsecured drums and containers, pits containing hazardous substances, and contaminated process vessels and tanks. As a result, the USEPA notified former Envirotek customers of their potential liability at the Site and requested a removal action. In May of 1990, the USEPA entered into an AOC with Site respondents to perform a removal action at the Site (Removal Action AOC).

In November 1990, implementation of a Remedial Action Sampling Plan (RASP) was completed at the Site to identify areas on Site, other than the Still Discharge Area (SDA), at which spills or releases of chemical compounds may have occurred. The results of this investigation indicated the following:

- The soil gas survey indicated elevated levels of volatile organic compounds (VOCs) in the area of the SDA and in an area to the west of Building 153.
- The analytical results for the groundwater sampling indicated the presence of VOC-impacted groundwater associated with the Site.
- The analytical results for the soil sampling indicated that there were elevated levels of chlorinated and aromatic VOCs, and that the soils containing the highest level of VOCs were located in the vicinity of the SDA.

In May 1993, implementation of a removal action that consisted of the removal of approximately 175 tons of impacted soil from the SDA was completed.

The NYSDEC and the Envirotek II/Roblin Steel Site Potentially Responsible Party (PRP) Group entered into a Consent Order on September 2, 1997 and amended on August 20, 1998. The Consent Order, and its amendment, obligated the responsible parties to implement a remedial investigation/feasibility study (RI/FS) remedial program.

The Envirotek II/Roblin Steel Site PRP Group conducted an RI at the Site to assess the on-Site surface and subsurface soil quality, subsurface soil quality, Site groundwater quality, and Site geologic and hydrogeologic characteristics. The results of the RI for the Site were presented in the RI Report. Based on the results of the RI report, the Envirotek II/Roblin Steel Site PRP Group submitted the following three recommendations to the NYSDEC:

- Defined as OU-1, the implementation of an Interim Remedial Measure (IRM) to remove the Boiler House ink waste for off-Site disposal; removing soils containing elevated levels of VOCs from Waste Pit No. 6, decontaminating the pit, and backfilling the pit with clean backfill; and disposing of all solid, liquid, and personal protection equipment generated during this IRM to an approved off-Site disposal facility.
- Defined as OU-2, the reduction of the potential for migration of VOC constituents of concern (COCs) from source-area soils to the shallow overburden groundwater.

- Defined as OU-3, the reduction of the concentration of VOC (COCs) in shallow overburden groundwater associated with elevated VOC concentrations in source area soils.

The implementation of the OU-2 IRM had an expected significant beneficial effect on OU-3 due to the removal of 7,100 tons of impacted soil as a potential future groundwater source of VOC COCs. The IRM Final Report for OU-3 presented an evaluation of groundwater gauging and sampling data and the historical occurrence and future viability of natural attenuation and supported the selection of a Monitored Natural Attenuation (MNA) remedy.

The NYSDEC approved the IRM Final Report for OU-3 in March 2005. On March 11, 2005, the Envirotek II/Roblin Steel Site PRP Group submitted the Focused Feasibility Study Report (FFS) that identified MNA as the best remedial option for OU-3, which was approved by the NYSDEC. The NYSDEC then issued the Record of Decision (ROD) for the Site on March 31, 2005, which selected MNA as the remedy to compete the final remedial action of OU-3.

The Monitoring Plan for OU-3 proposed to implement a MNA groundwater sampling program utilizing the existing monitoring well network. The objective of the monitoring plan for OU-3 was to obtain additional groundwater monitoring data, to supplement the existing data, and to evaluate whether MNA continues to be an effective remedy for OU-3. The groundwater sampling program, as stated in the Site Management Plan (dated August 2007, Revised October 2007 and presented as Exhibit B to the Final Engineering Report), consists of annual groundwater sampling for a period of 3 years, commencing in 2008, with subsequent sampling events to take place every 5 years until the year 2025. A total of six groundwater sampling events is required. The 2020 sampling event is the fifth of six required sampling events.

2. Groundwater Monitoring Activities

The 2020 monitoring program at the Envirotek II/Roblin Steel Site consisted of one sampling event completed on November 3 and 4, 2020. Groundwater samples and water level elevations were collected from six of the seven monitoring wells that define the OU-3 monitoring well network (ENV-1, ENV-4, ENV-7, ENV-8, ENV-9, and GW-3), along with four additional monitoring wells (NRG-3, NRG-4, NRG-5 and NRG-6). Monitoring well ENV-3R, part of the OU-3 monitoring network, could not be located for sampling. A summary of the monitoring wells that were monitored for groundwater elevation is presented on Table 1.

Groundwater samples were collected using low-flow purging and sampling techniques. Prior to sampling, each monitoring well was purged using a submersible pump and dedicated tubing until parameters of pH, conductance, dissolved oxygen (DO), temperature, and oxidation-reduction potential (ORP) stabilized, which provided an indication that water drawn from the well is representative of the groundwater in the surrounding formation. The results of these field parameters are presented on Table 2. After the field parameters stabilized, samples were collected with a submersible pump into sample containers provided by the testing laboratory.

Purge water generated during the groundwater sampling activities was emptied on Site, away from the sampled well. Quality control samples, including a trip blank, a matrix spike and matrix spike duplicate, and a field duplicate were collected. Samples were delivered under a chain of custody to Eurofins TestAmerica in Amherst, New York for analysis of VOCs by USEPA SW-846 Method 8260.

3. Site Management

The ROD for the Site included the implementation of a SMP. The SMP requires, in part, an Institutional Control/Engineering Control (IC/EC) certification submitted to certify that the controls in place are unchanged from the previous certification and that nothing has occurred that will impair the ability of the controls to protect public health or the environment, or constitute a violation to comply with any operation and maintenance of the Site. There are no engineering controls on the Site as there is no active remedial system. The IC/EC for the Site is in the form of an environmental easement that includes the following:

- Require compliance with the approved SMP
- Limit the use and development of the property to commercial or industrial uses only
- Restrict groundwater use as a source of potable water unless treated
- Require the Site owner to complete and submit an IC/EC certification

No significant Site activities or changes have occurred in the last 5 years, nor has any excavation taken place. The Site use has been consistent with commercial/industrial uses. Only recently (December 2020), NRW imported approximately 285 tons of crushed concrete from Swift Rivers Associates in Tonawanda, New York to grade and fill an area between monitoring wells NRG-5, NRG-6, and GW-7 for additional tractor trailer staging.

As required by the NYSDEC, the signed IC/EC Certification is presented in Appendix A.

4. Groundwater Monitoring Results

This section includes the results of the 2020 groundwater sampling event. Included are descriptions of Site-specific hydrogeology, the identification and distribution of constituents present in groundwater, and a comparison of historical data. Constituents were compared to the applicable NYSDEC Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) Groundwater Standards and Guidance Values. Copies of the Groundwater Field Sampling Forms are provided in Appendix B.

4.1 Site Hydrogeology

The groundwater elevation contours are consistent with historical interpretations. The groundwater flow has a unidirectional flow throughout the Site due to the proximity of the Niagara River. Monitoring wells NRG-3 and NRG-4 are located west of the boiler house, in an area referred to as the "Ore Pit." The Ore Pit has concrete walls to the south, north and west (and possibly east) of the well locations, which provide a barrier to groundwater movement, thus, creating an elevated groundwater level in the area. As presented on Table 3, the groundwater gradient calculated

between monitoring wells ENV-1 and GW-3 and between ENV-1 and ENV-7 increased from the 2015 reported groundwater gradient. Variation in groundwater levels and gradients are seasonally dependent upon the amount of precipitation received.

Groundwater elevation data collected during the groundwater sampling events is presented on Figure 3 that illustrates the groundwater elevation contours within the upper fill material based on groundwater levels measured on November 3, 2020.

4.2 Groundwater Analytical Test Results

A summary of VOCs detected in groundwater during the 2020 groundwater sampling event is presented on Table 4. Figure 4 illustrates the distribution of total VOC concentrations detected in groundwater from each of the monitoring wells during the 2020 sampling event. The laboratory analytical data report is provided in Appendix C. The data was evaluated for quality assurance purposes following the guidelines provided in NYSDEC Division of Environmental Remediation "DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B-Guidance for Data Deliverables and the Development of Data Usability Summary Reports (DUSR)," (DER-10) May 2010, and was found to be usable without qualification. The DUSR is presented in Appendix D.

Exceedances of applicable NYSDEC groundwater criteria were observed at four of the ten monitoring wells sampled:

- ENV-8: cis-1,2,-dichloroethene (cis-1,2-DCE) at a concentration of 14 ug/L versus a standard of 5 ug/L
- NRG-3: methylene chloride at an estimated concentration of 12J ug/L versus a standard of 5 ug/L, and tricloroethene (TCE) at a concentration of 21 ug/L versus a standard of 5 ug/L
- NRG-5: 1,2-dichloroethane (1,2-DCA) at a concentration of 2.1 ug/L versus a standard of 0.6 ug/L, and cis-1,2-DCE at a concentration of 41 ug/L versus a standard of 5 ug/L
- NRG-6: cis-1,2-DCE at a concentration and duplicate of 11 ug/L and 12 ug/L versus a standard of 5 ug/L

Historical groundwater analytical data is presented in Table 5. Historical groundwater total VOC concentration figures displaying the lateral extent of the total VOC concentration plume from the sampling events of October 2015, October 2010, October 2009, October 2008, October 2006, October 2005, September 2004, May 2004, and September 1999 are presented in Appendix E.

Trend analysis of VOCs from the comparison of historical data, as shown on Figures 5 through 16, indicates that all VOC concentrations are decreasing or remaining the same in groundwater at all monitoring wells with exceptions for cis-1,2-dichloroethene (NRG-5 and NRG-6), and TCE (NRG-3). The concentrations of TCE at NRG-3 and cis-1,2-DCE at NRG-5 and NRG-6 show increases compared to the 2015 sampling event but are generally below historical maximums. Only the TCE detection at NRG-3 appears higher than the historical range; however, due to elevated detection limits (25 ug/L to 100 ug/L) in historical sampling rounds, actual TCE concentrations may have been masked. No trends can be discerned from this single data point.

5. Conclusions

Overall, groundwater quality continues to generally improve as VOC concentrations decrease across the Site. A few detections increased from the prior event; however, these are not indicative of any increasing trend as overall, concentrations continue to decrease from the start of monitoring.

The OU-3 MNA remedy has been shown to be sufficiently effective by decreasing the VOC concentration plume over time and improving Site groundwater quality.

Figures

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ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

SITE LOCATION MAP

Project No. **86-18749**
Report No. **001**
Date **2/11/21**

FIGURE 1

Filename: C:\US\Amherst\Projects\86\18749\CADD\Drawings\Figures\18749-Reports\Report 1\18749-Figure 1 - Site Location Map.dwg
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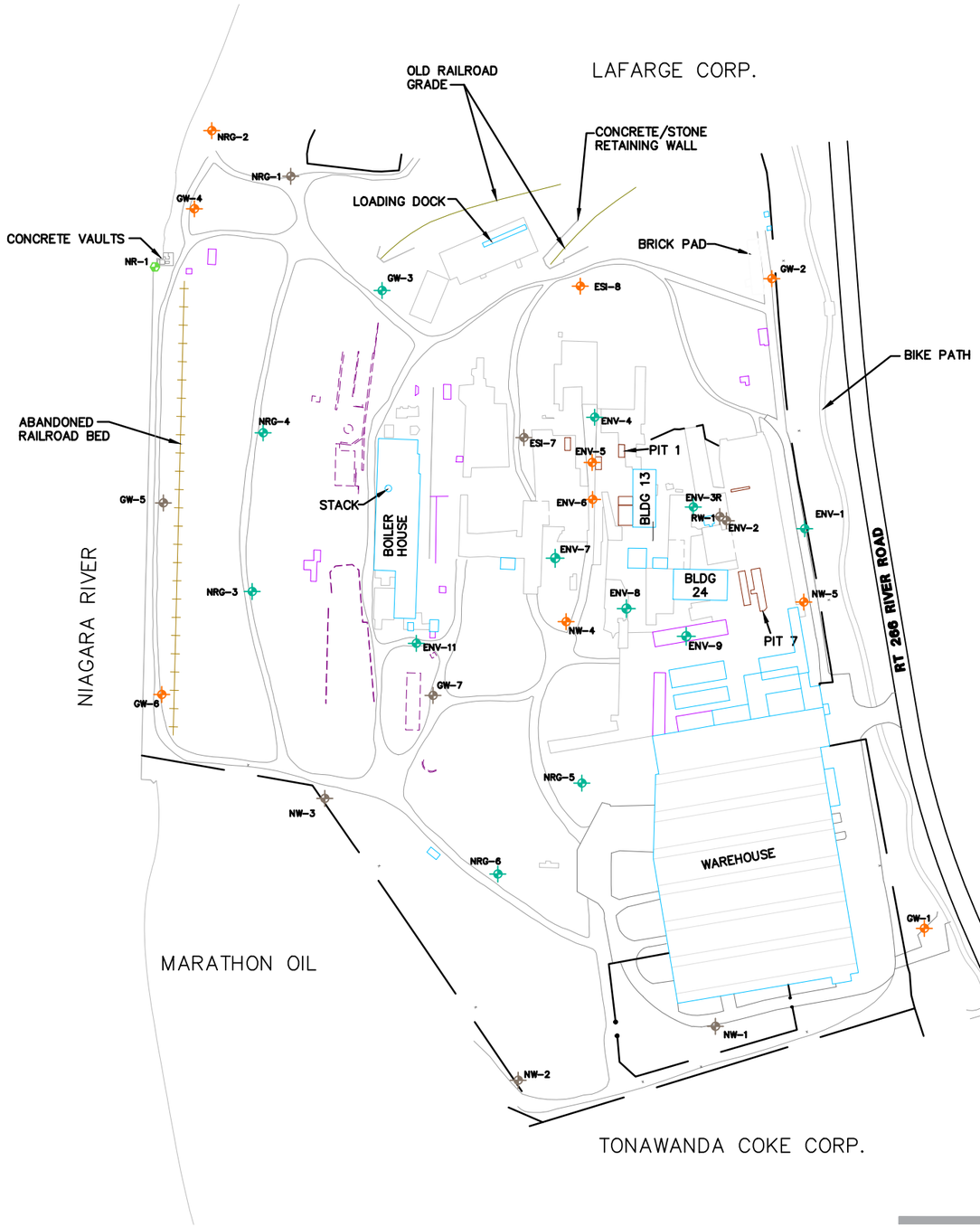

LEGEND:

- EXISTING BUILDING
- CONCRETE PAD
- EXISTING PITS
- FENCE
- FORMER BUILDING FOUNDATION
- ENV-1 — EXISTING MONITORING WELL SAMPLED
- GW-1 — EXISTING MONITORING WELL FOR GAUGING ONLY
- NR-1 — STAFF GAUGE
- GW-7 — EXISTING MONITORING WELL UNABLE TO BE GAUGED

N

NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
   GW: NYSDEC MONITORING WELL
   ENV: BBL MONITORING WELL
   NW: NIAGARA RIVER WORLD MONITORING WELL
   ESI: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
   NRG: NATURAL RESOURCE GROUP MONITORING WELL.

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GHD

ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

SITE PLAN

Project No. **86-18749**
Report No. **001**
Date **2/11/21**

FIGURE 2

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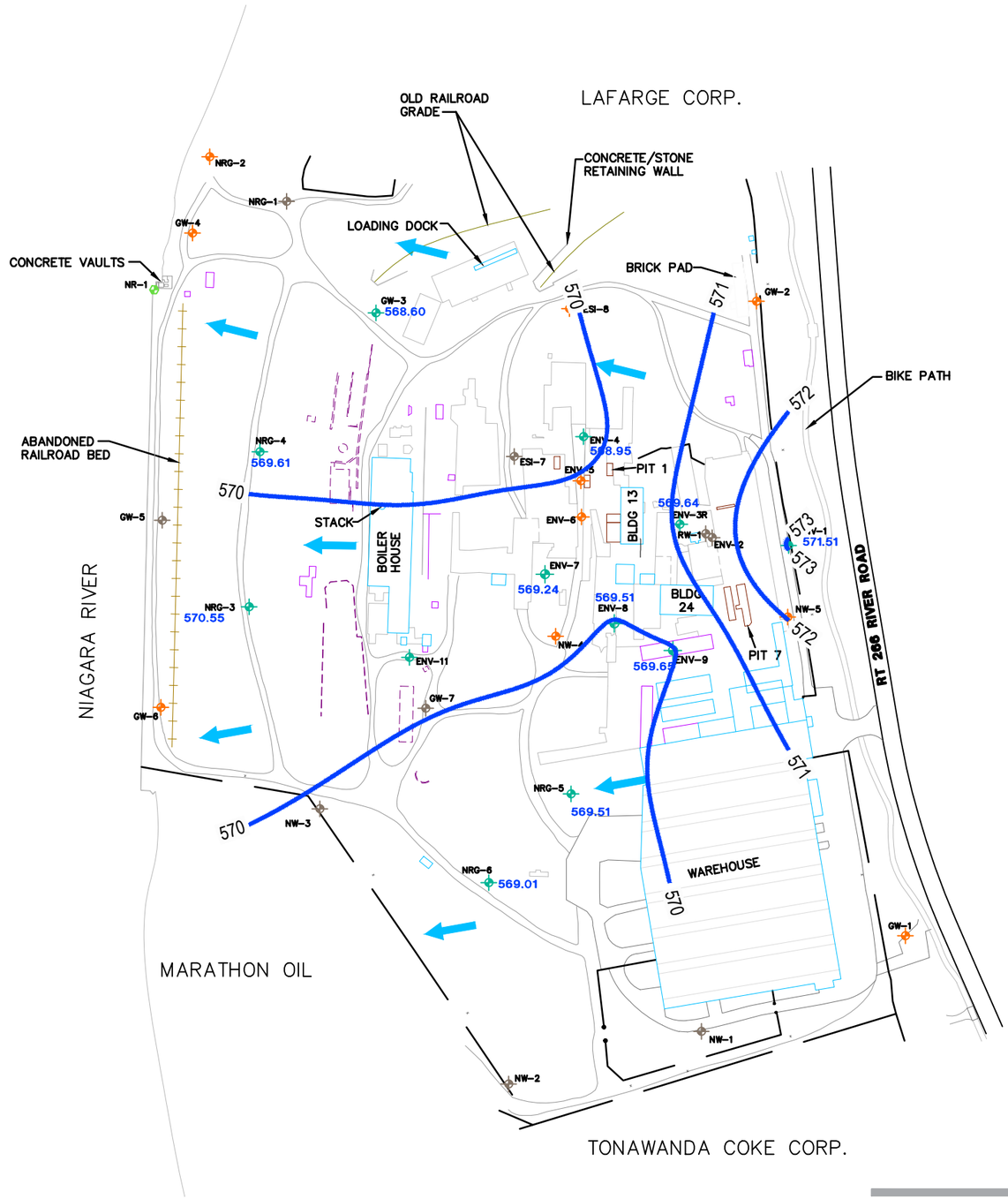

LEGEND:

- EXISTING BUILDING
- CONCRETE PAD
- EXISTING PITS
- FENCE
- FORMER BUILDING FOUNDATION
- ENV-1 — EXISTING MONITORING WELL SAMPLED
- GW-1 — EXISTING MONITORING WELL FOR GAUGING ONLY
- NR-1 — STAFF GAUGE
- GW-7 — EXISTING MONITORING WELL UNABLE TO BE GAUGED
- 570 — GROUNDWATER ELEVATION CONTOUR IN FEET (AMSL)
- GROUNDWATER FLOW DIRECTION

NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
   GW: NYSDEC MONITORING WELL
   ENV: BBL MONITORING WELL
   NW: NIAGARA RIVER WORLD MONITORING WELL
   ESI: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
   NRG: NATURAL RESOURCE GROUP MONITORING WELL.
3. CONTOURS BASED ON WATER LEVEL READINGS COLLECTED ON NOVEMBER 3, 2020.

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ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

GROUNDWATER ELEVATION CONTOUR MAP

Project No. **86-18749**
Report No. **001**
Date **2/11/21**

FIGURE 3

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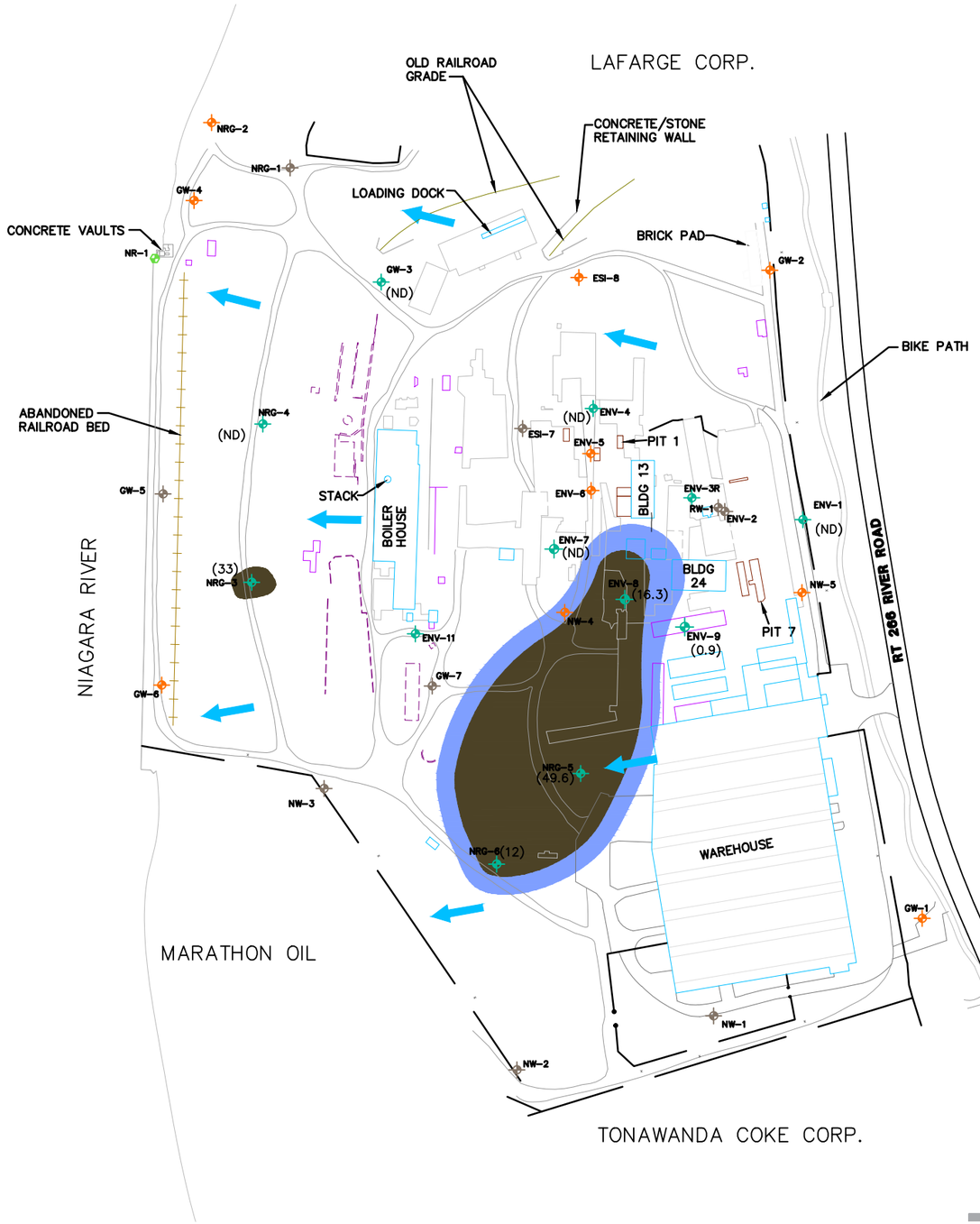

LEGEND:

- EXISTING BUILDING
- CONCRETE PAD
- EXISTING PITS
- FENCE
- FORMER BUILDING FOUNDATION
- ENV-1 — EXISTING MONITORING WELL SAMPLED
- GW-1 — EXISTING MONITORING WELL FOR GAUGING ONLY
- NR-1 — STAFF GAUGE
- GW-7 — EXISTING MONITORING WELL UNABLE TO BE GAUGED
- GROUNDWATER FLOW DIRECTION
- (6) — TOTAL VOC CONCENTRATION (Ug/L)
- 100 – 10 Ug/L
- 10 – 1 Ug/L

NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
   GW: NYSDEC MONITORING WELL
   ENV: BBL MONITORING WELL
   NW: NIAGARA RIVER WORLD MONITORING WELL
   ESI: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
   NRG: NATURAL RESOURCE GROUP MONITORING WELL.

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0 300'

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ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

TOTAL GROUNDWATER VOC CONCENTRATION MAP
NOVEMBER 3, 2020

Project No. **86-18749**
Report No. **001**
Date **2/11/21**

FIGURE 4

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FIGURE 5
Groundwater VOC Concentrations in ENV-1 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

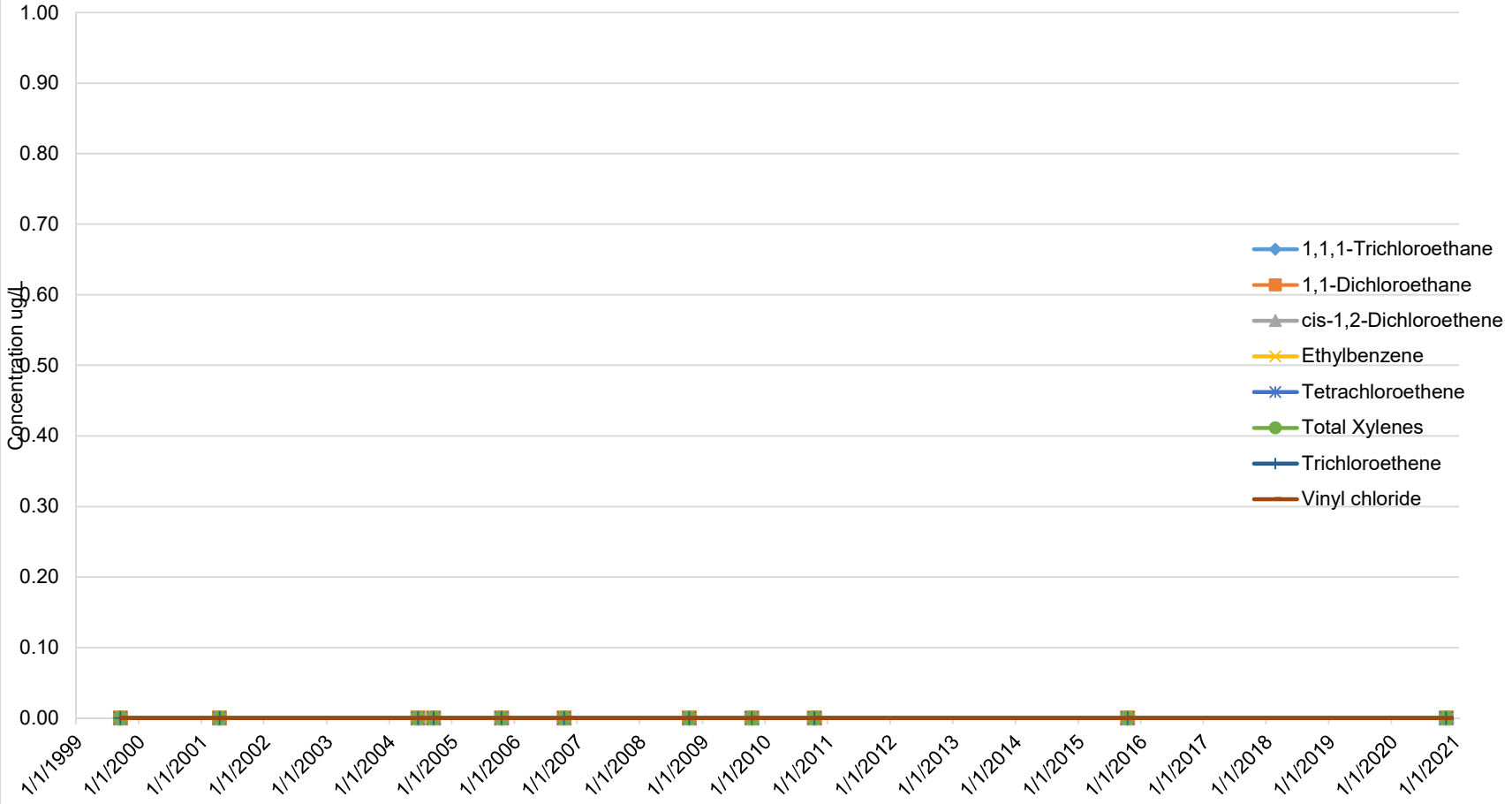


FIGURE 6
Groundwater VOC Concentrations in ENV-3R vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

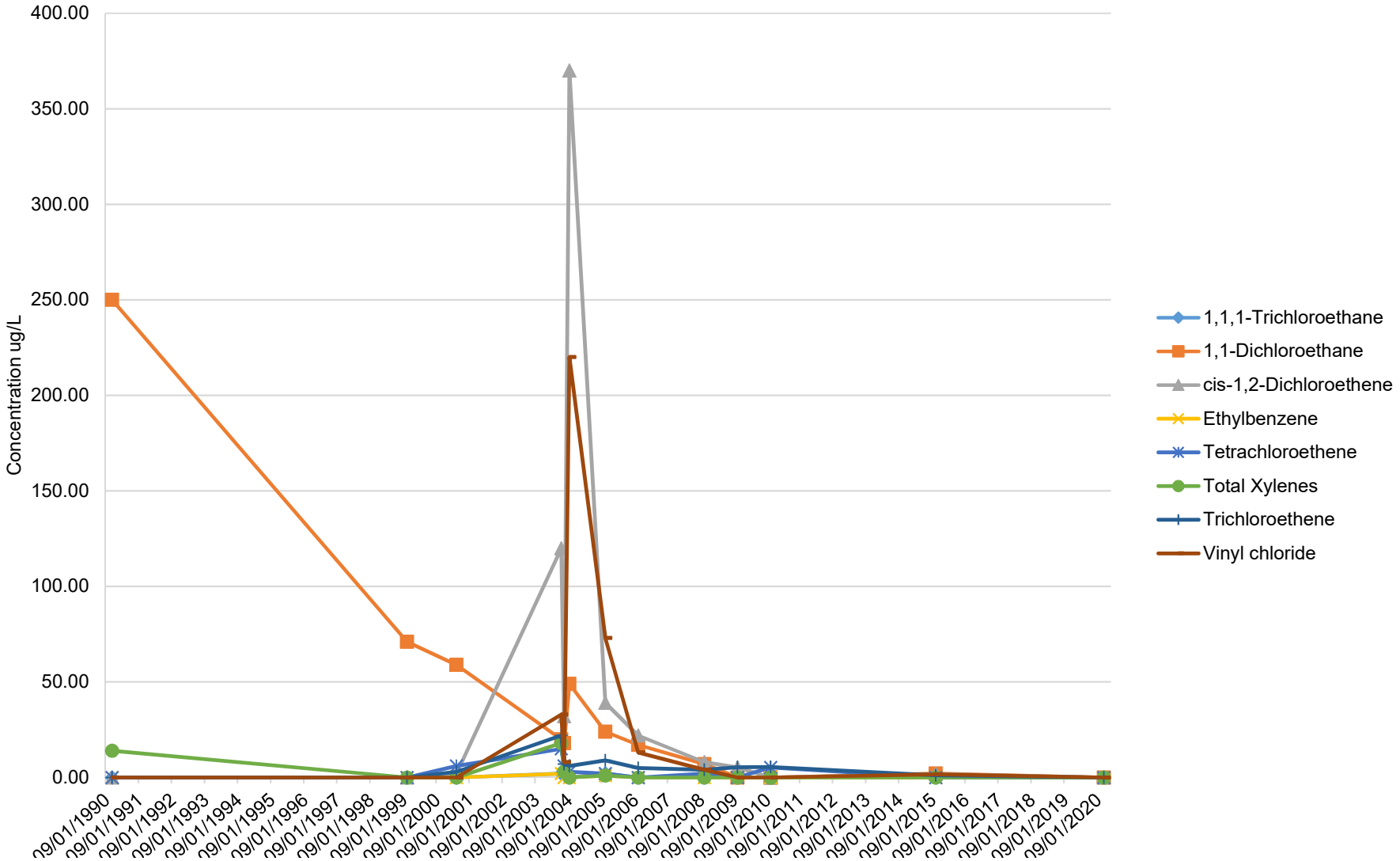


FIGURE 7
Groundwater VOC Concentrations in ENV-4 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

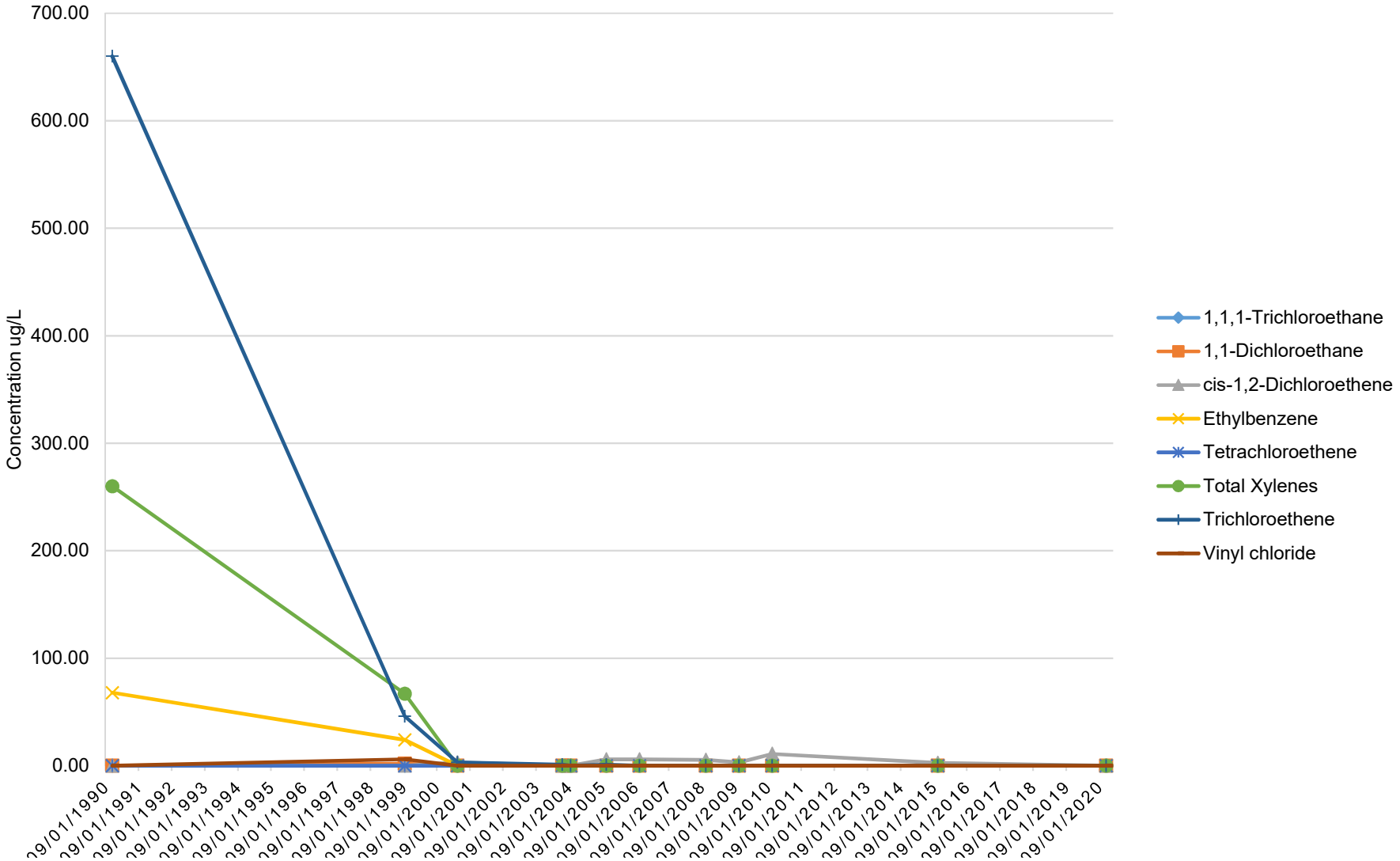


FIGURE 8
Groundwater VOC Concentrations in ENV-7 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

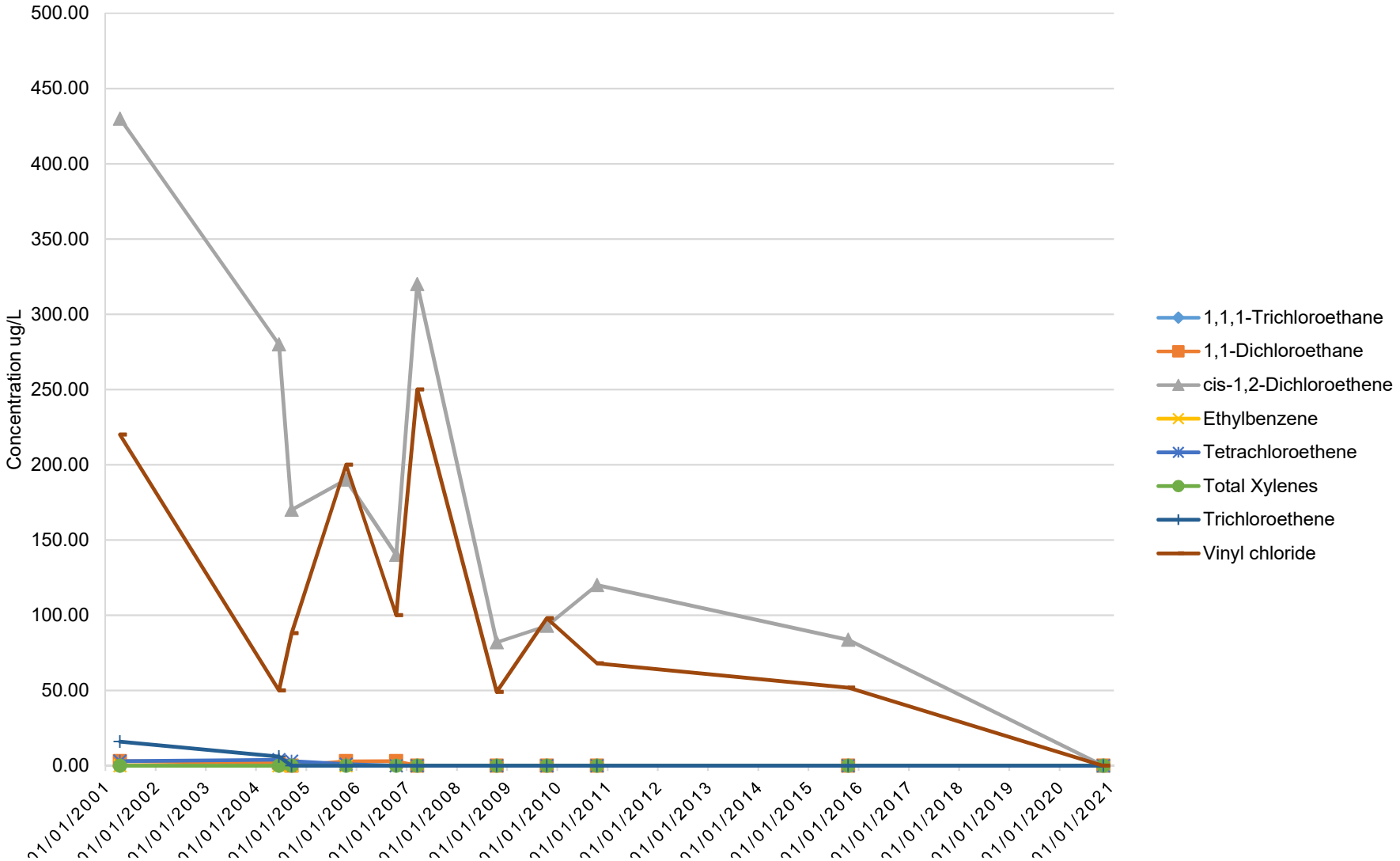


FIGURE 9
Groundwater VOC Concentrations in ENV-8 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

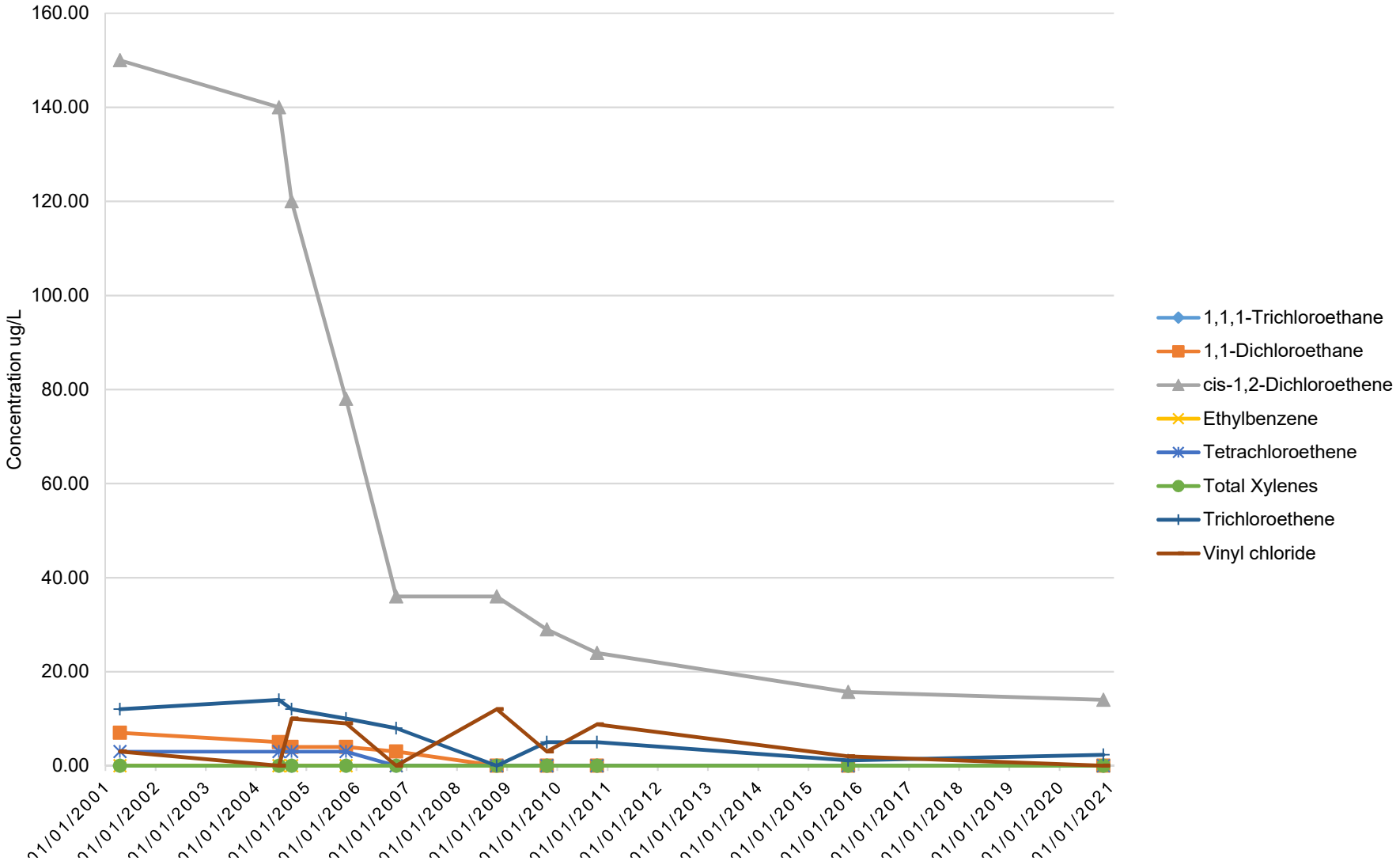


FIGURE 10
Groundwater VOC Concentrations in ENV-9 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

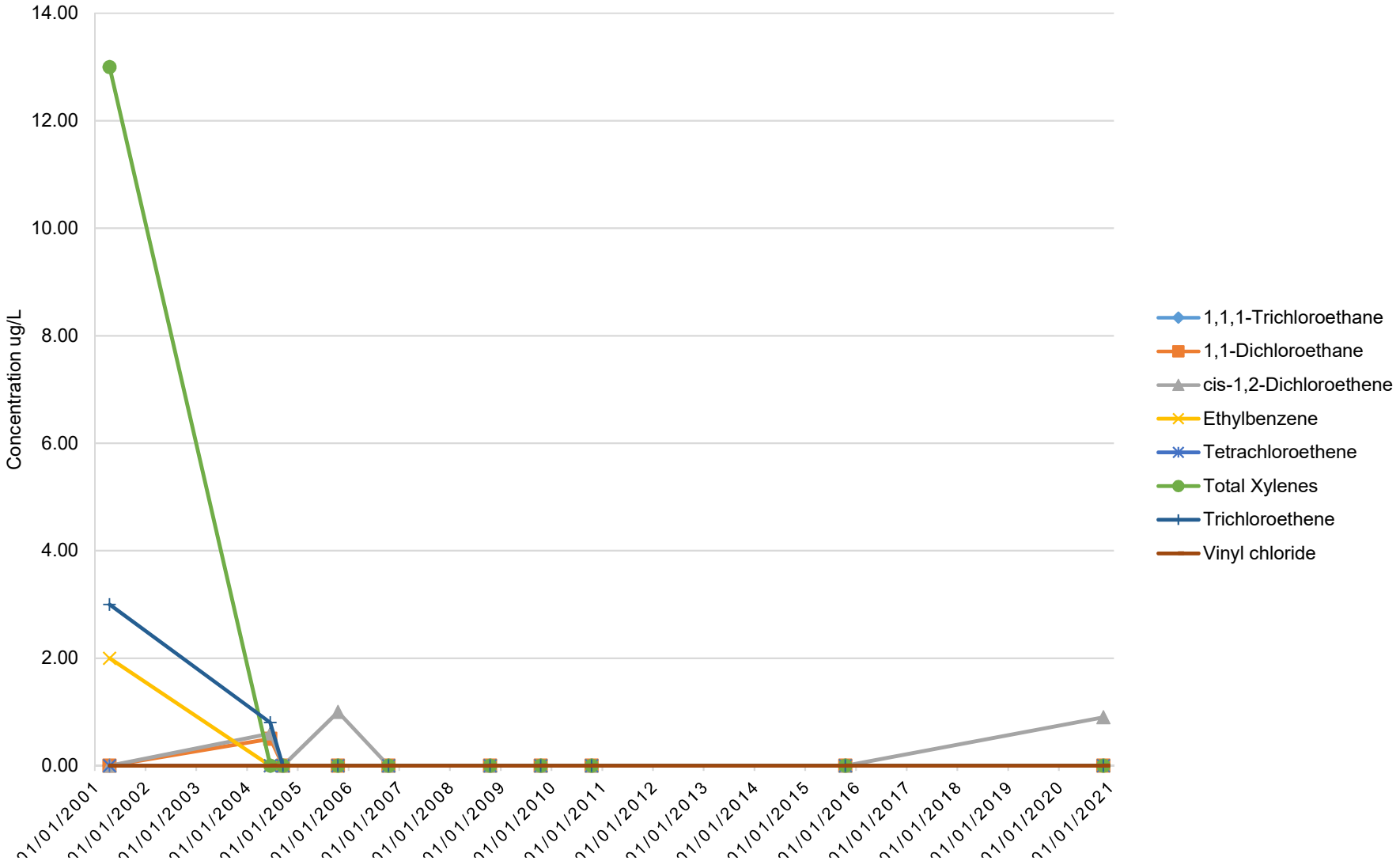


FIGURE 11
Groundwater VOC Concentrations in ENV-11 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

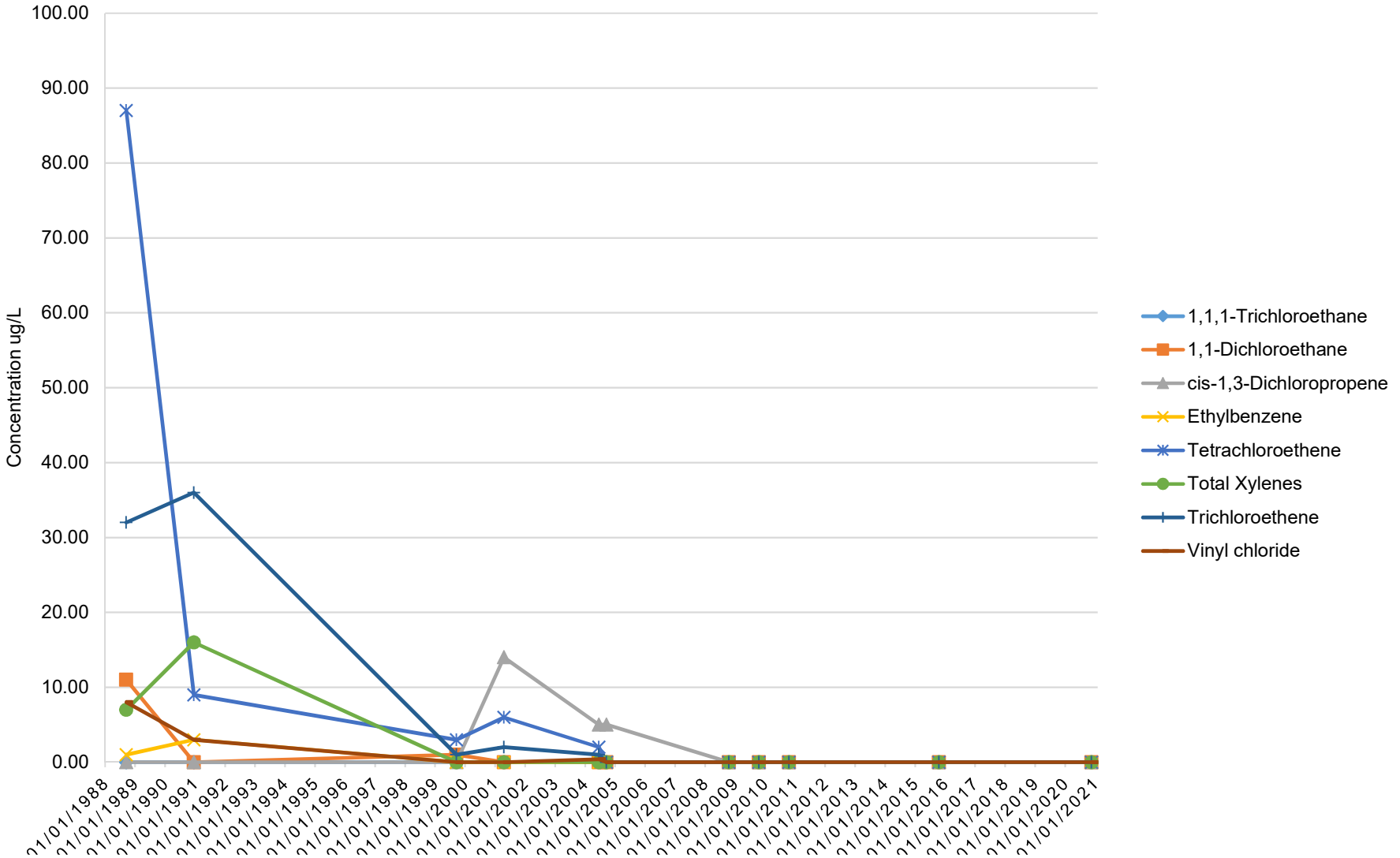


FIGURE 12
Groundwater VOC Concentrations in GW-3 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

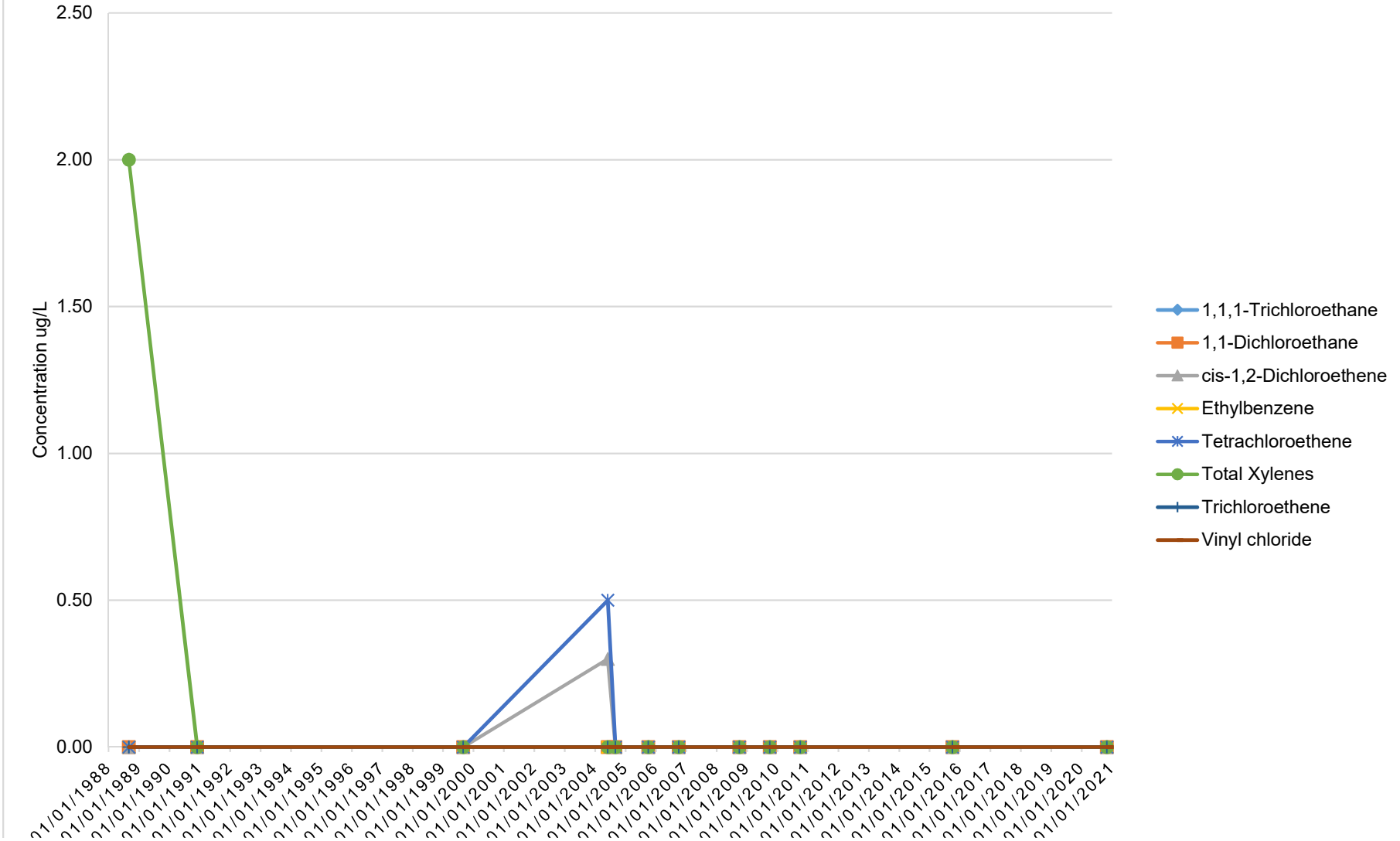


FIGURE 13
Groundwater VOC Concentrations in NRG-3 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

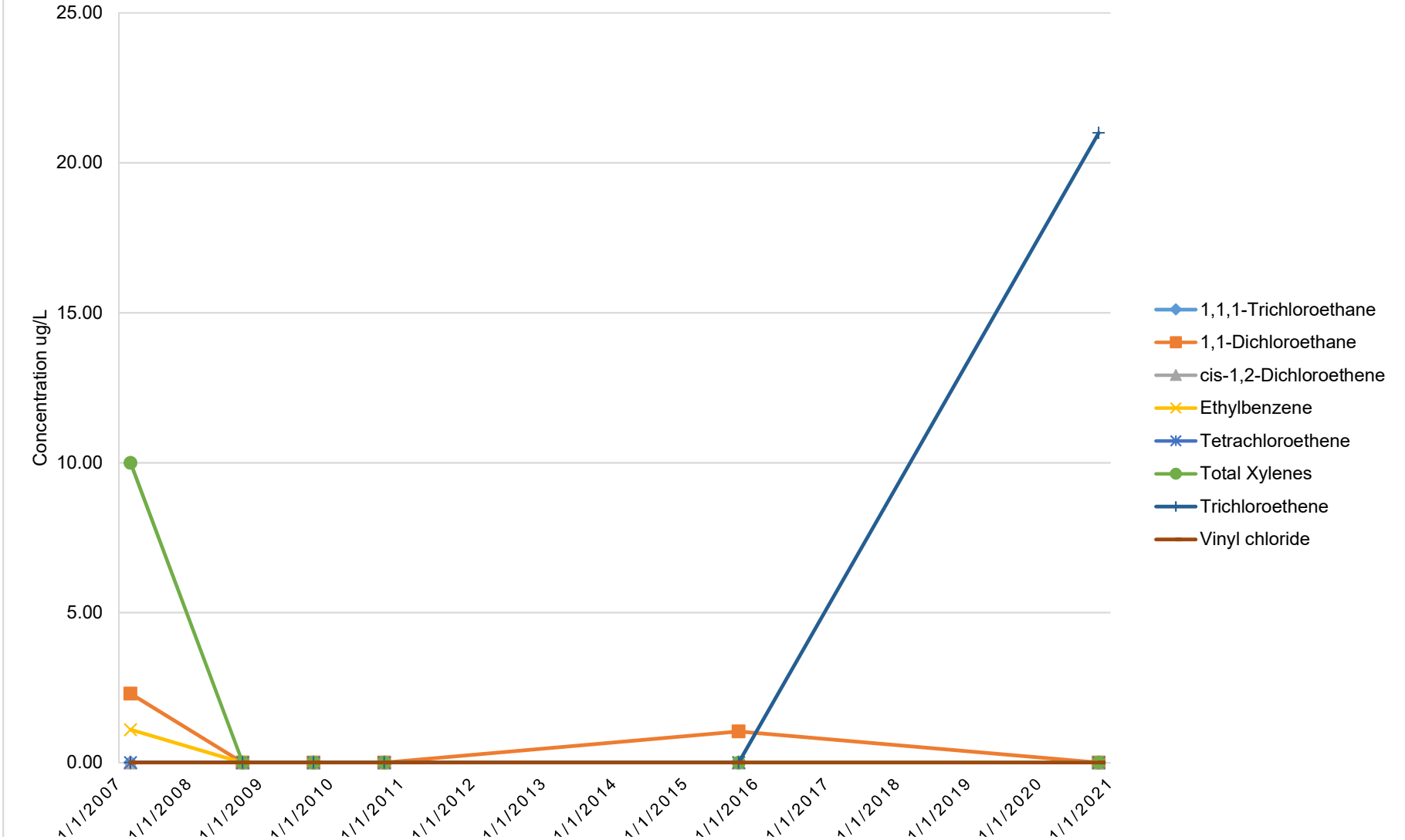


FIGURE 14
Groundwater VOC Concentrations in NRG-4 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

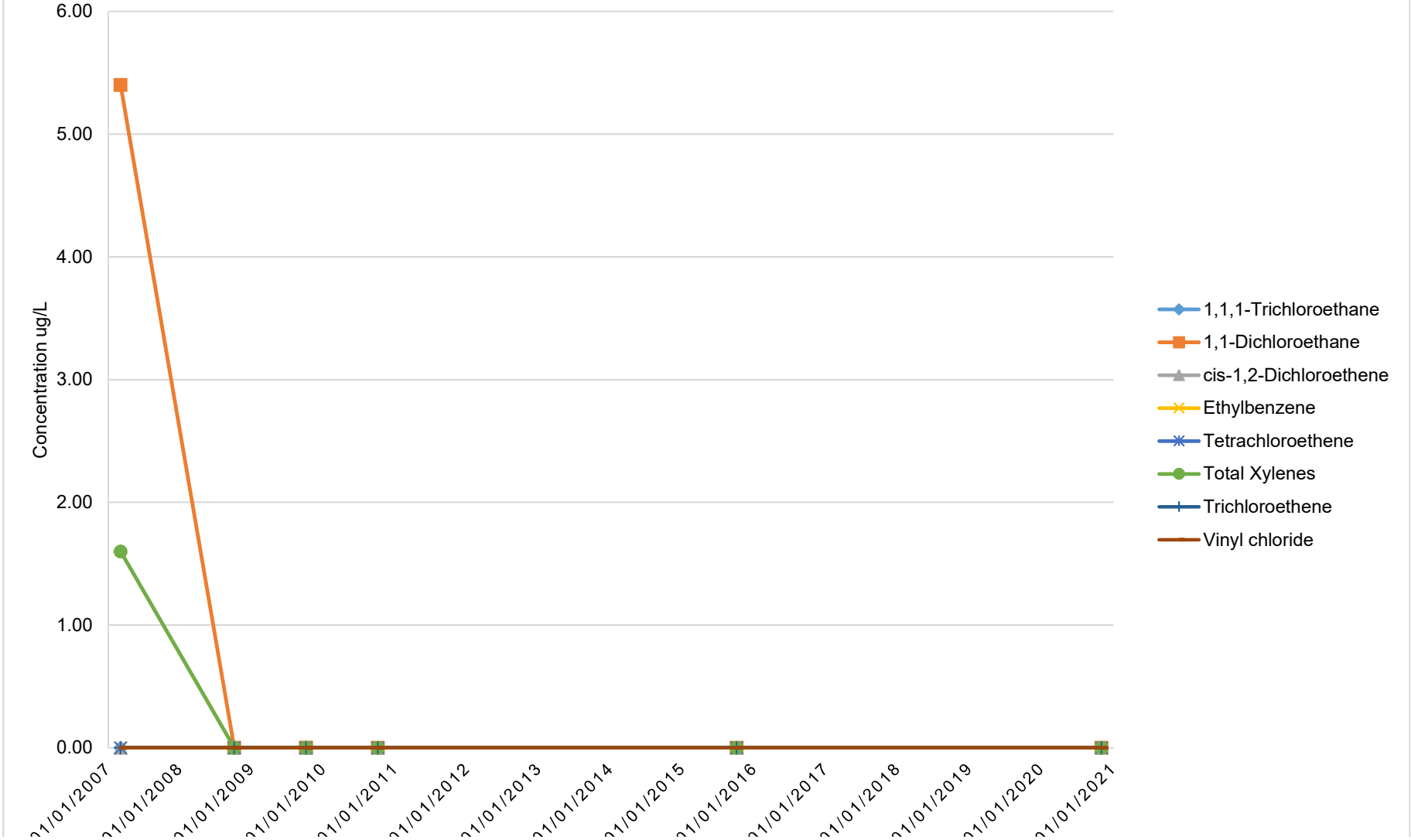


FIGURE 15
Groundwater VOC Concentrations in NRG-5 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report

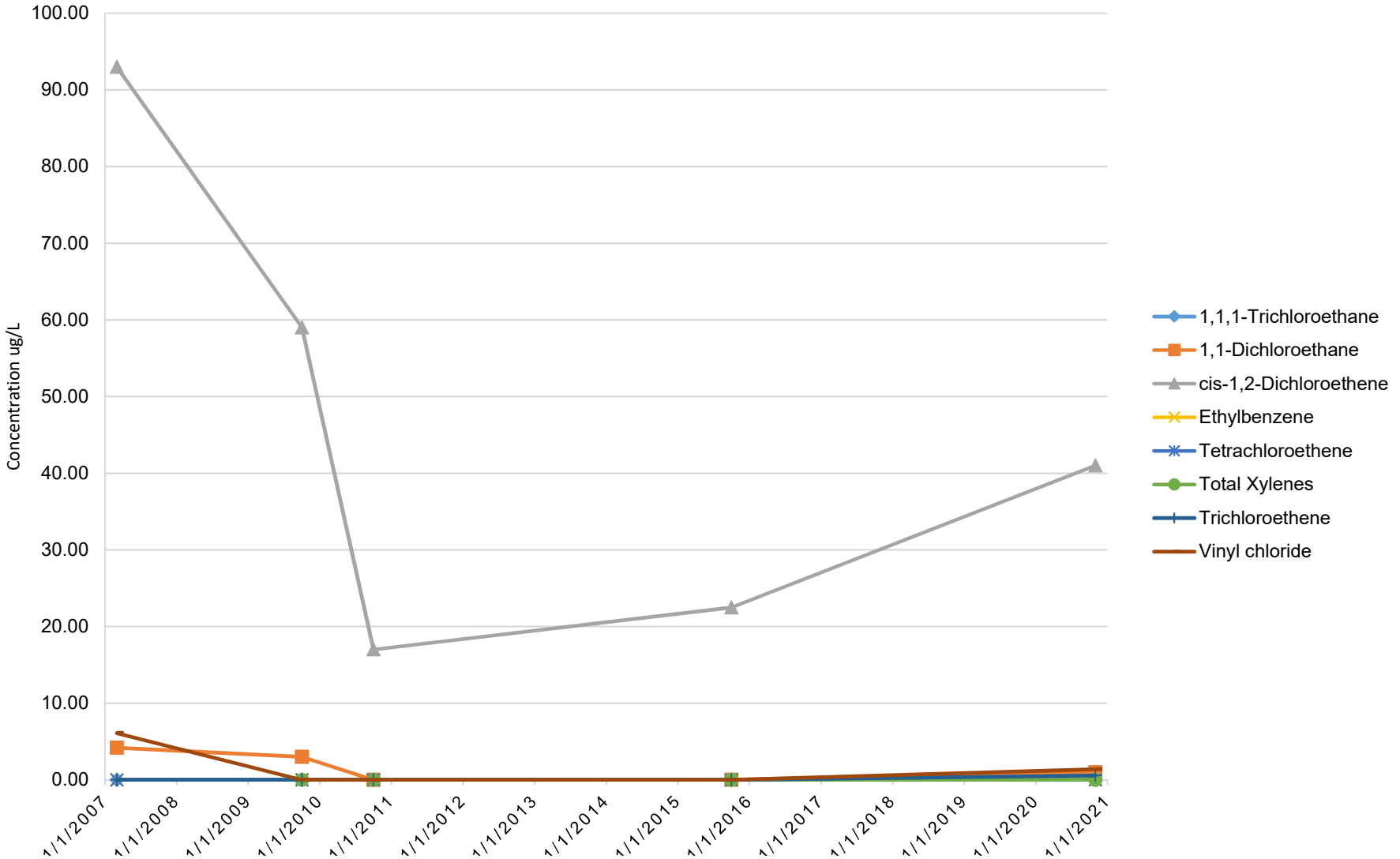
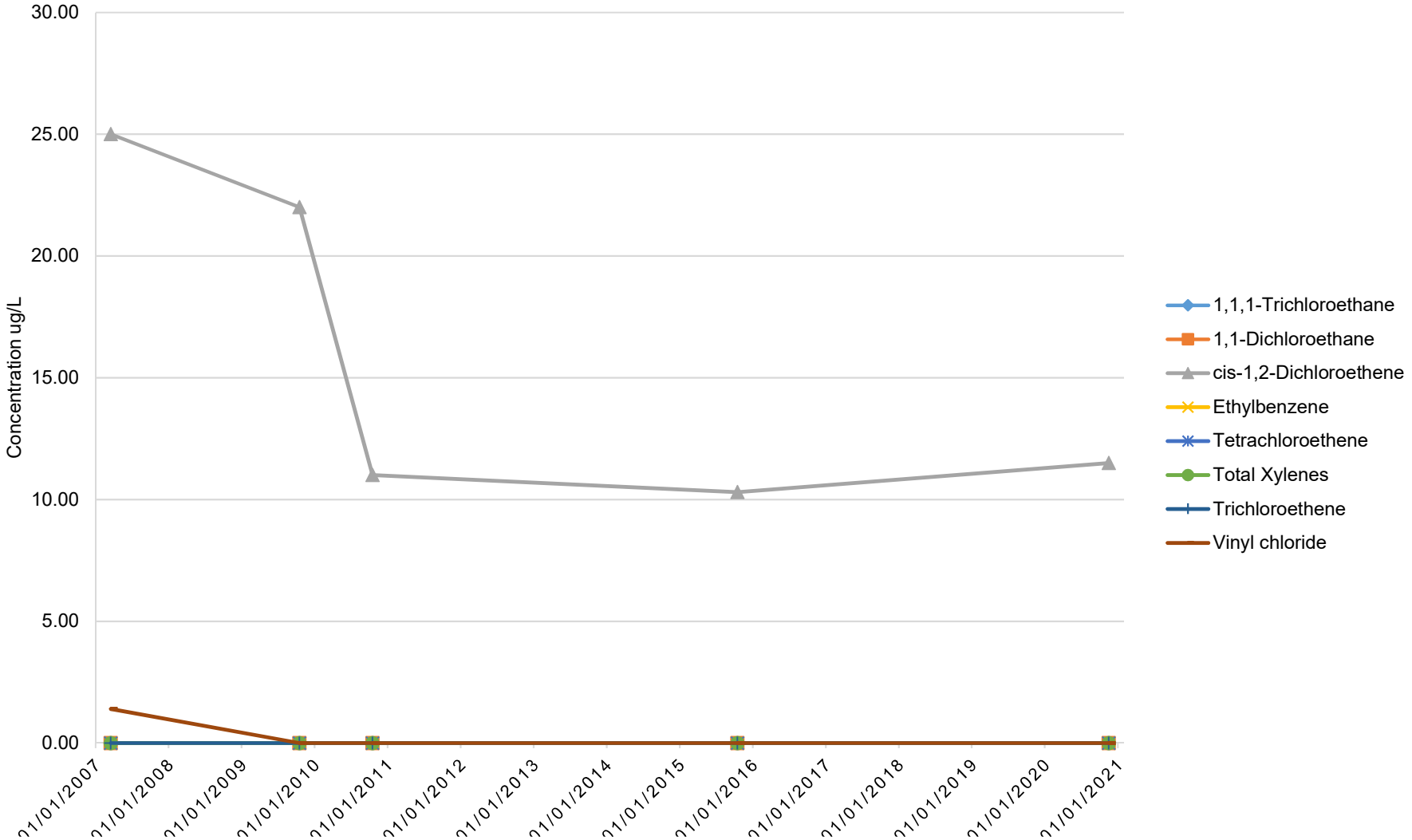


FIGURE 16
Groundwater VOC Concentrations in NRG-6 vs. Time

Envirotek II Site - Tonawanda, New York
2020 Groundwater Monitoring Report



Tables

Table 1
Groundwater Monitoring Well Inventory
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Monitoring Well #	2020 Status	Well Sampled	Reference Elevation (ft.)	Depth to Groundwater (ft.)	Groundwater Elevation (ft.)
ENV-1	Existing	Yes	579.46	6.39	573.07
ENV-3R	Could not locate	No			N/A
ENV-4	Existing	Yes	582.60	12.89	569.71
ENV-5	Existing	No			N/A
ENV-6	Existing	No			N/A
ENV-7	Existing	Yes	582.74	12.16	570.58
ENV-8	Existing	Yes	583.11	13.15	569.96
ENV-9	Existing	Yes	583.65	13.70	569.95
ENV-11	Destroyed	No			N/A
ESI-7	Existing	No			N/A
ESI-8	Existing	No			N/A
GW-1	Existing	No			N/A
GW-2	Existing	No			N/A
GW-3	Existing	Yes	579.00	9.71	569.29
GW-4	Existing	No			N/A
GW-5	Existing	No			N/A
GW-6	Existing	No			N/A
GW-7	Existing	No			N/A
NR-1	Existing	No			N/A
NRG-1	Destroyed	No			N/A
NRG-2	Existing	No			N/A
NRG-3	Existing	Yes	584.55	13.71	570.84
NRG-4	Existing	Yes	582.31	12.63	569.68
NRG-5	Existing	Yes	580.26	10.45	569.81
NRG-6	Existing	Yes	580.51	11.34	569.17
NW-1	Existing	No			N/A
NW-2	Existing	No			N/A
NW-3	Existing	No			N/A
NW-4	Existing	No			N/A
NW-5	Existing	No			N/A

Table 2
Field Parameter Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Parameter	Temperature (°C)							pH (standard units)							Conductivity (mS/cm)						
Date Collected	**10/17/2005**	**10/5/2006**	**10/7/2008**	**10/27/2009**	**10/21/2010**	**10/21/2015**	**11/3/2020**	**10/17/2005**	**10/5/2006**	**10/7/2008**	**10/27/2009**	**10/21/2010**	**10/21/2015**	**11/3/2020**	**10/17/2005**	**10/5/2006**	**10/7/2008**	**10/27/2009**	**10/21/2010**	**10/21/2015**	**11/3/2020**
ENV-1	14.55	14.7	14.7	14.5	12.84	13.21	11.2	6.32	6.96	6.91	6.84	7.06	7.17	6.92	0.702	0.866	1.12	0.837	1.11	0.942	0.78
ENV-3R	16.04	15.6	15.1	17.2	16	15.73	-	7.95	8.39	7.64	7.15	8.05	7.69	-	0.834	0.984	1.14	0.878	0.632	0.773	-
ENV-4	14.16	13.9	13.4	14.5	13.7	13.25	12.1	7.96	9.09	8.75	8.83	8.27	8.95	6.02	0.971	0.983	0.749	0.884	1.32	0.596	0.78
ENV-7	13.89	13.1	13.8	14.2	12.5	13.53	12.4	7.74	8.5	7.65	7.56	8.14	8.03	3.48	0.567	0.911	0.945	0.771	0.654	0.674	0.87
ENV-8	16.09	15.4	14.3	16.5	14.41	14.86	14.2	7.49	8.27	7.97	7.36	8.4	7.91	7.13	0.989	1.29	1.25	1.14	1.24	0.828	0.86
ENV-9	14.76	13.9	13.9	16.4	14.05	14.7	11.2	7.9	8.17	6.5	7.27	7.93	7.47	8.17	1.708	2.17	2.44	2.38	2.59	2.34	1.81
ENV-11	-	-	-	13	12.7	-	-	-	-	-	11.5	11.99	-	-	-	-	-	2.21	2.68	-	-
GW-3	13.44	13.1	14.2	14.4	13.22	13.68	10.4	10.11	11.71	11.39	10.4	11.78	11.04	11.68	1.116	1.36	1.83	1.94	2.27	1.15	1.07
NRG-3	-	-	15.5	16.1	14.64	16.28	11.6	-	-	8.42	8.38	8	8.11	8.03	-	-	0.661	0.355	0.439	0.516	0.403
NRG-4	-	-	15	16.1	14.55	14.99	12.9	-	-	10.02	9.87	10.53	8.28	6.03	-	-	0.472	0.466	0.328	0.519	0.448
NRG-5	-	-	-	15.2	14.56	14.78	12.8	-	-	-	9.13	9.27	9.09	5.61	-	-	-	1.88	1.73	1.83	2.03
NRG-6	-	-	-	15.4	15.03	16.1	13.2	-	-	-	10.55	11.39	10.85	11.3	-	-	-	1.8	1.96	1.67	1.31

Parameter	Dissolved Oxygen (mg/L))							Turbidity (NTUs)							ORP (mV)						
Date Collected	**10/17/2005**	**10/5/2006**	**10/7/2008**	**10/27/2009**	**10/21/2010**	**10/21/2015**	**11/3/2020**	**10/17/2005**	**10/5/2006**	**10/7/2008**	**10/27/2009**	**10/21/2010**	**10/21/2015**	**11/3/2020**	**10/17/2005**	**10/5/2006**	**10/7/2008**	**10/27/2009**	**10/21/2010**	**10/21/2015**	**11/3/2020**
ENV-1	0.3	9.28	2.78	4.24	4.27	3.28	0.18	5.2	2	101	10.7	51.3	41.1	16	-121.7	-169	-150	-121	-111	-95	-97.5
ENV-3R	0.36	9.49	1.85	4.16	0.71	5.19	-	0.9	1.17	316	7.3	N/A	492	-	-159.9	-248	-19	20	-135	-25	-
ENV-4	0	9.6	1.96	3.47	1.6	1.85	1.2	9.7	2	136	349	67	35.6	2.87	-206.9	-330	-223	-107	-282	-248	-208.3
ENV-7	0.54	4.72	2.8	6.02	4.79	3.75	3.77	0	0	70.5	183	345	455	6.88	58.7	-141	-49	121	-63	-22	10.2
ENV-8	0.37	0.49	1.26	3.62	3.58	4.45	2.68	1.5	5	N/A	71.5	N/A	N/A	1.58	233.8	-162	22	13	-144	-37	-177.1
ENV-9	0.57	9.21	1.3	5.89	3.86	4.4	0.27	7.7	6.3	N/A	95.8	N/A	320	2.81	-208.1	-253	-45	-47	-99	-24	-63.8
ENV-11	-	-	-	4.27	1.86	-	-	-	-	-	24.3	223	-	-	-	-	-	-136	-253	-	-
GW-3	0.17	0	1.83	3.92	3.33	2.07	0.19	3.7	0.35	44.2	78	N/A	253	0.91	-110.7	-296	-258	-110	-201	-214	-247.6
NRG-3	-	-	2.02	2.52	3.65	3.53	0.38	-	-	250	230	156	305	5.42	-	-	-183	-4	-163	-68	-61.6
NRG-4	-	-	2.74	3.68	4.9	3	1.02	-	-	78	27.5	137	31	7.82	-	-	-217	-15	-225	-140	-144.2
NRG-5	-	-	-	2.94	3.17	2.9	3.52	-	-	-	NA	N/A	346	1.01	-	-	-	57	-85	-128	-109.7
NRG-6	-	-	-	3.56	4.71	2.53	0.16	-	-	-	NA	N/A	179	0.3	-	-	-	-125	-207	-239	-163.5

Notes:
°C - degrees Celsius
mS/cm - millisemens/centimeter
mV - millivolts
mg/L - milligrams per liter
NTU - nephelometric turbidity units
N/A - Field equipment unable to record a turbidity reading due to very murky water.
ENV-3R - well could not be located for sampling
ENV-11 - well not sampled due to being destroyed during brush clearing prior to 2015 sampling event

Table 3
Groundwater Gradient Comparison
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

	Groundwater Gradient (foot per foot)	
Sampling Date	**ENV-1 to GW-3**	**ENV-1 to ENV-7**
10/5/2006	0.0033	0.0046
10/9/2008	0.0046	0.0068
10/27/2009	0.0028	0.0040
10/21/2010	0.0030	0.0049
10/21/2015	0.0028	0.0041
11/3/2020	0.0035	0.0044

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

		Location ID:	ENV-1	ENV-4	ENV-7
		Sample Name:	WG-11192740-110320-DT-009	WG-11192740-110320-SG-006	WG-11192740-110320-SG-008
		Sample Date:	11/03/2020	11/03/2020	11/03/2020
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**		
Volatile Organic Compounds					
1,1,1-Trichloroethane	5	NC	µg/L	1.0 U	2.0 U	4.0 U
1,1,2,2-Tetrachloroethane	5	NC	µg/L	1.0 U	2.0 U	4.0 U
1,1,2-Trichloroethane	1	NC	µg/L	1.0 U	2.0 U	4.0 U
1,1-Dichloroethane	5	NC	µg/L	1.0 U	2.0 U	4.0 U
1,1-Dichloroethene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
1,2,4-Trichlorobenzene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	NC	µg/L	1.0 U	2.0 U	4.0 U
1,2-Dibromoethane (Ethylene dibromide)	0.0006	NC	µg/L	1.0 U	2.0 U	4.0 U
1,2-Dichlorobenzene	3	NC	µg/L	1.0 U	2.0 U	4.0 U
1,2-Dichloroethane	0.6	NC	µg/L	1.0 U	2.0 U	4.0 U
1,2-Dichloropropane	1	NC	µg/L	1.0 U	2.0 U	4.0 U
1,3-Dichlorobenzene	3	NC	µg/L	1.0 U	2.0 U	4.0 U
1,4-Dichlorobenzene	3	NC	µg/L	1.0 U	2.0 U	4.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	NC	50	µg/L	10 U	20 U	40 U
2-Hexanone	NC	50	µg/L	5.0 U	10 U	20 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	NC	NC	µg/L	5.0 U	10 U	20 U
Acetone	NC	50	µg/L	10 U	20 U	40 U
Benzene	1	NC	µg/L	1.0 U	2.0 U	4.0 U
Bromodichloromethane	NC	50	µg/L	1.0 U	2.0 U	4.0 U
Bromoform	NC	50	µg/L	1.0 U	2.0 U	4.0 U
Bromomethane (Methyl bromide)	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Carbon disulfide	60	60	µg/L	1.0 U	2.0 U	4.0 U
Carbon tetrachloride	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Chlorobenzene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Chloroethane	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Chloroform (Trichloromethane)	7	NC	µg/L	1.0 U	2.0 U	4.0 U
Chloromethane (Methyl chloride)	5	NC	µg/L	1.0 U	2.0 U	4.0 U
cis-1,2-Dichloroethene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
cis-1,3-Dichloropropene	NC	NC	µg/L	1.0 U	2.0 U	4.0 U
Cyclohexane	NC	NC	µg/L	1.0 U	2.0 U	4.0 U
Dibromochloromethane	NC	50	µg/L	1.0 U	2.0 U	4.0 U
Dichlorodifluoromethane (CFC-12)	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Ethylbenzene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Isopropyl benzene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Methyl acetate	NC	NC	µg/L	2.5 U	5.0 U	10 U
Methyl cyclohexane	NC	NC	µg/L	1.0 U	2.0 U	4.0 U
Methyl tert butyl ether (MTBE)	NC	10	µg/L	1.0 U	2.0 U	4.0 U
Methylene chloride	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Styrene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Tetrachloroethene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Toluene	5	NC	µg/L	1.0 U	2.0 U	4.0 U

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

			Location ID:	ENV-1	ENV-4	ENV-7
			Sample Name:	WG-11192740-110320-DT-009	WG-11192740-110320-SG-006	WG-11192740-110320-SG-008
			Sample Date:	11/03/2020	11/03/2020	11/03/2020
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**			
Volatile Organic Compounds						
trans-1,2-Dichloroethene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
trans-1,3-Dichloropropene	NC	NC	µg/L	1.0 U	2.0 U	4.0 U
Trichloroethene	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Trichlorofluoromethane (CFC-11)	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Trifluorotrichloroethane (CFC-113)	5	NC	µg/L	1.0 U	2.0 U	4.0 U
Vinyl chloride	2	NC	µg/L	1.0 U	2.0 U	4.0 U
Xylenes (total)	5	NC	µg/L	2.0 U	4.0 U	8.0 U

Notes:

All concentrations are expressed in units of micrograms per liter (µg/L).
14 Concentration greater than applicable criteria.
J - Estimated concentration.
U - Not detected at the associated reporting limit.
NC - No criteria.
a - New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 703.5 Water Quality Standards.
b - NYSDEC Division of Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998).

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

			Location ID:	ENV-8	ENV-9	GW-3
			Sample Name:	WG-11192740-110320-SG-010	WG-11192740-110320-DT-007	WG-11192740-110320-DT-005
			Sample Date:	11/03/2020	11/03/2020	11/03/2020
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**			
Volatile Organic Compounds						
1,1,1-Trichloroethane	5	NC	µg/L	2.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	NC	µg/L	2.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	NC	µg/L	2.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	NC	µg/L	2.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	NC	µg/L	2.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	0.0006	NC	µg/L	2.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	NC	µg/L	2.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	NC	µg/L	2.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1	NC	µg/L	2.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	NC	µg/L	2.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	NC	µg/L	2.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	NC	50	µg/L	20 U	10 U	10 U
2-Hexanone	NC	50	µg/L	10 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	NC	NC	µg/L	10 U	5.0 U	5.0 U
Acetone	NC	50	µg/L	20 U	10 U	10 U
Benzene	1	NC	µg/L	2.0 U	1.0 U	1.0 U
Bromodichloromethane	NC	50	µg/L	2.0 U	1.0 U	1.0 U
Bromoform	NC	50	µg/L	2.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Carbon disulfide	60	60	µg/L	2.0 U	1.0 U	1.0 U
Carbon tetrachloride	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Chlorobenzene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Chloroethane	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	7	NC	µg/L	2.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	5	NC	µg/L	2.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5	NC	µg/L	**14**	0.90 J	1.0 U
cis-1,3-Dichloropropene	NC	NC	µg/L	2.0 U	1.0 U	1.0 U
Cyclohexane	NC	NC	µg/L	2.0 U	1.0 U	1.0 U
Dibromochloromethane	NC	50	µg/L	2.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Ethylbenzene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Isopropyl benzene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Methyl acetate	NC	NC	µg/L	5.0 U	2.5 U	2.5 U
Methyl cyclohexane	NC	NC	µg/L	2.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	NC	10	µg/L	2.0 U	1.0 U	1.0 U
Methylene chloride	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Styrene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Tetrachloroethene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Toluene	5	NC	µg/L	2.0 U	1.0 U	1.0 U

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

			Location ID:	ENV-8	ENV-9	GW-3
			Sample Name:	WG-11192740-110320-SG-010	WG-11192740-110320-DT-007	WG-11192740-110320-DT-005
			Sample Date:	11/03/2020	11/03/2020	11/03/2020
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**			
Volatile Organic Compounds						
trans-1,2-Dichloroethene	5	NC	µg/L	2.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NC	NC	µg/L	2.0 U	1.0 U	1.0 U
Trichloroethene	5	NC	µg/L	2.3	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	5	NC	µg/L	2.0 U	1.0 U	1.0 U
Vinyl chloride	2	NC	µg/L	2.0 U	1.0 U	1.0 U
Xylenes (total)	5	NC	µg/L	4.0 U	2.0 U	2.0 U

Notes:

All concentrations are expressed in units of micrograms per liter (µg/L).
14 Concentration greater than applicable criteria.
J - Estimated concentration.
U - Not detected at the associated reporting limit.
NC - No criteria.
a - New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 703.5 Water Quality Standards.
b - NYSDEC Division of Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998).

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

		Location ID:	NRG-3	NRG-4	NRG-5
		Sample Name:	WG-11192740-110420-DT-011	WG-11192740-110320-SG-004	WG-11192740-110320-SG-002
		Sample Date:	11/04/2020	11/03/2020	11/03/2020
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**		
Volatile Organic Compounds					
1,1,1-Trichloroethane	5	NC	µg/L	20 U	2.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	NC	µg/L	20 U	2.0 U	1.0 U
1,1,2-Trichloroethane	1	NC	µg/L	20 U	2.0 U	1.0 U
1,1-Dichloroethane	5	NC	µg/L	20 U	2.0 U	1.0
1,1-Dichloroethene	5	NC	µg/L	20 U	2.0 U	1.0 U
1,2,4-Trichlorobenzene	5	NC	µg/L	20 U	2.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	NC	µg/L	20 U	2.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	0.0006	NC	µg/L	20 U	2.0 U	1.0 U
1,2-Dichlorobenzene	3	NC	µg/L	20 U	2.0 U	1.0 U
1,2-Dichloroethane	0.6	NC	µg/L	20 U	2.0 U	**2.1**
1,2-Dichloropropane	1	NC	µg/L	20 U	2.0 U	1.0 U
1,3-Dichlorobenzene	3	NC	µg/L	20 U	2.0 U	1.0 U
1,4-Dichlorobenzene	3	NC	µg/L	20 U	2.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	NC	50	µg/L	200 U	20 U	10 U
2-Hexanone	NC	50	µg/L	100 U	10 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	NC	NC	µg/L	100 U	10 U	5.0 U
Acetone	NC	50	µg/L	200 U	20 U	10 U
Benzene	1	NC	µg/L	20 U	2.0 U	1.0 U
Bromodichloromethane	NC	50	µg/L	20 U	2.0 U	1.0 U
Bromoform	NC	50	µg/L	20 U	2.0 U	1.0 U
Bromomethane (Methyl bromide)	5	NC	µg/L	20 U	2.0 U	1.0 U
Carbon disulfide	60	60	µg/L	20 U	2.0 U	1.0 U
Carbon tetrachloride	5	NC	µg/L	20 U	2.0 U	1.0 U
Chlorobenzene	5	NC	µg/L	20 U	2.0 U	1.0 U
Chloroethane	5	NC	µg/L	20 U	2.0 U	1.0 U
Chloroform (Trichloromethane)	7	NC	µg/L	20 U	2.0 U	1.0 U
Chloromethane (Methyl chloride)	5	NC	µg/L	20 U	2.0 U	1.0 U
cis-1,2-Dichloroethene	5	NC	µg/L	20 U	2.0 U	**41**
cis-1,3-Dichloropropene	NC	NC	µg/L	20 U	2.0 U	1.0 U
Cyclohexane	NC	NC	µg/L	20 U	2.0 U	1.0 U
Dibromochloromethane	NC	50	µg/L	20 U	2.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	5	NC	µg/L	20 U	2.0 U	1.0 U
Ethylbenzene	5	NC	µg/L	20 U	2.0 U	1.0 U
Isopropyl benzene	5	NC	µg/L	20 U	2.0 U	1.0 U
Methyl acetate	NC	NC	µg/L	50 U	5.0 U	2.5 U
Methyl cyclohexane	NC	NC	µg/L	20 U	2.0 U	1.0 U
Methyl tert butyl ether (MTBE)	NC	10	µg/L	20 U	2.0 U	1.0 U
Methylene chloride	5	NC	µg/L	**12 J**	2.0 U	1.0 U
Styrene	5	NC	µg/L	20 U	2.0 U	1.0 U
Tetrachloroethene	5	NC	µg/L	20 U	2.0 U	1.0 U
Toluene	5	NC	µg/L	20 U	2.0 U	1.0 U

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

			Location ID:	NRG-3	NRG-4	NRG-5
			Sample Name:	WG-11192740-110420-DT-011	WG-11192740-110320-SG-004	WG-11192740-110320-SG-002
			Sample Date:	11/04/2020	11/03/2020	11/03/2020
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**			
Volatile Organic Compounds						
trans-1,2-Dichloroethene	5	NC	µg/L	20 U	2.0 U	3.5
trans-1,3-Dichloropropene	NC	NC	µg/L	20 U	2.0 U	1.0 U
Trichloroethene	5	NC	µg/L	**21**	2.0 U	0.56 J
Trichlorofluoromethane (CFC-11)	5	NC	µg/L	20 U	2.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	5	NC	µg/L	20 U	2.0 U	1.0 U
Vinyl chloride	2	NC	µg/L	20 U	2.0 U	1.4
Xylenes (total)	5	NC	µg/L	40 U	4.0 U	2.0 U

Notes:

All concentrations are expressed in units of micrograms per liter (µg/L).
14 Concentration greater than applicable criteria.
J - Estimated concentration.
U - Not detected at the associated reporting limit.
NC - No criteria.
a - New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 703.5 Water Quality Standards.
b - NYSDEC Division of Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998).

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

		Location ID:		NRG-6	NRG-6
		Sample Name:		WG-11192740-110320-DT-001	WG-11192740-110320-DT-003
		Sample Date:		11/03/2020	11/03/2020
					Duplicate
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**		
Volatile Organic Compounds					
1,1,1-Trichloroethane	5	NC	µg/L	2.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	NC	µg/L	2.0 U	1.0 U
1,1,2-Trichloroethane	1	NC	µg/L	2.0 U	1.0 U
1,1-Dichloroethane	5	NC	µg/L	2.0 U	1.0 U
1,1-Dichloroethene	5	NC	µg/L	2.0 U	1.0 U
1,2,4-Trichlorobenzene	5	NC	µg/L	2.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	NC	µg/L	2.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	0.0006	NC	µg/L	2.0 U	1.0 U
1,2-Dichlorobenzene	3	NC	µg/L	2.0 U	1.0 U
1,2-Dichloroethane	0.6	NC	µg/L	0.53 J	0.55 J
1,2-Dichloropropane	1	NC	µg/L	2.0 U	1.0 U
1,3-Dichlorobenzene	3	NC	µg/L	2.0 U	1.0 U
1,4-Dichlorobenzene	3	NC	µg/L	2.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	NC	50	µg/L	20 U	10 U
2-Hexanone	NC	50	µg/L	10 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	NC	NC	µg/L	10 U	5.0 U
Acetone	NC	50	µg/L	20 U	10 U
Benzene	1	NC	µg/L	2.0 U	1.0 U
Bromodichloromethane	NC	50	µg/L	2.0 U	1.0 U
Bromoform	NC	50	µg/L	2.0 U	1.0 U
Bromomethane (Methyl bromide)	5	NC	µg/L	2.0 U	1.0 U
Carbon disulfide	60	60	µg/L	2.0 U	1.0 U
Carbon tetrachloride	5	NC	µg/L	2.0 U	1.0 U
Chlorobenzene	5	NC	µg/L	2.0 U	1.0 U
Chloroethane	5	NC	µg/L	2.0 U	1.0 U
Chloroform (Trichloromethane)	7	NC	µg/L	2.0 U	1.0 U
Chloromethane (Methyl chloride)	5	NC	µg/L	2.0 U	1.0 U
cis-1,2-Dichloroethene	5	NC	µg/L	**11**	**12**
cis-1,3-Dichloropropene	NC	NC	µg/L	2.0 U	1.0 U
Cyclohexane	NC	NC	µg/L	2.0 U	1.0 U
Dibromochloromethane	NC	50	µg/L	2.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	5	NC	µg/L	2.0 U	1.0 U
Ethylbenzene	5	NC	µg/L	2.0 U	1.0 U
Isopropyl benzene	5	NC	µg/L	2.0 U	1.0 U
Methyl acetate	NC	NC	µg/L	5.0 U	2.5 U
Methyl cyclohexane	NC	NC	µg/L	2.0 U	1.0 U
Methyl tert butyl ether (MTBE)	NC	10	µg/L	2.0 U	1.0 U
Methylene chloride	5	NC	µg/L	2.0 U	1.0 U
Styrene	5	NC	µg/L	2.0 U	1.0 U
Tetrachloroethene	5	NC	µg/L	2.0 U	1.0 U
Toluene	5	NC	µg/L	2.0 U	1.0 U

Table 4
Groundwater Analytical Results Summary
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

			Location ID:	NRG-6	NRG-6
			Sample Name:	WG-11192740-110320-DT-001	WG-11192740-110320-DT-003
			Sample Date:	11/03/2020	11/03/2020
					Duplicate
Parameters	**New York State Water Quality Standards a**	**Guidance Values b**	**Unit**		
Volatile Organic Compounds					
trans-1,2-Dichloroethene	5	NC	µg/L	2.0 U	1.0 U
trans-1,3-Dichloropropene	NC	NC	µg/L	2.0 U	1.0 U
Trichloroethene	5	NC	µg/L	2.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	5	NC	µg/L	2.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	5	NC	µg/L	2.0 U	1.0 U
Vinyl chloride	2	NC	µg/L	2.0 U	1.0 U
Xylenes (total)	5	NC	µg/L	4.0 U	2.0 U

Notes:

All concentrations are expressed in units of micrograms per liter (µg/L).
14 Concentration greater than applicable criteria.
J - Estimated concentration.
U - Not detected at the associated reporting limit.
NC - No criteria.
a - New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 703.5 Water Quality Standards.
b - NYSDEC Division of Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998).

Table 5
Monitoring Well ENV-1
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	09/29/99	04/18/01	05/05/04	09/28/04	10/17/05	10/06/06	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,1,2-Trichloroethane	1	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
1,1-Dichloroethane	5	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
1,1-Dichloroethene	5	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,2-Dichlorobenzene	3	µg/L					10 U	1 U	5 U	5 U	5U	ND	ND
1,2-Dichloroethane	0.6	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
1,2-Dichloropropane	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,3-Dichlorobenzene	3	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	-	-
1,4-Dichlorobenzene	3	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
1,4-Dioxane	5	µg/L	-	-	-	-	-	-	100 U	100 U	100U	ND	ND
2-Hexanone	50	µg/L	10 U	10 U	5 U	25 U	10 U	5U	10 U	10 U	5U	-	-
Acetone	50	µg/L	10 U	10 U	5 U	25 U	10 U	5 UJ	10 U	10 U	10U	ND	ND
Benzene	1	µg/L	10 U	10 U	**1**	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Bromoform	50	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Bromomethane	5	µg/L	-	-	-	-	10 U	1 UJ	5 U	5 U	5U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Carbon tetrachloride	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Chlorobenzene	5	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Chloroethane	5	µg/L	10 U	10 U	1 U	5 U	10 U	R	5 U	5 U	5U	ND	ND
Chloroform	7	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Chloromethane	NE	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	-	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Cyclohexane	NE	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	-	-
Dibromochloromethane	50	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	-	10 U	1 U	5U	5U	5U	ND	ND
Dichlorodifluoromethane	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	-	-
Ethylbenzene	5	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Isopropylbenzene	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Methyl acetate	NE	µg/L	-	-	-	-	10 U	1 UJ	5 U	5 U	5U	ND	ND
2-Butanone (MEK)	50	µg/L	10 U	10 U	1 U	25 U	10 U	5 U	10 U	10 U	10U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	10 U	10 U	5 U	25 U	10 U	5 U	10 U	10 U	5U	ND	ND
Methyl Cyclohexane	NE	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Methylene chloride	5	µg/L	10 U	10 U	2 U	**3 J**	10 U	1 U	5 U	5 U	5U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
m,p-Xylene	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	-	-
o-Xylene	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	-	-
Styrene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	ND	ND
tert-Butylbenzene	5	µg/L	-	-	-	-	-	-	5 U	5 U	5U	-	-
Tetrachloroethene	5	µg/L	10 U	10 U	1 U	25 U	10 U	1 U	5 U	5 U	5U	ND	ND
Toluene	5	µg/L	10 U	10 U	1 U	25 U	10 U	1 U	5 U	5 U	5U	ND	ND
Total Xylenes	5	µg/L	10 U	10 U	3 U	15 U	10 U	3 U	5 U	5 U	5U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	NA	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Trichloroethene	5	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Trichlorofluoromethane	5	µg/L	-	-	-	-	10 U	1 U	5 U	5 U	5U	ND	ND
Vinyl chloride	2	µg/L	10 U	10 U	1 U	5 U	10 U	1 U	5 U	5 U	5U	ND	ND
Total VOCs		µg/L	ND	ND	1	3	ND	ND	ND	ND	ND	ND	ND
Total VOCs		mg/L	ND	ND	ND	0.003	ND	ND	ND	ND	ND	ND	ND

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well ENV-3R
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	11/19/90	10/01/99	04/18/01	05/05/04	07/15/04	09/28/04	10/17/05	10/05/06	10/07/08	10/27/09	10/21/10	10/21/15	11/3/2020[2]
1,1,1-Trichloroethane	5	µg/L	-	10 U	10 U	2.00	**4 J**	10 U	**2 J**	5 U	5 U	5 U	5 U	ND	-
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,1,2-Trichloroethane	1	µg/L	-	10 U	10 U	1 U	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
1,1-Dichloroethane	5	µg/L	**250**	**71**	**59**	**20**	**18**	**49**	**24**	**17**	**7**	**4 J**	**4 J**	**2.04**	-
1,1-Dichloroethene	5	µg/L	-	10 U	10 U	**1**	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
1,2,3-Trichlorobenzene	5	µg/L												ND	-
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,2-Dichlorobenzene	3	µg/L							10 U	5 U	5 U	5 U	5 U	ND	-
1,2-Dichloroethane	0.6	µg/L	-	10 U	10 U	**1**	-	**3 J**	10 U	5 U	5 U	5 U	5 U	ND	-
1,2-Dichloropropane	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,3-Dichlorobenzene	3	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
1,4-Dioxane	5	µg/L	-	-	-	-	-	-	-	-	100 U	100 U	100 U	-	-
2-Hexanone	50	µg/L	-	10 U	10 U	5 U	-	50 U	10 U	25 U	10 U	10 U	10 U	ND	-
Acetone	50	µg/L	-	10 U	10 U	5 U	-	50 U	10 U	25 UJ	10 U	10 U	10 U	ND	-
Benzene	1	µg/L	-	**1 J**	10 U	**1**	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
Bromoform	50	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Bromomethane	5	µg/L	-	-	-	-	-	-	10 U	5 U J	5 U	5 U	5 U	ND	-
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	-	-	-	ND	-
Bromodichloromethane	50	µg/L												ND	-
Carbon disulfide	60	µg/L	-	10 U	10 U	1 U	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
Carbon tetrachloride	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Chlorobenzene	5	µg/L	-	10 U	10 U	1 U	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
Chloroethane	5	µg/L	**79**	**52**	**25**	1 U	-	10 U	10 U	R	5 U	5 U	5 U	ND	-
Chloroform	7	µg/L	-	10 U	10 U	1 U	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
Chloromethane	NE	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
cis-1,2-Dichloroethene	5	µg/L	NA	NA	**2 J**	**120 D**	**32**	**370 D**	**39**	**22**	**8**	**5.3**	**4 J**	**1.78**	-
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Cyclohexane	NE	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Dichlorodifluoromethane	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Ethylbenzene	5	µg/L	-	10 U	10 U	**2**	-	10 U	**1 J**	5 U	5 U	5 U	5 U	ND	-
Isopropylbenzene	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Methyl acetate	NE	µg/L	-	-	-	-	-	-	10 U	5 UJ	5 U	5 U	5 U	ND	-
2-Butanone (MEK)	50	µg/L	-	10 U	10 U	1 U	-	50 U	10 U	25 U	10 U	10 U	10 U	ND	-
4-Methyl 2-Pentanone	NE	µg/L	**82**	10 U	**2 J**	**14**	-	50 U	10 U	25 U	10 U	10 U	10 U	ND	-
Methyl Cyclohexane	NE	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Methylene chloride	5	µg/L	-	**2 J**	10 U	**0. 8 J**	**6 J**	**9 DJ**	10 U	5 U	5 U	5 U	5 U	ND	-
Methyl-t-Butyl Ether (MTBE)	10	µg/L							10 U	5 U	5 U	5 U	5 U	ND	-
m,p-Xylene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
Styrene	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
tert-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	-	10 U	**6 J**	**15**	**6**	**3 J**	**2 J**	**3 J**	**2 J**	**4 J**	**5.3**	ND	-
Toluene	5	µg/L	**11**	10 U	10 U	**3**	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
Total Xylenes	5	µg/L	**14**	10 U	10 U	**18**	**3 J**	30 U	**1 J**	15 U	5 U	5 U	5 U	ND	-
trans-1, 2-Dichloroethene	5	µg/L	NA	NA	10 U	**0.7 J**	-	10 U	10 U	5 U	5 U	5 U	5 U	ND	-
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Trichloroethene	5	µg/L	-	10 U	**3 J**	**22**	**7**	**6 J**	**9 J**	**5**	**4 J**	**5.4**	**5.5**	**1.12**	-
Trichlorofluoromethane	5	µg/L	-	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	-
Vinyl chloride	2	µg/L	-	10 U	10 U	**33 D**	**8**	**220 J**	**73**	**13**	**4 J**	**2 J**	**3 J**	**1.72**	-
Total VOCs		µg/L	436	126	97	253.5	84	660	151	60	25	21	22	6.7	-
Total VOCs		mg/L	0.436	0.126	0.097	0.254	0.084	0.660	0.151	0.060	0.025	0.021	0.022	0.007	-

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)
2. Well could not be located for sampling.

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well ENV-4
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	11/19/90	09/30/99	04/18/01	05/05/04	09/28/04	10/17/05	10/05/06	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
1,1-Dichloroethane	5	µg/L	-	**2 J**	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
1,1-Dichloroethene	5	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,2-Dichlorobenzene	3	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
1,2-Dichloropropane	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
1,4-Dichlorobenzene	3	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
1,4-Dioxane	5	µg/L	-	-	-	-	-	-	-	100 U	100 U	200 U	-	-
2-Hexanone	50	µg/L	-	10 U	10 U	5 U	50 U	10 U	25 U	10 U	10 U	20 U	ND	ND
Acetone	50	µg/L	-	10 U	10 U	5 U	50 U	10 U	25 UJ	10 U	10 U	20 U	ND	ND
Benzene	1	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Bromoform	50	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Bromomethane	5	µg/L	-	-	-	-	-	10 U	5 UJ	5 U	5 U	10 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Carbon tetrachloride	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Chlorobenzene	5	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Chloroethane	5	µg/L	-	10 U	10 U	1 U	10 U	10 U	R	5 U	5 U	10 U	ND	ND
Chloroform	7	µg/L	-	10 U	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Chloromethane	NE	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	-	-	**3 J**	1 U	10 U	**6 J**	**6**	**5.5**	**3 J**	**11.0**	**2.67**	ND
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Cyclohexane	NE	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Dichlorodifluoromethane	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Ethylbenzene	5	µg/L	**58**	**24**	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Isopropylbenzene	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Methyl acetate	NE	µg/L	-	-	-	-	-	10 U	5 UJ	5 U	5 U	10 U	ND	ND
2-Butanone (MEK)	50	µg/L	-	10 U	10 U	1 U	10 U	10 U	25 U	10 U	10 U	20 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	**110**	10 U	10 U	5 U	50 U	10 U	25 U	10 U	10 U	20 U	ND	ND
Methyl Cyclohexane	NE	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Methylene chloride	5	µg/L	-	10 U	10 U	2 U	**8 J**	10 U	5 U	5 U	5 U	10 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
m,p-Xylene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
Styrene	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
tert-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	10 U	-	-
Tetrachloroethene	5	µg/L	-	10 U	10 U	**0.3 J**	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Toluene	5	µg/L	**760**	**9 J**	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Total Xylenes	5	µg/L	**260**	**67**	10 U	3 U	30 U	10 U	15 U	5 U	5 U	10 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	-	-	10 U	1 U	10 U	2 J	5 U	5 U	5 U	10 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Trichloroethene	5	µg/L	**560**	**46**	**3 J**	**1**	10 U	**1 J**	5 U	5 U	5 U	10 U	ND	ND
Trichlorofluoromethane	5	µg/L	-	-	-	-	-	10 U	5 U	5 U	5 U	10 U	ND	ND
Vinyl chloride	2	µg/L	-	**5 J**	10 U	1 U	10 U	10 U	5 U	5 U	5 U	10 U	ND	ND
Total VOCs		µg/L	1748	154	6	1.3	8	9	6	6	3	11	2.67	0.00
Total VOCs		mg/L	1.748	0.154	0.006	0.001	0.008	0.009	0.006	0.006	0.003	0.011	0.003	0.000

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.

Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.

NE = NYSDEC TOGS 1.1.1 water quality standard not established.

U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.

ND = The analyte was analyzed for but not detected.

J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

R = The sample results are rejected.

D = Compound identified in analysis at a secondary dilution factor.

- = The analyte was not sampled for.

Table 5
Monitoring Well ENV-7
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	04/19/01	05/05/04	09/28/04	10/17/05	10/05/06	03/08/07	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethane	5	µg/L	**3 J**	**2.00**	5 U	**3 J**	**3 J**	U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethene	5	µg/L	25 U	1.00	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,2-Dichlorobenzene	3	µg/L				10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,2-Dichloropropane	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
1,4-Dioxane	5	µg/L	-	-	-	-	-	U	100 U	100 U	100 U	-	-
2-Hexanone	50	µg/L	25 U	5 U	25 U	10 U	25 U	U	10 U	10 U	10 U	ND	ND
Acetone	50	µg/L	16 U	5 U	25 U	10 U	25 UJ	U	10 U	10 U	10 U	ND	ND
Benzene	1	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Bromoform	50	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Bromomethane	5	µg/L	-	-	-	10 U	5 UJ	U	5 U	5 U	5 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Carbon tetrachloride	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Chlorobenzene	5	µg/L	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	ND	ND
Chloroethane	5	µg/L	µg/L	25 U	1 U	5 U	10 U	R	U	5 U	5 U	ND	ND
Chloroform	7	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Chloromethane	NE	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	**430**	**280 D**	**170**	**190**	**140**	**320**	**82**	**93**	**120**	**83.6**	ND
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Cyclohexane	NE	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Dichlorodifluoromethane	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Ethylbenzene	5	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Isopropylbenzene	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Methyl acetate	NE	µg/L	-	-	-	10 U	5 UJ	U	5 U	5 U	5 U	ND	ND
2-Butanone (MEK)	50	µg/L	25 U	1 U	5 U	10 U	25 U	U	10 U	10 U	10 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	25 U	5 U	25 U	10 U	25 U	U	10 U	10 U	10 U	ND	ND
Methyl Cyclohexane	NE	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Methylene chloride	5	µg/L	25 U	2 U	**3 J**	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
m,p-Xylene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
Styrene	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
tert-Butylbenzene	5	µg/L	-	-	-	-	-	U	5 U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	**3 J**	**4**	**3 J**	**1 J**	5 U	U	5 U	5 U	5 U	ND	ND
Toluene	5	µg/L	25 U	1 U	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Total Xylenes	5	µg/L	28 UJ	3 U	15 U	10 U	15 U	U	5 U	5 U	5 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	**4 J**	**3**	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Trichloroethene	5	µg/L	**16 J**	**6**	5 U	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Trichlorofluoromethane	5	µg/L	-	-	-	10 U	5 U	U	5 U	5 U	5 U	ND	ND
Vinyl chloride	2	µg/L	**220**	**50 D**	**88**	**200**	**100**	**250**	**49**	**98**	**68**	**51.9**	ND
Total VOCs		µg/L	720	346	264	394	243	570	131	191	188	135.50	0.00
Total VOCs		mg/L	0.720	0.346	0.264	0.394	0.243	0.570	0.131	0.191	0.188	0.136	0.000

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.

Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.

NE = NYSDEC TOGS 1.1.1 water quality standard not established.

U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.

ND = The analyte was analyzed for but not detected.

J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

R = The sample results are rejected.

D = Compound identified in analysis at a secondary dilution factor.

- = The analyte was not sampled for.

Table 5
Monitoring Well ENV-8
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	04/19/01	05/05/04	09/28/04	10/17/05	10/05/06	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethane	5	µg/L	**7 J**	**5**	**4 J**	**4 J**	5 U	**3 J**	5 U	**2 J**	ND	ND
1,1-Dichloroethene	5	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dichlorobenzene	3	µg/L				10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dichloropropane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,4-Dioxane	5	µg/L	-	-	-	-	-	100 U	100 U	100 U	-	-
2-Hexanone	50	µg/L	10 U	25 U	50 U	10 U	25 U	10 U	10 U	10 U	ND	ND
Acetone	50	µg/L	**31**	25 U	50 U	10 U	25 UJ	10 U	10 U	10 U	ND	ND
Benzene	1	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Bromoform	50	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Bromomethane	5	µg/L	-	-	-	10 U	5 UJ	5 U	5 U	5 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Carbon tetrachloride	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Chlorobenzene	5	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Chloroethane	5	µg/L	10 U	5 U	10 U	10 U	R	5 U	5 U	5 U	ND	ND
Chloroform	7	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Chloromethane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	**150**	**140**	**120**	**78**	**36**	**36**	**29**	**24**	**15.70**	**14**
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Cyclohexane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Dichlorodifluoromethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Ethylbenzene	5	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Isopropylbenzene	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Methyl acetate	NE	µg/L	-	-	-	10 U	5 UJ	5 U	5 U	5 U	ND	ND
2-Butanone (MEK)	50	µg/L	10 U	5 U	10 U	10 U	25 U	10 U	10 U	10 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	**11**	25 U	50 U	10 U	25 U	10 U	10 U	10 U	ND	ND
Methyl Cyclohexane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Methylene chloride	5	µg/L	10 U	10 U	**4 J**	10 U	5 U	5 U	5 U	5 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
m,p-Xylene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
Styrene	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
tert-Butylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	**3 J**	**3 J**	**3 J**	**3 J**	5 U	5 U	5 U	5 U	ND	ND
Toluene	5	µg/L	10 U	5 U	10 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Total Xylenes	5	µg/L	-	15 U	30 U	10 U	15 U	5 U	5 U	5 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	**4 J**	**3 J**	10 U	**2 J**	5 U	5 U	5 U	5 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Trichloroethene	5	µg/L	**12**	**14 J**	**12**	**10**	**8**	5 U	**5 J**	**5 J**	**1.16**	**2.3**
Trichlorofluoromethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Vinyl chloride	2	µg/L	**3 J**	5 U	**10**	**9 J**	5 U	**12**	**3 J**	**8.8**	**2.02**	ND
Total VOCs		µg/L	233	165	153	106	44	51	37	40	18.88	16.3
Total VOCs		mg/L	0.233	0.165	0.153	0.106	0.044	0.051	0.037	0.040	0.019	0.0163

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.

Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.

NE = NYSDEC TOGS 1.1.1 water quality standard not established.

U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.

ND = The analyte was analyzed for but not detected.

J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

R = The sample results are rejected.

D = Compound identified in analysis at a secondary dilution factor.

- = The analyte was not sampled for.

Table 5
Monitoring Well ENV-9
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	04/19/01	05/05/04	09/28/04	10/17/05	10/05/06	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethane	5	µg/L	10 U	**0. 5 J**	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethene	5	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dichlorobenzene	3	µg/L				10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
1,2-Dichloropropane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
1,4-Dioxane	5	µg/L	-	-	-	-	-	100 U	100 U	100 U	-	-
2-Hexanone	50	µg/L	**2 J**	5 U	25 U	10 U	25 U	10 U	10 U	10 U	ND	ND
Acetone	50	µg/L	**1,200 DJ**	5 U	25 U	10 U	25 UJ	10 U	10 U	10 U	ND	ND
Benzene	1	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Bromoform	50	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Bromomethane	5	µg/L	-	-	-	10 U	5 UJ	5 U	5 U	5 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Carbon tetrachloride	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Chlorobenzene	5	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Chloroethane	5	µg/L	10 U	1 U	5 U	10 U	R	5 U	5 U	5 U	ND	ND
Chloroform	7	µg/L	3 J	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Chloromethane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	10 U	**0. 6 J**	5 U	**1 J**	5 U	5 U	5 U	5 U	ND	**0.9 J**
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Cyclohexane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Dichlorodifluoromethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Ethylbenzene	5	µg/L	**2 J**	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Isopropylbenzene	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Methyl acetate	NE	µg/L	-	-	-	10 U	5 UJ	5 U	5 U	5 U	ND	ND
2-Butanone (MEK)	50	µg/L	**5 J**	1 U	5 U	10 U	25 U	10 U	10 U	10 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	**10**	5 U	25 U	10 U	25 U	10 U	10 U	10 U	ND	ND
Methyl Cyclohexane	NE	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Methylene chloride	5	µg/L	10 U	2 U	**3 J**	10 U	5 U	5 U	5 U	5 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
m,p-Xylene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
Styrene	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
tert-Butylbenzene	5	µg/L	-	-	-	-	-	5 U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Toluene	5	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Total Xylenes	5	µg/L	**13 J**	3 U	15 U	10 U	15 U	5 U	5 U	5 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Trichloroethene	5	µg/L	**3 J**	**0. 8 J**	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Trichlorofluoromethane	5	µg/L	-	-	-	10 U	5 U	5 U	5 U	5 U	ND	ND
Vinyl chloride	2	µg/L	10 U	1 U	5 U	10 U	5 U	5 U	5 U	5 U	ND	ND
Total VOCs		µg/L	1238	1.9	3	1	ND	ND	ND	ND	ND	0.9
Total VOCs		mg/L	1.238	0.0019	0.003	0.001	ND	ND	ND	ND	ND	0.0009

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well ENV-11
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	09/28/88	12/05/90	09/30/99	04/19/01	05/05/04	09/28/04	10/07/08	10/27/09	10/21/10	10/21/2015[2]	11/3/2020[2]
1,1,1-Trichloroethane	5	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	-	-	-		5 U	5 U	-	-
1,1,2-Trichloroethane	1	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
1,1-Dichloroethane	5	µg/L	**11**	-	**1 J**	10 U	1 U	10 U	-	5 U	5 U	-	-
1,1-Dichloroethene	5	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
1,2-Dichlorobenzene	3	µg/L		-	-	-	-	-	-	5 U	5 U	-	-
1,2-Dichloroethane	0.6	µg/L	-	**4 J**	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
1,2-Dichloropropane	5	µg/L	-	-	-	-		-	-	5 U	5 U	-	-
1,3-Dichlorobenzene	3	µg/L			-	-	-	-	-	5 U	5 U	-	-
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L			-	-	-	-	-	5 U	5 U	-	-
1,4-Dioxane	5	µg/L	-	-	-	-	-	-	-	100 U	100 U	-	-
2-Hexanone	50	µg/L	-	-	10 U	10 U	5 U	50 U	-	10 U	10 U	-	-
Acetone	50	µg/L	**210 D**	**60**	10 U	**12**	5 U	50 U	-	10 U	10 U	-	-
Benzene	1	µg/L	**2 J**	**0.9 J**	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
Bromoform	50	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Bromomethane	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	60	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
Carbon tetrachloride	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Chlorobenzene	5	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
Chloroethane	5	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
Chloroform	7	µg/L	-	-	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
Chloromethane	NE	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
cis-1,2-Dichloroethene	5	µg/L	-	-	-	**14**	**5**	**5 J**	-	5 U	**4 J**	-	-
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Cyclohexane	NE	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Dichlorodifluoromethane	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Ethylbenzene	5	µg/L	**1 J**	**3 J**	10 U	10 U	1 U	10 U	-	5 U	5 U	-	-
Isopropylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Methyl acetate	NE	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
2-Butanone (MEK)	50	µg/L	**61**	-	10 U	10 U	1 U	10 U		10 U	10 U	-	-
4-Methyl 2-Pentanone	NE	µg/L	**40**	**20**	10 U	10 U	5 U	50 U	-	10 U	10 U	-	-
Methyl Cyclohexane	NE	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Methylene chloride	5	µg/L	**41 B**	-	10 U	10 U	2 U	20 U	-	5 U	5 U	-	-
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
m,p-Xylene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Styrene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
tert-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	**87**	**9 J**	**3 J**	**6 J**	**2**	10 U	-	5 U	5 U	-	-
Toluene	5	µg/L	**30 B**	**59**	10 U	1 J	**1**	10 U	-	5 U	5 U	-	-
Total Xylenes	5	µg/L	**7**	**16**	10 U	10 U	3 U	30 U	-	5 U	5 U	-	-
trans-1, 2-Dichloroethene	5	µg/L	-	-	-	10 U	1 U	10 U	-	5 U	5 U	-	-
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Trichloroethene	5	µg/L	**32**	**36**	**1 J**	**2 J**	**1**	10 U	-	5 U	5 U	-	-
Trichlorofluoromethane	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	-	-
Vinyl chloride	2	µg/L	**8**	**3 J**	10 U	10 U	**0.4 J**	10 U	-	5 U	5 U	-	-
Total VOCs		µg/L	530	210.9	5	35	9.4	5	ND	ND	4	-	-
Total VOCs		mg/L	0.530	0.2109	0.005	0.035	0.0094	0.005	ND	ND	0.004	-	-

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)
2. Well was not sampled since it was destroyed during a brush clearing operation.

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well GW-3
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	09/28/88	12/05/90	09/29/99	05/05/04	09/28/04	10/17/05	10/05/06	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethane	5	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
1,1-Dichloroethene	5	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	-	-	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,2-Dichlorobenzene	3	µg/L						10 U	4 U	5 U	5 U	5 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
1,2-Dichloropropane	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,3-Dichlorobenzene	3	µg/L			-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L			-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
1,4-Dioxane	5	µg/L	-	-	-	-	-	-	-	100 U	100 U	100 U	-	-
2-Hexanone	50	µg/L	-	-	10 U	5 U	10 U	10 U	20 U	10 U	10 U	10 U	ND	ND
Acetone	50	µg/L	-	**20**	10 U	5 U	10 U	10 U	20 UJ	10 U	10 U	10 U	ND	ND
Benzene	1	µg/L	**6**	**2 J**	**1 J**	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Bromoform	50	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Bromomethane	5	µg/L	-	-	-	-	-	10 U	4 UJ	5 U	5 U	5 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	-	-	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	-	-	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Carbon tetrachloride	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Chlorobenzene	5	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Chloroethane	5	µg/L	-	-	10 U	1 U	2 U	10 U	R	5 U	5 U	5 U	ND	ND
Chloroform	7	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Chloromethane	NE	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	-	-	-	**0.3 J**	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
cis-1,3-Dichloropropene	0.40	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Cyclohexane	NE	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Dichlorodifluoromethane	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Ethylbenzene	5	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Isopropylbenzene	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Methyl acetate	NE	µg/L	-	-	-	-	-	10 U	4 UJ	5 U	5 U	5 U	ND	ND
2-Butanone (MEK)	50	µg/L	-	**29**	10 U	1 U	2 U	10 U	20 U	10 U	10 U	10 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	-	-	10 U	5 U	10 U	10 U	20 U	10 U	10 U	10 U	ND	ND
Methyl Cyclohexane	NE	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Methylene chloride	5	µg/L	-	-	10 U	2 U	**1 J**	10 U	4 U	5 U	5 U	5 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
m,p-Xylene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
o-Xylene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
Styrene	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
tert-Butylbenzene	5	µg/L	-	-	-	-	-	-	-	5 U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	-	-	10 U	**0.5 J**	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Toluene	5	µg/L	**1 J**	**0. 6 J**	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Total Xylenes	5	µg/L	**2 J**	-	10 U	3 U	6 U	10 U	12 U	5 U	5 U	5 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	-	-	-	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Trichloroethene	5	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Trichlorofluoromethane	5	µg/L	-	-	-	-	-	10 U	4 U	5 U	5 U	5 U	ND	ND
Vinyl chloride	2	µg/L	-	-	10 U	1 U	2 U	10 U	4 U	5 U	5 U	5 U	ND	ND
Total VOCs		µg/L	9	51.6	1	0.8	1	ND	ND	ND	ND	ND	ND	ND
Total VOCs		mg/L	0.009	0.0516	0.001	0.0008	0.001	ND	ND	ND	ND	ND	ND	ND

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)

Bolded concentrations indicated the analyte was detected.

Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.

NE = NYSDEC TOGS 1.1.1 water quality standard not established.

U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.

ND = The analyte was analyzed for but not detected.

J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

R = The sample results are rejected.

D = Compound identified in analysis at a secondary dilution factor.

- = The analyte was not sampled for.

Table 5
Monitoring Well NRG-3
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	3/14/07[2]	10/07/08	10/27/09	10/21/10	10/21/15	11/04/20
1,1,1-Trichloroethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	U	25 U	100 U	50 U	ND	ND
1,1-Dichloroethane	5	µg/L	**2.3 J**	25 U	100 U	50 U	**1.04**	ND
1,1-Dichloroethene	5	µg/L	U	25 U	100 U	50 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	U	25 U	100 U	50 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	U	25 U	100 U	50 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	U	25 U	100 U	50 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	U	25 U	100 U	50 U	ND	ND
1,2-Dichlorobenzene	3	µg/L	U	25 U	100 U	50 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	U	25 U	100 U	50 U	ND	ND
1,2-Dichloropropane	5	µg/L	U	25 U	100 U	50 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	U	25 U	100 U	50 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	U	25 U	100 U	50 U	-	-
1,4-Dichlorobenzene	3	µg/L	U	25 U	100 U	50 U	ND	ND
1,4-Dioxane	5	µg/L	U	500 U	2000 U	1000 U	-	-
2-Hexanone	50	µg/L	U	50 U	200 U	100 U	ND	ND
Acetone	50	µg/L	U	50 U	200 U	100 U	ND	ND
Benzene	1	µg/L	**1.7 J**	25 U	100 U	50 U	ND	ND
Bromoform	50	µg/L	U	25 U	100 U	50 U	ND	ND
Bromomethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	U	25 U	100 U	50 U	**1.03**	ND
Carbon tetrachloride	5	µg/L	U	25 U	100 U	50 U	ND	ND
Chlorobenzene	5	µg/L	U	25 U	100 U	50 U	ND	ND
Chloroethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
Chloroform	7	µg/L	U	25 U	100 U	50 U	ND	ND
Chloromethane	NE	µg/L	U	25 U	100 U	50 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	U	25 U	100 U	50 U	ND	ND
cis-1,3-Dichloropropene	0.40	µg/L	U	25 U	100 U	50 U	ND	ND
Cyclohexane	NE	µg/L	U	25 U	100 U	50 U	-	-
Dibromochloromethane	50	µg/L	U	25 U	100 U	50 U	-	-
Chlorodibromomethane	NE	µg/L	U	25 U	100 U	50 U	ND	ND
Dichlorodifluoromethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
Ethylbenzene	5	µg/L	**1.1 J**	25 U	100 U	50 U	ND	ND
Isopropylbenzene	5	µg/L	U	25 U	100 U	50 U	ND	ND
Methyl acetate	NE	µg/L	U	25 U	100 U	50 U	ND	ND
2-Butanone (MEK)	50	µg/L	U	50 U	200 U	100 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	U	50 U	200 U	100 U	ND	ND
Methyl Cyclohexane	NE	µg/L	U	25 U	100 U	50 U	ND	ND
Methylene chloride	5	µg/L	U	25 U	100 U	50 U	ND	**12 J**
Methyl-t-Butyl Ether (MTBE)	10	µg/L	U	25 U	100 U	50 U	ND	ND
m,p-Xylene	5	µg/L	U	25 U	100 U	50 U	-	-
n-Butylbenzene	5	µg/L	U	25 U	100 U	50 U	-	-
n-Propylbenzene	5	µg/L	U	25 U	100 U	50 U	-	-
o-Xylene	5	µg/L	U	25 U	100 U	50 U	-	-
sec-Butylbenzene	5	µg/L	U	25 U	100 U	50 U	-	-
Styrene	5	µg/L	U	25 U	100 U	50 U	ND	ND
tert-Butylbenzene	5	µg/L	U	25 U	100 U	50 U	-	-
Tetrachloroethene	5	µg/L	U	25 U	100 U	50 U	ND	ND
Toluene	5	µg/L	**3.1 J**	25 U	100 U	50 U	ND	ND
Total Xylenes	5	µg/L	**10**	25 U	100 U	50 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	U	25 U	100 U	50 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	U	25 U	100 U	50 U	ND	ND
Trichloroethene	5	µg/L	U	25 U	100 U	50 U	ND	**21**
Trichlorofluoromethane	5	µg/L	U	25 U	100 U	50 U	ND	ND
Vinyl chloride	2	µg/L	U	25 U	100 U	50 U	ND	ND
Total VOCs		µg/L	19.4	ND	ND	ND	ND	33
Total VOCs		mg/L	0.0194	ND	ND	ND	ND	0.033

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)
2. The reporting limits were raised due to matrix interference. Sample foamed during laboratory purging procedure.

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well NRG-4
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	3/14/07[2]	10/07/08	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	U	25 U	5 U	25 U	ND	ND
1,1-Dichloroethane	5	µg/L	**5.4**	25 U	5 U	25 U	ND	ND
1,1-Dichloroethene	5	µg/L	U	25 U	5 U	25 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	U	25 U	5 U	25 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	U	25 U	5 U	25 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	U	25 U	5 U	25 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	U	25 U	5 U	25 U	ND	ND
1,2-Dichlorobenzene	3	µg/L	U	25 U	5 U	25 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	U	25 U	5 U	25 U	ND	ND
1,2-Dichloropropane	5	µg/L	U	25 U	5 U	25 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	U	25 U	5 U	25 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	U	25 U	5 U	25 U	-	-
1,4-Dichlorobenzene	3	µg/L	U	25 U	5 U	25 U	ND	ND
1,4-Dioxane	5	µg/L	U	500 U	100 U	500 U	-	-
2-Hexanone	50	µg/L	U	50 U	10 U	50 U	ND	ND
Acetone	50	µg/L	U	50 U	10 U	50 U	ND	ND
Benzene	1	µg/L	**0.79 J**	25 U	5 U	25 U	ND	ND
Bromoform	50	µg/L	U	25 U	5 U	25 U	ND	ND
Bromomethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	-	ND	ND
Carbon disulfide	60	µg/L	U	25 U	5 U	25 U	ND	ND
Carbon tetrachloride	5	µg/L	U	25 U	5 U	25 U	ND	ND
Chlorobenzene	5	µg/L	U	25 U	5 U	25 U	ND	ND
Chloroethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
Chloroform	7	µg/L	U	25 U	5 U	25 U	ND	ND
Chloromethane	NE	µg/L	U	25 U	5 U	25 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	U	25 U	5 U	25 U	ND	ND
cis-1,3-Dichloropropene	0.40	µg/L	U	25 U	5 U	25 U	ND	ND
Cyclohexane	NE	µg/L	U	25 U	5 U	25 U	-	-
Dibromochloromethane	50	µg/L	U	25 U	5 U	25 U	-	-
Chlorodibromomethane	NE	µg/L	U	25 U	5 U	25 U	ND	ND
Dichlorodifluoromethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
Ethylbenzene	5	µg/L	U	25 U	5 U	25 U	ND	ND
Isopropylbenzene	5	µg/L	U	25 U	5 U	25 U	ND	ND
Methyl acetate	NE	µg/L	U	25 U	5 U	25 U	ND	ND
2-Butanone (MEK)	50	µg/L	U	50 U	10 U	50 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	U	50 U	10 U	50 U	ND	ND
Methyl Cyclohexane	NE	µg/L	U	25 U	5 U	25 U	ND	ND
Methylene chloride	5	µg/L	U	25 U	5 U	25 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	U	25 U	5 U	25 U	ND	ND
m,p-Xylene	5	µg/L	U	25 U	5 U	25 U	-	-
n-Butylbenzene	5	µg/L	U	25 U	5 U	25 U	-	-
n-Propylbenzene	5	µg/L	U	25 U	5 U	25 U	-	-
o-Xylene	5	µg/L	U	25 U	5 U	25 U	-	-
sec-Butylbenzene	5	µg/L	U	25 U	5 U	25 U	-	-
Styrene	5	µg/L	U	25 U	5 U	25 U	ND	ND
tert-Butylbenzene	5	µg/L	U	25 U	5 U	25 U	-	-
Tetrachloroethene	5	µg/L	U	25 U	5 U	25 U	ND	ND
Toluene	5	µg/L	**1.8 J**	25 U	5 U	25 U	ND	ND
Total Xylenes	5	µg/L	**1.6 J**	25 U	5 U	25 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	U	25 U	5 U	25 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	U	25 U	5 U	25 U	ND	ND
Trichloroethene	5	µg/L	U	25 U	5 U	25 U	ND	ND
Trichlorofluoromethane	5	µg/L	U	25 U	5 U	25 U	ND	ND
Vinyl chloride	2	µg/L	U	25 U	5 U	25 U	ND	ND
Total VOCs		µg/L	12.19	ND	ND	ND	ND	ND
Total VOCs		mg/L	0.01219	ND	ND	ND	ND	ND

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)
2. The reporting limits were raised due to matrix interference. Sample foamed during laboratory purging procedure.

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well NRG-5
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	3/13/07[2]	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	U	5 U	5 U	ND	ND
1,1-Dichloroethane	5	µg/L	**4.2 J**	**3 J**	5 U	ND	**1.0**
1,1-Dichloroethene	5	µg/L	U	5 U	5 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	U	5 U	5 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	U	5 U	5 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	U	5 U	5 U	ND	ND
1,2-Dichlorobenzene	3	µg/L	U	5 U	5 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	**4.4 J**	**2 J**	5 U	ND	**2.1**
1,2-Dichloropropane	5	µg/L	U	5 U	5 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	U	5 U	5 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L	U	5 U	5 U	ND	ND
1,4-Dioxane	5	µg/L	U	100 U	100 U	-	-
2-Hexanone	50	µg/L	U	10 U	10 U	ND	ND
Acetone	50	µg/L	U	10 U	10 U	ND	ND
Benzene	1	µg/L	U	5 U	5 U	ND	ND
Bromoform	50	µg/L	U	5 U	5 U	ND	ND
Bromomethane	5	µg/L	U	5 U	5 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	ND	ND
Carbon disulfide	60	µg/L	U	5 U	5 U	ND	ND
Carbon tetrachloride	5	µg/L	U	5 U	5 U	ND	ND
Chlorobenzene	5	µg/L	U	5 U	5 U	ND	ND
Chloroethane	5	µg/L	U	5 U	5 U	ND	ND
Chloroform	7	µg/L	U	5 U	5 U	ND	ND
Chloromethane	NE	µg/L	U	5 U	5 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	**93**	**59**	**17**	**22.5**	**41**
cis-1,3-Dichloropropene	0.40	µg/L	U	5 U	5 U	ND	ND
Cyclohexane	NE	µg/L	U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	U	5 U	5 U	ND	ND
Dichlorodifluoromethane	5	µg/L	U	5 U	5 U	ND	ND
Ethylbenzene	5	µg/L	U	5 U	5 U	ND	ND
Isopropylbenzene	5	µg/L	U	5 U	5 U	ND	ND
Methyl acetate	NE	µg/L	U	5 U	5 U	ND	ND
2-Butanone (MEK)	50	µg/L	U	10 U	10 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	U	10 U	10 U	ND	ND
Methyl Cyclohexane	NE	µg/L	U	5 U	5 U	ND	ND
Methylene chloride	5	µg/L	U	5 U	5 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	U	5 U	5 U	ND	ND
m,p-Xylene	5	µg/L	U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	U	5 U	5 U	-	-
o-Xylene	5	µg/L	U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	U	5 U	5 U	-	-
Styrene	5	µg/L	U	5 U	5 U	ND	ND
tert-Butylbenzene	5	µg/L	U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	U	5 U	5 U	ND	ND
Toluene	5	µg/L	U	5 U	5 U	ND	ND
Total Xylenes	5	µg/L	U	5 U	5 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	**6.7 J**	**5 J**	**2 J**	**1.94J**	**3.5**
trans-1,3-Dichloropropene	0.4	µg/L	U	5 U	5 U	ND	ND
Trichloroethene	5	µg/L	U	5 U	5 U	ND	**0.56 J**
Trichlorofluoromethane	5	µg/L	U	5 U	5 U	ND	ND
Vinyl chloride	2	µg/L	**6.1 J**	5 U	5 U	ND	**1.4**
Total VOCs		µg/L	114.4	69	19	24.44	49.56
Total VOCs		mg/L	0.1144	0.069	0.019	0.02444	0.04956

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)
2. The reporting limits were raised due to matrix interference. Sample foamed during laboratory purging procedure.

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but not detected.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Table 5
Monitoring Well NRG-6
Historical Groundwater Analytical Results
2020 Periodic Review Report
Roblin Steel Site (Formerly Wickwire Spencer)
OU-3 - Envirotek II Groundwater
NYSDEC Site No. 915056

Volatile Compounds	NYSDEC TOGS 1.1.1 Water Quality Standards[1]	Units	3/13/07[2]	10/27/09	10/21/10	10/21/15	11/03/20
1,1,1-Trichloroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1,2,2-Tetrachloroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1,2-Trichlotrifluoroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1,2-Trichloroethane	1	µg/L	U	5 U	5 U	ND	ND
1,1-Dichloroethane	5	µg/L	U	5 U	5 U	ND	ND
1,1-Dichloroethene	5	µg/L	U	5 U	5 U	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	-	-	-	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	U	5 U	5 U	ND	ND
1,2,4 -Trimethylbenzene	5	µg/L	U	5 U	5 U	-	-
1,2-Dibromo-3-Chloropropane DBCP	0.04	µg/L	U	5 U	5 U	ND	ND
1,2-Dibromoethane (EDB)	NE	µg/L	U	5 U	5 U	ND	ND
1,2-Dichlorobenzene	3	µg/L	U	5 U	5 U	ND	ND
1,2-Dichloroethane	0.6	µg/L	U	5 U	5 U	ND	**0.53 J**
1,2-Dichloropropane	5	µg/L	U	5 U	5 U	ND	ND
1,3-Dichlorobenzene	3	µg/L	U	5 U	5 U	ND	ND
1,3,5-Trimethylbenzene	5	µg/L	U	5 U	5 U	-	-
1,4-Dichlorobenzene	3	µg/L	U	5 U	5 U	ND	ND
1,4-Dioxane	5	µg/L	U	100 U	100 U	-	-
2-Hexanone	50	µg/L	U	10 U	10 U	ND	ND
Acetone	50	µg/L	U	10 U	10 U	ND	ND
Benzene	1	µg/L	U	5 U	5 U	ND	ND
Bromoform	50	µg/L	U	5 U	5 U	ND	ND
Bromomethane	5	µg/L	U	5 U	5 U	ND	ND
Bromochloromethane	5	µg/L	-	-	-	ND	ND
Bromodichloromethane	50	µg/L	-	-	-	ND	ND
Carbon disulfide	60	µg/L	U	5 U	5 U	ND	ND
Carbon tetrachloride	5	µg/L	U	5 U	5 U	ND	ND
Chlorobenzene	5	µg/L	U	5 U	5 U	ND	ND
Chloroethane	5	µg/L	U	5 U	5 U	ND	ND
Chloroform	7	µg/L	U	5 U	5 U	ND	ND
Chloromethane	NE	µg/L	U	5 U	5 U	ND	ND
cis-1,2-Dichloroethene	5	µg/L	**25**	**22**	**11**	**10.30**	**11.5**
cis-1,3-Dichloropropene	0.40	µg/L	U	5 U	5 U	ND	ND
Cyclohexane	NE	µg/L	U	5 U	5 U	-	-
Dibromochloromethane	50	µg/L	U	5 U	5 U	-	-
Chlorodibromomethane	NE	µg/L	U	5 U	5 U	ND	ND
Dichlorodifluoromethane	5	µg/L	U	5 U	5 U	ND	ND
Ethylbenzene	5	µg/L	U	5 U	5 U	ND	ND
Isopropylbenzene	5	µg/L	U	5 U	5 U	ND	ND
Methyl acetate	NE	µg/L	U	5 U	5 U	ND	ND
2-Butanone (MEK)	50	µg/L	U	10 U	10 U	ND	ND
4-Methyl 2-Pentanone	NE	µg/L	U	10 U	10 U	ND	ND
Methyl Cyclohexane	NE	µg/L	U	5 U	5 U	ND	ND
Methylene chloride	5	µg/L	U	5 U	5 U	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	µg/L	U	5 U	5 U	ND	ND
m,p-Xylene	5	µg/L	U	5 U	5 U	-	-
n-Butylbenzene	5	µg/L	U	5 U	5 U	-	-
n-Propylbenzene	5	µg/L	U	5 U	5 U	-	-
o-Xylene	5	µg/L	U	5 U	5 U	-	-
sec-Butylbenzene	5	µg/L	U	5 U	5 U	-	-
Styrene	5	µg/L	U	5 U	5 U	ND	ND
tert-Butylbenzene	5	µg/L	U	5 U	5 U	-	-
Tetrachloroethene	5	µg/L	U	5 U	5 U	ND	ND
Toluene	5	µg/L	U	5 U	5 U	ND	ND
Total Xylenes	5	µg/L	U	5 U	5 U	ND	ND
trans-1, 2-Dichloroethene	5	µg/L	**1.1 J**	5 U	5 U	ND	ND
trans-1,3-Dichloropropene	0.4	µg/L	**1.4 J**	5 U	5 U	ND	ND
Trichloroethene	5	µg/L	U	5 U	5 U	ND	ND
Trichlorofluoromethane	5	µg/L	U	5 U	5 U	ND	ND
Vinyl chloride	2	µg/L	U	5 U	5 U	ND	ND
Total VOCs		µg/L	27.5	22.0	11.0	10.3	12.03
Total VOCs		mg/L	0.0275	0.0220	0.0110	0.0103	0.01203

Notes:

1. New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values (µg/L)
2. The reporting limits were raised due to matrix interference. Sample foamed during laboratory purging procedure.

Bolded concentrations indicated the analyte was detected.
Bolded and shaded concentrations indicate equal to or exceedance of TOGS 1.1.1 criteria.
NE = NYSDEC TOGS 1.1.1 water quality standard not established.
U = The analyte was analyzed for but not detected. The associated value is the analyte quantitation limit.
ND = The analyte was analyzed for but n ND = The analyte was anal ND = The a ND = The ana ND = The ana ND = The ana ND = The ana ND = The ana
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
R = The sample results are rejected.
D = Compound identified in analysis at a secondary dilution factor.
- = The analyte was not sampled for.

Appendices

Appendix A
IC/EC Certification

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

Site Details **Box 1**

Site No. 915056

Site Name Roblin Steel (formerly Wickwire Spencer)

Site Address: 4000 River Road Zip Code: 14150
City/Town: Tonawanda
County: Erie
Site Acreage: 62.000

Reporting Period: January 15, 2016 to January 15, 2021

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

Box 2

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

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

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

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 915056 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
64.08-1-1.1	Niagara River World, Inc.	Ground Water Use Restriction Landuse Restriction Monitoring Plan Site Management Plan IC/EC Plan

An Environmental Easement was filed with the Erie County Clerk's Office on November 26, 2007. The Controlled Property may be used for restricted commercial and industrial use as long as the following long-term engineering controls are employed: (1) restrict the use of site groundwater as a source of potable or process water without necessary water quality treatment as determined by the Erie County Department of Health; (2) any proposed soil excavation on the property requires prior notification and prior approval of NYSDEC in accordance with the Site Management Plan approved by NYSDEC for this Controlled Property. The excavated soil must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives; and (3) evaluate the potential for vapor intrusion for any buildings developed on the site. Provision for mitigation, such as installation of a vapor barrier and sub-slab vapor system or other engineering controls shall be implemented on all structures, prior to occupancy.

Post-closure groundwater monitoring is required every five years to ensure the long term effectiveness of the remedy.

64.08-1-1.2	Niagara River World, Inc.	IC/EC Plan Site Management Plan Monitoring Plan Landuse Restriction Ground Water Use Restriction

An Environmental Easement was filed with the Erie County Clerk's Office on November 26, 2007. The Controlled Property may be used for restricted commercial and industrial use as long as the following long-term engineering controls are employed: (1) restrict the use of site groundwater as a source of potable or process water without necessary water quality treatment as determined by the Erie County Department of Health; (2) any proposed soil excavation on the property requires prior notification and prior approval of NYSDEC in accordance with the Site Management Plan approved by NYSDEC for this Controlled Property. The excavated soil must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives; and (3) evaluate the potential for vapor intrusion for any buildings developed on the site. Provision for mitigation, such as installation of a vapor barrier and sub-slab vapor system or other engineering controls shall be implemented on all structures, prior to occupancy.

Post-closure groundwater monitoring is required every five years to ensure the long term effectiveness of the remedy.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
64.08-1-1.1	Monitoring Wells Fencing/Access Control
Fencing/Access Control.	
64.08-1-1.2	Fencing/Access Control Monitoring Wells
Fencing/Access Control.	

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 Engineering Control certification;

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

YES	NO
☒	☐

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

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

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

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

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

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

YES	NO
☒	☐

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

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

_____ _____

Signature of Owner, Remedial Party or Designated Representative Date

IC CERTIFICATIONS
SITE NO. 915056

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 Bonnie Leto (print name) at 4000 River Road, Tonawanda, New York (print business address),

am certifying as Owner (Owner or Remedial Party)

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

Bonnie M Leto

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

2/3/2021

Date

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional 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 David M. Britton, P.E. at GHD,
print name print business address

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

David Britton

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

Stamp (Required for PE)

2/12/2021
Date

Appendix B
Groundwater Field Sampling Logs

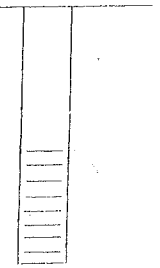
Masterflex

DUP

Monitoring Well Record for Low-Flow Purging
(Form BP-09)

Project Data:
Project Name: Niagara River Works
Ref. No.: 11192740-200

Date: 11/3/20
Personnel: D. Tyran



Monitoring Well Data:
Well No.: NRG-6
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 20.36
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 11.34

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
0929		11.34	0.00	12.7	1.47	14.5	0.50	10.61	60.2		
0934	160			13.0	1.49	11.8	023	10.97	-39.6		
0939		11.34	0.00	13.0	1.48	7.01	0.18	11.12	-84.7		
0944	176			13.2	1.44	3.43	0.14	11.17	-104.6		
0949		11.34	0.00	13.2	1.38	1.08	0.12	11.20	-124.7		
0954	160			13.2	1.36	0.71	0.13	11.21	-135.9		
0959				13.2	1.33	0.54	0.13	11.21	-146.7		
1004	164	11.34	0.00	13.1	1.32	0.39	0.13	11.26	-155.9		
1009				13.2	1.31	0.30	0.16	11.30	-163.5		

Sample ID: WG-11192740-110320-DT-001
Sample Time: 1015

Notes: Blind Dup WG-11192740-110320-DT-003

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Start purge @ 0921

D. Tyran

MS/MSD

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

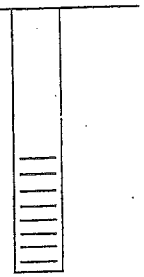
Project Name: NIAGARA RIVER WORLD
Ref. No.: 11192740 - 200

Date: 11/3/2020
Personnel: S GARDNER

Monitoring Well Data:

Well No.: NRG-5
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 19.64
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 10.45



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1020	140	10.47	0.02	12.8	2.05	2.66	3.56	5.66	-112.4		
1025	140	10.47	0.02	12.8	2.04	0.98	3.50	5.63	-111.3		
1030		10.47	0.02	12.8	2.03	1.01	3.52	5.61	-109.7		

Sample ID: WG-11192740-110320-SG-002

Sample Time: 1035

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

START PURGE @ 0931

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

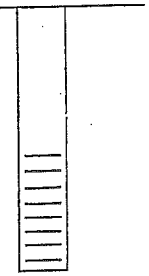
Project Name: NIAGARA RIVER WORLD
Ref. No.: 1192740-20

Date: 11/3/2020
Personnel: S GARDINER

Monitoring Well Data:

Well No.: NRG-4
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 18.55
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.63



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1115	92	12.97	0.34	12.2	0.489	6.30	1.68	5.76	-133.3		
1120		13.06	0.43	12.5	0.465	2.98	1.23	5.79	-138.2		
1125	92	13.12	0.49	12.6	0.458	3.85	1.03	6.11	-150.8		
1130		13.14	0.51	12.8	0.453	7.22	1.00	6.07	-153.2		
1135	92	13.17	0.54	12.8	0.450	7.77	1.01	6.03	-149.7		
1140		13.18	0.55	12.9	0.448	7.82	1.02	6.03	-144.2		

Sample ID: WG-1192740-110320-SG-004

Sample Time: 1145

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

START PURGE @ 1109

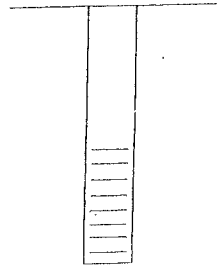
Dave S Tyson

Masterflex

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:
Project Name: Niagara River Works
Ref. No.: 11192740-200

Date: 11/3/20
Personnel: D. Tyson



Monitoring Well Data:
Well No.: GW-3
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 20.90
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 9.71

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1129		9.71	0.00	10.2	1.05	7.29	0.46	11.27	-231.3		
1134	152			10.4	1.06	4.23	0.31	11.37	-235.1		
1139		9.71	0.00	10.4	1.06	2.22	0.24	11.48	-239.9		
1144	160			10.4	1.07	1.44	0.17	11.57	-243.5		
1149		9.71	0.00	10.4	1.07	1.55	0.18	11.63	-245.6		
1154				10.4	1.07	0.91	0.19	11.68	-247.6		

Sample ID: WG-11192740-110320-DT-005
Sample Time: 1155

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Start Purge 1124

Dave J Tyson

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

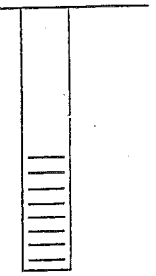
Project Name: NIAGARA RIVER WORLD
Ref. No.: 11192740-200

Date: 11/3/2020
Personnel: S GARDINER

Monitoring Well Data:

Well No.: ENV-A
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 22.88
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.89



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1210	120	12.91	0.02	12.1	0.78	7.36	1.80	5.75	-143.4		
1215	120	12.91	0.02	11.9	0.78	5.33	1.24	5.64	-159.9		
1220		12.91	0.02	12.0	0.78	3.26	1.20	5.76	-172.1		
1225	124	12.91	0.02	12.0	0.78	3.60	1.18	5.89	-183.7		
1230		12.91	0.02	12.0	0.78	2.88	1.20	5.91	-195.9		
1235	124	12.91	0.02	12.1	0.78	2.21	1.21	5.97	-203.6		
1240		12.91	0.02	12.1	0.78	2.87	1.20	6.02	-208.3		

Sample ID: WG-11192740-110320-SG-0006

Sample Time: 1245

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

START PURGE @ 1205

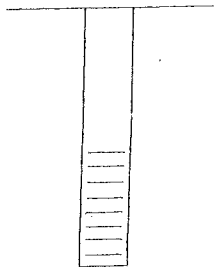
Masterflex

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Niagara River Works
Ref. No.: 11192740-200

Date: 11-3-20
Personnel: D. Tyran



Monitoring Well Data:

Well No.: ENV-9
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 18.09
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 13.70

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1226		14.08	0.38	10.7	1.79	3.63	1.08	9.24	7.8		
1231	64			10.6	1.79	3.54	0.68	8.87	-7.8		
1236		14.11	0.41	10.5	1.79	4.01	0.56	8.68	-14.4		
1241	76			10.6	1.79	3.74	0.45	8.52	-16.3		
1246		14.07	0.37	10.7	1.79	3.35	0.44	8.41	-24.5		
1251	88			11.0	1.81	4.75	0.41	8.28	-28.8		
1256		14.15	0.45	11.2	1.82	3.97	0.35	8.22	-37.8		
1301	80			11.0	1.80	2.93	0.31	8.19	-46.4		
1306		14.19		11.0	1.80	2.73	0.29	8.17	-55.5		
1311				11.2	1.81	2.81	0.27	8.17	-63.8		

Sample ID: WG-11192740-110320-DT-007

Sample Time: 1315

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Start Purge @ 1220

David J Tyran

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

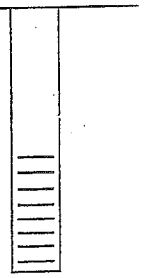
Project Name: NIAGARA RIVER WORLD
Ref. No.: 11192740-200

Date: 11/3/2020
Personnel: S GARDNER

Monitoring Well Data:

Well No.: ENV-7
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 23.08
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.16



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1319	60	12.81	0.65	12.4	0.87	9.53	5.85	3.54	-12.6		
1324	60	13.25	1.09	12.4	0.87	6.95	3.80	3.39	7.1		
1329	60	13.61	1.45	12.4	0.87	7.20	3.82	3.40	9.7		
1334		13.98	1.82	12.4	0.87	6.88	3.77	3.48	10.2		

Sample ID: WG-11192740-110320-SG-008

Sample Time: 1340

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

START PURGE @ 1306

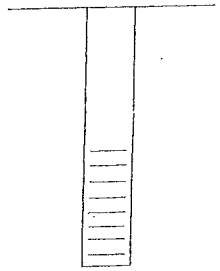
Masterflex

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Niagara River Works
Ref. No.: 11192740.200

Date: 11.3.20
Personnel: D. Tyran



Monitoring Well Data:

Well No.: ENV-1
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 24.42
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 6.39

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1340	132			11.2	0.82	3.51	0.51	7.22	-40.4		
1345		~~6.48~~	~~0.09~~	11.3	0.80	3.85	0.48	7.12	-63.1		
1350	124			11.3	0.79	2.75	0.79	7.05	-78.1		
1355		~~6.43~~	~~0.04~~	11.2	0.79	3.17	0.68	7.01	-83.8		
1400	116			11.2	0.78	6.38	0.66	6.98	-88.0		
1405		9.62	3.23	11.4	0.79	10.8	0.64	6.96	-91.5		
1410	108			11.3	0.78	13.5	0.18	6.94	-94.3		
1415		9.78	3.39	11.3	0.78	13.5	0.17	6.93	-95.8		
1420				11.2	0.78	16.0	0.18	6.92	-97.5		

Sample ID: WG-11192740-110320-DT-009

Sample Time: 1425

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Start Purge @ 1335

Dave J Tyran

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

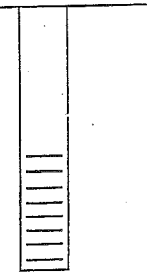
Project Name: NIAGARA RIVER WORLD
Ref. No.: 11192740-200

Date: 11/3/2020
Personnel: S GARDNER

Monitoring Well Data:

Well No.: ENV-8
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 17.47
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 13.15



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1402	124	13.15	0.00	14.1	0.85	8.79	4.60	6.76	-144.0		
1407	126	13.15	0.00	14.4	0.85	5.34	4.06	6.80	-152.9		
1412		13.15	0.00	14.4	0.85	3.89	3.40	6.71	-152.8		
1417		13.15	0.00	14.3	0.86	1.89	3.00	7.17	-174.8		
1422	126	13.15	0.00	14.2	0.86	1.67	2.80	7.04	-170.2		
1427		13.15	0.00	14.2	0.86	1.58	2.68	7.13	-177.1		

Sample ID: WG-11192740-110320-S6-010

Sample Time: 1435

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

START PURGE @ 1357

Masterflex

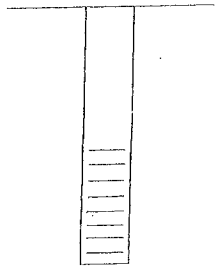
Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:
Project Name: Niagara River Works
Ref. No.: 11192740-200

Date: 11-3-20
Personnel: D Tyra

Monitoring Well Data:
Well No.: NRG-3
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 15.81
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 13.71



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[6]:				±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1047		14.42	0.71	11.5	~~1.07~~	7.99	1.07	8.70	-20.3		Cond 0.481
1052	74			11.6	0.444	6.58	0.49	8.28	-38.4		
1057		15.47	1.76	11.6	0.403	5.42	0.38	8.03	-61.6		
1101	Well Dry w/L 15.71										
1438	Check level w/L			15.62	0.09	Recharge 3.5 hours					
11/4/20 0800	w/L	15.10									

Sample ID: WG-11192740-110420-DT-011

Sample Time: 0800

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Dan Tyra

Start Purge 1042

CHAIN OF CUSTODY RECORD

COC NO.: 60250

Address: NF office

PAGE 1 OF 1

Phone: _____ Fax: _____

Project No/ Phase/Task Code: 11172740 200	Laboratory Name: Eurofins TestAmerica	Lab Location: Albany NY	SSOW ID:
Project Name: Niagara River Works Sys GW Sampling	Lab Contact: Dave Hickey		Cooler No:
Project Location: Tonawanda	SAMPLE TYPE	ANALYSIS REQUESTED (See Back of COC for Definitions)	Carrier: Hand Delivered
GHD Chemistry Contact: Kathy Willy			Airbill No:
Sampler(s): D Tyman / S Gardner			Total # of Containers: 41

Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd//yy)	TIME (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	VOCs											Total Containers/sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						HCl													
1	TB 11172740 110320 DT	11.3.20		TB	G	N	X											2		
2	WG 11172740 110320 DT 001	11.3.20	1015	WG	G	N	X											3		
3	WG 11172740 110320 SG 002	11.3.20	1035	WG	G	N	X											9	X	
4	WG 11172740 110320 DT 003	11.3.20	1015	WG	G	N	X											3		
5	WG 11172740 110320 SG 004	11.3.20	1145	WG	G	N	X											3		
6	WG 11172740 110320 DT 005	11.3.20	1155	WG	G	N	X											3		
7	WG 11172740 110320 SG 006	11.3.20	1245	WG	G	N	X											3		
8	WG 11172740 110320 DT 007	11.3.20	1315	WG	G	N	X											3		
9	WG 11172740 110320 SG 008	11.3.20	1340	WG	G	N	X											3		
10	WG 11172740 110320 DT 009	11.3.20	1425	WG	G	N	X											3		
11	WG 11172740 110320 SG 010	11.3.20	1435	WG	G	N	X											3		
12	WG 11172740 110420 DT 011	11.4.20	0800	WG	G	N	X											3		

TAT Required in business days (use separate COCs for different TATs):

☐ ☐1 Day ☑2 Days ☐3 Days ☐1 Week ☑2 Week

Notes/ Special Requirements:

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
1. D Tyman	GHD	11/4/20	0813	1.			
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

Appendix C
Analytical Data Report

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 480-177679-1
Client Project/Site: 11192740, Niagara River World

For:
GHD Services Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Denise D Heckler

Authorized for release by:
11/14/2020 3:03:28 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 480-177679-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-177679-1

Comments
No additional comments.

Receipt
The samples were received on 11/4/2020 11:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

GC/MS VOA
Method 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: WG-11192740-110320-DT-001 (480-177679-2), WG-11192740-110320-SG-004 (480-177679-5), WG-11192740-110320-SG-006 (480-177679-7), WG-11192740-110320-SG-008 (480-177679-9), WG-11192740-110320-SG-010 (480-177679-11) and WG-11192740-110420-DT-011 (480-177679-12). Elevated reporting limits (RLs) are provided.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: TB-11192740-110320-DT — Lab Sample ID: 480-177679-1

No Detections.

Client Sample ID: WG-11192740-110320-DT-001 — Lab Sample ID: 480-177679-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	0.53	J	2.0	0.42	ug/L	2		8260C	Total/NA
cis-1,2-Dichloroethene	11		2.0	1.6	ug/L	2		8260C	Total/NA

Client Sample ID: WG-11192740-110320-SG-002 — Lab Sample ID: 480-177679-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.0	F1	1.0	0.38	ug/L	1		8260C	Total/NA
1,2-Dichloroethane	2.1	F1	1.0	0.21	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	41		1.0	0.81	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	3.5		1.0	0.90	ug/L	1		8260C	Total/NA
Trichloroethene	0.56	J F1	1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	1.4		1.0	0.90	ug/L	1		8260C	Total/NA

Client Sample ID: WG-11192740-110320-DT-003 — Lab Sample ID: 480-177679-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	0.55	J	1.0	0.21	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	12		1.0	0.81	ug/L	1		8260C	Total/NA

Client Sample ID: WG-11192740-110320-SG-004 — Lab Sample ID: 480-177679-5

No Detections.

Client Sample ID: WG-11192740-110320-DT-005 — Lab Sample ID: 480-177679-6

No Detections.

Client Sample ID: WG-11192740-110320-SG-006 — Lab Sample ID: 480-177679-7

No Detections.

Client Sample ID: WG-11192740-110320-DT-007 — Lab Sample ID: 480-177679-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.90	J	1.0	0.81	ug/L	1		8260C	Total/NA

Client Sample ID: WG-11192740-110320-SG-008 — Lab Sample ID: 480-177679-9

No Detections.

Client Sample ID: WG-11192740-110320-DT-009 — Lab Sample ID: 480-177679-10

No Detections.

Client Sample ID: WG-11192740-110320-SG-010 — Lab Sample ID: 480-177679-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	14		2.0	1.6	ug/L	2		8260C	Total/NA
Trichloroethene	2.3		2.0	0.92	ug/L	2		8260C	Total/NA

Client Sample ID: WG-11192740-110420-DT-011 — Lab Sample ID: 480-177679-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	12	J	20	8.8	ug/L	20		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample ID: WG-11192740-110420-DT-011 (Continued)
Lab Sample ID: 480-177679-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	21		20	9.2	ug/L	20		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: TB-11192740-110320-DT
Date Collected: 11/03/20 00:00
Date Received: 11/04/20 11:30

Lab Sample ID: 480-177679-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/10/20 22:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/10/20 22:34	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/10/20 22:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/10/20 22:34	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/10/20 22:34	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/10/20 22:34	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/10/20 22:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/10/20 22:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/10/20 22:34	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			11/10/20 22:34	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/10/20 22:34	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/10/20 22:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/10/20 22:34	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/10/20 22:34	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/10/20 22:34	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/10/20 22:34	1
Acetone	10	U	10	3.0	ug/L			11/10/20 22:34	1
Benzene	1.0	U	1.0	0.41	ug/L			11/10/20 22:34	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/10/20 22:34	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/10/20 22:34	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/10/20 22:34	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/10/20 22:34	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/10/20 22:34	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/10/20 22:34	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/10/20 22:34	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/10/20 22:34	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/10/20 22:34	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/10/20 22:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			11/10/20 22:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/10/20 22:34	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/10/20 22:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/10/20 22:34	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/10/20 22:34	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/10/20 22:34	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/10/20 22:34	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/10/20 22:34	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/10/20 22:34	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/10/20 22:34	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/10/20 22:34	1
Styrene	1.0	U	1.0	0.73	ug/L			11/10/20 22:34	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/10/20 22:34	1
Toluene	1.0	U	1.0	0.51	ug/L			11/10/20 22:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/10/20 22:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/10/20 22:34	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/10/20 22:34	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/10/20 22:34	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/10/20 22:34	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/10/20 22:34	1

Client Sample ID: TB-11192740-110320-DT

Lab Sample ID: 480-177679-1

Date Collected: 11/03/20 00:00

Matrix: Water

Date Received: 11/04/20 11:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/10/20 22:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*77 - 120*		*11/10/20 22:34*	*1*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*11/10/20 22:34*	*1*
Dibromofluoromethane (Surr)	*118*		*75 - 123*		*11/10/20 22:34*	*1*

Client Sample ID: WG-11192740-110320-DT-001

Lab Sample ID: 480-177679-2

Date Collected: 11/03/20 10:15

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.0	U	2.0	1.6	ug/L			11/08/20 16:23	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 16:23	2
1,1,2-Trichloroethane	2.0	U	2.0	0.46	ug/L			11/08/20 16:23	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.62	ug/L			11/08/20 16:23	2
1,1-Dichloroethane	2.0	U	2.0	0.76	ug/L			11/08/20 16:23	2
1,1-Dichloroethene	2.0	U	2.0	0.58	ug/L			11/08/20 16:23	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.82	ug/L			11/08/20 16:23	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.78	ug/L			11/08/20 16:23	2
1,2-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 16:23	2
1,2-Dichloroethane	**0.53**	**J**	2.0	0.42	ug/L			11/08/20 16:23	2
1,2-Dichloropropane	2.0	U	2.0	1.4	ug/L			11/08/20 16:23	2
1,3-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 16:23	2
1,4-Dichlorobenzene	2.0	U	2.0	1.7	ug/L			11/08/20 16:23	2
2-Butanone (MEK)	20	U	20	2.6	ug/L			11/08/20 16:23	2
2-Hexanone	10	U	10	2.5	ug/L			11/08/20 16:23	2
4-Methyl-2-pentanone (MIBK)	10	U	10	4.2	ug/L			11/08/20 16:23	2
Acetone	20	U	20	6.0	ug/L			11/08/20 16:23	2
Benzene	2.0	U	2.0	0.82	ug/L			11/08/20 16:23	2
Bromodichloromethane	2.0	U	2.0	0.78	ug/L			11/08/20 16:23	2
Bromoform	2.0	U	2.0	0.52	ug/L			11/08/20 16:23	2
Bromomethane	2.0	U	2.0	1.4	ug/L			11/08/20 16:23	2
Carbon disulfide	2.0	U	2.0	0.38	ug/L			11/08/20 16:23	2
Carbon tetrachloride	2.0	U	2.0	0.54	ug/L			11/08/20 16:23	2
Chlorobenzene	2.0	U	2.0	1.5	ug/L			11/08/20 16:23	2
Dibromochloromethane	2.0	U	2.0	0.64	ug/L			11/08/20 16:23	2
Chloroethane	2.0	U	2.0	0.64	ug/L			11/08/20 16:23	2
Chloroform	2.0	U	2.0	0.68	ug/L			11/08/20 16:23	2
Chloromethane	2.0	U	2.0	0.70	ug/L			11/08/20 16:23	2
cis-1,2-Dichloroethene	**11**		2.0	1.6	ug/L			11/08/20 16:23	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.72	ug/L			11/08/20 16:23	2
Cyclohexane	2.0	U	2.0	0.36	ug/L			11/08/20 16:23	2
Dichlorodifluoromethane	2.0	U	2.0	1.4	ug/L			11/08/20 16:23	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			11/08/20 16:23	2
1,2-Dibromoethane	2.0	U	2.0	1.5	ug/L			11/08/20 16:23	2
Isopropylbenzene	2.0	U	2.0	1.6	ug/L			11/08/20 16:23	2
Methyl acetate	5.0	U	5.0	2.6	ug/L			11/08/20 16:23	2
Methyl tert-butyl ether	2.0	U	2.0	0.32	ug/L			11/08/20 16:23	2
Methylcyclohexane	2.0	U	2.0	0.32	ug/L			11/08/20 16:23	2
Methylene Chloride	2.0	U	2.0	0.88	ug/L			11/08/20 16:23	2

Client Sample ID: WG-11192740-110320-DT-001

Lab Sample ID: 480-177679-2

Date Collected: 11/03/20 10:15

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	2.0	U	2.0	1.5	ug/L			11/08/20 16:23	2
Tetrachloroethene	2.0	U	2.0	0.72	ug/L			11/08/20 16:23	2
Toluene	2.0	U	2.0	1.0	ug/L			11/08/20 16:23	2
trans-1,2-Dichloroethene	2.0	U	2.0	1.8	ug/L			11/08/20 16:23	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.74	ug/L			11/08/20 16:23	2
Trichloroethene	2.0	U	2.0	0.92	ug/L			11/08/20 16:23	2
Trichlorofluoromethane	2.0	U	2.0	1.8	ug/L			11/08/20 16:23	2
Vinyl chloride	2.0	U	2.0	1.8	ug/L			11/08/20 16:23	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			11/08/20 16:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*80 - 120*		*11/08/20 16:23*	*2*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*11/08/20 16:23*	*2*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*11/08/20 16:23*	*2*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*11/08/20 16:23*	*2*

Client Sample ID: WG-11192740-110320-SG-002

Lab Sample ID: 480-177679-3

Date Collected: 11/03/20 10:35

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U F1	1.0	0.82	ug/L			11/08/20 16:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 16:48	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/08/20 16:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/08/20 16:48	1
1,1-Dichloroethane	**1.0**	**F1**	1.0	0.38	ug/L			11/08/20 16:48	1
1,1-Dichloroethene	1.0	U F1	1.0	0.29	ug/L			11/08/20 16:48	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/08/20 16:48	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/08/20 16:48	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/08/20 16:48	1
1,2-Dichloroethane	**2.1**	**F1**	1.0	0.21	ug/L			11/08/20 16:48	1
1,2-Dichloropropane	1.0	U F1	1.0	0.72	ug/L			11/08/20 16:48	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/08/20 16:48	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/08/20 16:48	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/08/20 16:48	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/08/20 16:48	1
4-Methyl-2-pentanone (MIBK)	5.0	U F1	5.0	2.1	ug/L			11/08/20 16:48	1
Acetone	10	U	10	3.0	ug/L			11/08/20 16:48	1
Benzene	1.0	U F1	1.0	0.41	ug/L			11/08/20 16:48	1
Bromodichloromethane	1.0	U F1	1.0	0.39	ug/L			11/08/20 16:48	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/08/20 16:48	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/08/20 16:48	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/08/20 16:48	1
Carbon tetrachloride	1.0	U F1	1.0	0.27	ug/L			11/08/20 16:48	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/08/20 16:48	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/08/20 16:48	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/08/20 16:48	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/08/20 16:48	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/08/20 16:48	1

Client Sample ID: WG-11192740-110320-SG-002

Lab Sample ID: 480-177679-3

Date Collected: 11/03/20 10:35

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**41**		1.0	0.81	ug/L			11/08/20 16:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/08/20 16:48	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/08/20 16:48	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/08/20 16:48	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/08/20 16:48	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/08/20 16:48	1
Isopropylbenzene	1.0	U F1	1.0	0.79	ug/L			11/08/20 16:48	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/08/20 16:48	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/08/20 16:48	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/08/20 16:48	1
Methylene Chloride	1.0	U F1	1.0	0.44	ug/L			11/08/20 16:48	1
Styrene	1.0	U	1.0	0.73	ug/L			11/08/20 16:48	1
Tetrachloroethene	1.0	U F1	1.0	0.36	ug/L			11/08/20 16:48	1
Toluene	1.0	U F1	1.0	0.51	ug/L			11/08/20 16:48	1
trans-1,2-Dichloroethene	**3.5**		1.0	0.90	ug/L			11/08/20 16:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/08/20 16:48	1
Trichloroethene	**0.56**	**J F1**	1.0	0.46	ug/L			11/08/20 16:48	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/08/20 16:48	1
Vinyl chloride	**1.4**		1.0	0.90	ug/L			11/08/20 16:48	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/08/20 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 120*		*11/08/20 16:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*11/08/20 16:48*	*1*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*		*11/08/20 16:48*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*11/08/20 16:48*	*1*

Client Sample ID: WG-11192740-110320-DT-003

Lab Sample ID: 480-177679-4

Date Collected: 11/03/20 10:15

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/08/20 17:12	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 17:12	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/08/20 17:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/08/20 17:12	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/08/20 17:12	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/08/20 17:12	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/08/20 17:12	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/08/20 17:12	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/08/20 17:12	1
1,2-Dichloroethane	**0.55**	**J**	1.0	0.21	ug/L			11/08/20 17:12	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/08/20 17:12	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/08/20 17:12	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/08/20 17:12	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/08/20 17:12	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/08/20 17:12	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/08/20 17:12	1
Acetone	10	U	10	3.0	ug/L			11/08/20 17:12	1

Client Sample ID: WG-11192740-110320-DT-003

Lab Sample ID: 480-177679-4

Date Collected: 11/03/20 10:15
Date Received: 11/04/20 11:30

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.41	ug/L			11/08/20 17:12	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/08/20 17:12	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/08/20 17:12	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/08/20 17:12	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/08/20 17:12	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/08/20 17:12	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/08/20 17:12	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/08/20 17:12	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/08/20 17:12	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/08/20 17:12	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/08/20 17:12	1
cis-1,2-Dichloroethene	**12**		1.0	0.81	ug/L			11/08/20 17:12	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/08/20 17:12	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/08/20 17:12	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/08/20 17:12	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/08/20 17:12	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/08/20 17:12	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/08/20 17:12	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/08/20 17:12	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/08/20 17:12	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/08/20 17:12	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/08/20 17:12	1
Styrene	1.0	U	1.0	0.73	ug/L			11/08/20 17:12	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/08/20 17:12	1
Toluene	1.0	U	1.0	0.51	ug/L			11/08/20 17:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/08/20 17:12	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/08/20 17:12	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/08/20 17:12	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/08/20 17:12	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/08/20 17:12	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/08/20 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*80 - 120*		*11/08/20 17:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*11/08/20 17:12*	*1*
4-Bromofluorobenzene (Surr)	*85*		*73 - 120*		*11/08/20 17:12*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*11/08/20 17:12*	*1*

Client Sample ID: WG-11192740-110320-SG-004

Lab Sample ID: 480-177679-5

Date Collected: 11/03/20 11:45
Date Received: 11/04/20 11:30

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.0	U	2.0	1.6	ug/L			11/08/20 17:37	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 17:37	2
1,1,2-Trichloroethane	2.0	U	2.0	0.46	ug/L			11/08/20 17:37	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.62	ug/L			11/08/20 17:37	2
1,1-Dichloroethane	2.0	U	2.0	0.76	ug/L			11/08/20 17:37	2
1,1-Dichloroethene	2.0	U	2.0	0.58	ug/L			11/08/20 17:37	2

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: WG-11192740-110320-SG-004
Date Collected: 11/03/20 11:45
Date Received: 11/04/20 11:30

Lab Sample ID: 480-177679-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	2.0	U	2.0	0.82	ug/L			11/08/20 17:37	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.78	ug/L			11/08/20 17:37	2
1,2-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 17:37	2
1,2-Dichloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 17:37	2
1,2-Dichloropropane	2.0	U	2.0	1.4	ug/L			11/08/20 17:37	2
1,3-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 17:37	2
1,4-Dichlorobenzene	2.0	U	2.0	1.7	ug/L			11/08/20 17:37	2
2-Butanone (MEK)	20	U	20	2.6	ug/L			11/08/20 17:37	2
2-Hexanone	10	U	10	2.5	ug/L			11/08/20 17:37	2
4-Methyl-2-pentanone (MIBK)	10	U	10	4.2	ug/L			11/08/20 17:37	2
Acetone	20	U	20	6.0	ug/L			11/08/20 17:37	2
Benzene	2.0	U	2.0	0.82	ug/L			11/08/20 17:37	2
Bromodichloromethane	2.0	U	2.0	0.78	ug/L			11/08/20 17:37	2
Bromoform	2.0	U	2.0	0.52	ug/L			11/08/20 17:37	2
Bromomethane	2.0	U	2.0	1.4	ug/L			11/08/20 17:37	2
Carbon disulfide	2.0	U	2.0	0.38	ug/L			11/08/20 17:37	2
Carbon tetrachloride	2.0	U	2.0	0.54	ug/L			11/08/20 17:37	2
Chlorobenzene	2.0	U	2.0	1.5	ug/L			11/08/20 17:37	2
Dibromochloromethane	2.0	U	2.0	0.64	ug/L			11/08/20 17:37	2
Chloroethane	2.0	U	2.0	0.64	ug/L			11/08/20 17:37	2
Chloroform	2.0	U	2.0	0.68	ug/L			11/08/20 17:37	2
Chloromethane	2.0	U	2.0	0.70	ug/L			11/08/20 17:37	2
cis-1,2-Dichloroethene	2.0	U	2.0	1.6	ug/L			11/08/20 17:37	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.72	ug/L			11/08/20 17:37	2
Cyclohexane	2.0	U	2.0	0.36	ug/L			11/08/20 17:37	2
Dichlorodifluoromethane	2.0	U	2.0	1.4	ug/L			11/08/20 17:37	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			11/08/20 17:37	2
1,2-Dibromoethane	2.0	U	2.0	1.5	ug/L			11/08/20 17:37	2
Isopropylbenzene	2.0	U	2.0	1.6	ug/L			11/08/20 17:37	2
Methyl acetate	5.0	U	5.0	2.6	ug/L			11/08/20 17:37	2
Methyl tert-butyl ether	2.0	U	2.0	0.32	ug/L			11/08/20 17:37	2
Methylcyclohexane	2.0	U	2.0	0.32	ug/L			11/08/20 17:37	2
Methylene Chloride	2.0	U	2.0	0.88	ug/L			11/08/20 17:37	2
Styrene	2.0	U	2.0	1.5	ug/L			11/08/20 17:37	2
Tetrachloroethene	2.0	U	2.0	0.72	ug/L			11/08/20 17:37	2
Toluene	2.0	U	2.0	1.0	ug/L			11/08/20 17:37	2
trans-1,2-Dichloroethene	2.0	U	2.0	1.8	ug/L			11/08/20 17:37	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.74	ug/L			11/08/20 17:37	2
Trichloroethene	2.0	U	2.0	0.92	ug/L			11/08/20 17:37	2
Trichlorofluoromethane	2.0	U	2.0	1.8	ug/L			11/08/20 17:37	2
Vinyl chloride	2.0	U	2.0	1.8	ug/L			11/08/20 17:37	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			11/08/20 17:37	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 120*		*11/08/20 17:37*	*2*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*11/08/20 17:37*	*2*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*11/08/20 17:37*	*2*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*11/08/20 17:37*	*2*

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: WG-11192740-110320-DT-005
Date Collected: 11/03/20 11:55
Date Received: 11/04/20 11:30

Lab Sample ID: 480-177679-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/08/20 18:02	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 18:02	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/08/20 18:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/08/20 18:02	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/08/20 18:02	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/08/20 18:02	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/08/20 18:02	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/08/20 18:02	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/08/20 18:02	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 18:02	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/08/20 18:02	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/08/20 18:02	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/08/20 18:02	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/08/20 18:02	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/08/20 18:02	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/08/20 18:02	1
Acetone	10	U	10	3.0	ug/L			11/08/20 18:02	1
Benzene	1.0	U	1.0	0.41	ug/L			11/08/20 18:02	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/08/20 18:02	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/08/20 18:02	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/08/20 18:02	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/08/20 18:02	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/08/20 18:02	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/08/20 18:02	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/08/20 18:02	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/08/20 18:02	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/08/20 18:02	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/08/20 18:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			11/08/20 18:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/08/20 18:02	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/08/20 18:02	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/08/20 18:02	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/08/20 18:02	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/08/20 18:02	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/08/20 18:02	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/08/20 18:02	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/08/20 18:02	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/08/20 18:02	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/08/20 18:02	1
Styrene	1.0	U	1.0	0.73	ug/L			11/08/20 18:02	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/08/20 18:02	1
Toluene	1.0	U	1.0	0.51	ug/L			11/08/20 18:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/08/20 18:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/08/20 18:02	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/08/20 18:02	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/08/20 18:02	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/08/20 18:02	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/08/20 18:02	1

Client Sample ID: WG-11192740-110320-DT-005

Lab Sample ID: 480-177679-6

Date Collected: 11/03/20 11:55
Date Received: 11/04/20 11:30

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*80 - 120*		*11/08/20 18:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*11/08/20 18:02*	*1*
4-Bromofluorobenzene (Surr)	*85*		*73 - 120*		*11/08/20 18:02*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*11/08/20 18:02*	*1*

Client Sample ID: WG-11192740-110320-SG-006

Lab Sample ID: 480-177679-7

Date Collected: 11/03/20 12:45
Date Received: 11/04/20 11:30

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.0	U	2.0	1.6	ug/L			11/08/20 18:27	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 18:27	2
1,1,2-Trichloroethane	2.0	U	2.0	0.46	ug/L			11/08/20 18:27	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.62	ug/L			11/08/20 18:27	2
1,1-Dichloroethane	2.0	U	2.0	0.76	ug/L			11/08/20 18:27	2
1,1-Dichloroethene	2.0	U	2.0	0.58	ug/L			11/08/20 18:27	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.82	ug/L			11/08/20 18:27	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.78	ug/L			11/08/20 18:27	2
1,2-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 18:27	2
1,2-Dichloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 18:27	2
1,2-Dichloropropane	2.0	U	2.0	1.4	ug/L			11/08/20 18:27	2
1,3-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 18:27	2
1,4-Dichlorobenzene	2.0	U	2.0	1.7	ug/L			11/08/20 18:27	2
2-Butanone (MEK)	20	U	20	2.6	ug/L			11/08/20 18:27	2
2-Hexanone	10	U	10	2.5	ug/L			11/08/20 18:27	2
4-Methyl-2-pentanone (MIBK)	10	U	10	4.2	ug/L			11/08/20 18:27	2
Acetone	20	U	20	6.0	ug/L			11/08/20 18:27	2
Benzene	2.0	U	2.0	0.82	ug/L			11/08/20 18:27	2
Bromodichloromethane	2.0	U	2.0	0.78	ug/L			11/08/20 18:27	2
Bromoform	2.0	U	2.0	0.52	ug/L			11/08/20 18:27	2
Bromomethane	2.0	U	2.0	1.4	ug/L			11/08/20 18:27	2
Carbon disulfide	2.0	U	2.0	0.38	ug/L			11/08/20 18:27	2
Carbon tetrachloride	2.0	U	2.0	0.54	ug/L			11/08/20 18:27	2
Chlorobenzene	2.0	U	2.0	1.5	ug/L			11/08/20 18:27	2
Dibromochloromethane	2.0	U	2.0	0.64	ug/L			11/08/20 18:27	2
Chloroethane	2.0	U	2.0	0.64	ug/L			11/08/20 18:27	2
Chloroform	2.0	U	2.0	0.68	ug/L			11/08/20 18:27	2
Chloromethane	2.0	U	2.0	0.70	ug/L			11/08/20 18:27	2
cis-1,2-Dichloroethene	2.0	U	2.0	1.6	ug/L			11/08/20 18:27	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.72	ug/L			11/08/20 18:27	2
Cyclohexane	2.0	U	2.0	0.36	ug/L			11/08/20 18:27	2
Dichlorodifluoromethane	2.0	U	2.0	1.4	ug/L			11/08/20 18:27	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			11/08/20 18:27	2
1,2-Dibromoethane	2.0	U	2.0	1.5	ug/L			11/08/20 18:27	2
Isopropylbenzene	2.0	U	2.0	1.6	ug/L			11/08/20 18:27	2
Methyl acetate	5.0	U	5.0	2.6	ug/L			11/08/20 18:27	2
Methyl tert-butyl ether	2.0	U	2.0	0.32	ug/L			11/08/20 18:27	2
Methylcyclohexane	2.0	U	2.0	0.32	ug/L			11/08/20 18:27	2
Methylene Chloride	2.0	U	2.0	0.88	ug/L			11/08/20 18:27	2

Client Sample ID: WG-11192740-110320-SG-006

Lab Sample ID: 480-177679-7

Date Collected: 11/03/20 12:45
Matrix: Water
Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	2.0	U	2.0	1.5	ug/L			11/08/20 18:27	2
Tetrachloroethene	2.0	U	2.0	0.72	ug/L			11/08/20 18:27	2
Toluene	2.0	U	2.0	1.0	ug/L			11/08/20 18:27	2
trans-1,2-Dichloroethene	2.0	U	2.0	1.8	ug/L			11/08/20 18:27	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.74	ug/L			11/08/20 18:27	2
Trichloroethene	2.0	U	2.0	0.92	ug/L			11/08/20 18:27	2
Trichlorofluoromethane	2.0	U	2.0	1.8	ug/L			11/08/20 18:27	2
Vinyl chloride	2.0	U	2.0	1.8	ug/L			11/08/20 18:27	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			11/08/20 18:27	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 120*		*11/08/20 18:27*	*2*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*11/08/20 18:27*	*2*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*11/08/20 18:27*	*2*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*11/08/20 18:27*	*2*

Client Sample ID: WG-11192740-110320-DT-007

Lab Sample ID: 480-177679-8

Date Collected: 11/03/20 13:15
Matrix: Water
Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/08/20 18:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 18:51	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/08/20 18:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/08/20 18:51	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/08/20 18:51	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/08/20 18:51	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/08/20 18:51	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/08/20 18:51	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/08/20 18:51	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 18:51	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/08/20 18:51	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/08/20 18:51	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/08/20 18:51	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/08/20 18:51	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/08/20 18:51	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/08/20 18:51	1
Acetone	10	U	10	3.0	ug/L			11/08/20 18:51	1
Benzene	1.0	U	1.0	0.41	ug/L			11/08/20 18:51	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/08/20 18:51	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/08/20 18:51	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/08/20 18:51	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/08/20 18:51	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/08/20 18:51	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/08/20 18:51	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/08/20 18:51	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/08/20 18:51	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/08/20 18:51	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/08/20 18:51	1

Client Sample ID: WG-11192740-110320-DT-007

Lab Sample ID: 480-177679-8

Date Collected: 11/03/20 13:15

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.90**	**J**	1.0	0.81	ug/L			11/08/20 18:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/08/20 18:51	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/08/20 18:51	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/08/20 18:51	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/08/20 18:51	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/08/20 18:51	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/08/20 18:51	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/08/20 18:51	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/08/20 18:51	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/08/20 18:51	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/08/20 18:51	1
Styrene	1.0	U	1.0	0.73	ug/L			11/08/20 18:51	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/08/20 18:51	1
Toluene	1.0	U	1.0	0.51	ug/L			11/08/20 18:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/08/20 18:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/08/20 18:51	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/08/20 18:51	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/08/20 18:51	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/08/20 18:51	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/08/20 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/08/20 18:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*11/08/20 18:51*	*1*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*		*11/08/20 18:51*	*1*
Dibromofluoromethane (Surr)	*109*		*75 - 123*		*11/08/20 18:51*	*1*

Client Sample ID: WG-11192740-110320-SG-008

Lab Sample ID: 480-177679-9

Date Collected: 11/03/20 13:40

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	4.0	U	4.0	3.3	ug/L			11/08/20 19:16	4
1,1,2,2-Tetrachloroethane	4.0	U	4.0	0.84	ug/L			11/08/20 19:16	4
1,1,2-Trichloroethane	4.0	U	4.0	0.92	ug/L			11/08/20 19:16	4
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	4.0	1.2	ug/L			11/08/20 19:16	4
1,1-Dichloroethane	4.0	U	4.0	1.5	ug/L			11/08/20 19:16	4
1,1-Dichloroethene	4.0	U	4.0	1.2	ug/L			11/08/20 19:16	4
1,2,4-Trichlorobenzene	4.0	U	4.0	1.6	ug/L			11/08/20 19:16	4
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	1.6	ug/L			11/08/20 19:16	4
1,2-Dichlorobenzene	4.0	U	4.0	3.2	ug/L			11/08/20 19:16	4
1,2-Dichloroethane	4.0	U	4.0	0.84	ug/L			11/08/20 19:16	4
1,2-Dichloropropane	4.0	U	4.0	2.9	ug/L			11/08/20 19:16	4
1,3-Dichlorobenzene	4.0	U	4.0	3.1	ug/L			11/08/20 19:16	4
1,4-Dichlorobenzene	4.0	U	4.0	3.4	ug/L			11/08/20 19:16	4
2-Butanone (MEK)	40	U	40	5.3	ug/L			11/08/20 19:16	4
2-Hexanone	20	U	20	5.0	ug/L			11/08/20 19:16	4
4-Methyl-2-pentanone (MIBK)	20	U	20	8.4	ug/L			11/08/20 19:16	4
Acetone	40	U	40	12	ug/L			11/08/20 19:16	4

Client Sample ID: WG-11192740-110320-SG-008

Lab Sample ID: 480-177679-9

Date Collected: 11/03/20 13:40

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.0	U	4.0	1.6	ug/L			11/08/20 19:16	4
Bromodichloromethane	4.0	U	4.0	1.6	ug/L			11/08/20 19:16	4
Bromoform	4.0	U	4.0	1.0	ug/L			11/08/20 19:16	4
Bromomethane	4.0	U	4.0	2.8	ug/L			11/08/20 19:16	4
Carbon disulfide	4.0	U	4.0	0.76	ug/L			11/08/20 19:16	4
Carbon tetrachloride	4.0	U	4.0	1.1	ug/L			11/08/20 19:16	4
Chlorobenzene	4.0	U	4.0	3.0	ug/L			11/08/20 19:16	4
Dibromochloromethane	4.0	U	4.0	1.3	ug/L			11/08/20 19:16	4
Chloroethane	4.0	U	4.0	1.3	ug/L			11/08/20 19:16	4
Chloroform	4.0	U	4.0	1.4	ug/L			11/08/20 19:16	4
Chloromethane	4.0	U	4.0	1.4	ug/L			11/08/20 19:16	4
cis-1,2-Dichloroethene	4.0	U	4.0	3.2	ug/L			11/08/20 19:16	4
cis-1,3-Dichloropropene	4.0	U	4.0	1.4	ug/L			11/08/20 19:16	4
Cyclohexane	4.0	U	4.0	0.72	ug/L			11/08/20 19:16	4
Dichlorodifluoromethane	4.0	U	4.0	2.7	ug/L			11/08/20 19:16	4
Ethylbenzene	4.0	U	4.0	3.0	ug/L			11/08/20 19:16	4
1,2-Dibromoethane	4.0	U	4.0	2.9	ug/L			11/08/20 19:16	4
Isopropylbenzene	4.0	U	4.0	3.2	ug/L			11/08/20 19:16	4
Methyl acetate	10	U	10	5.2	ug/L			11/08/20 19:16	4
Methyl tert-butyl ether	4.0	U	4.0	0.64	ug/L			11/08/20 19:16	4
Methylcyclohexane	4.0	U	4.0	0.64	ug/L			11/08/20 19:16	4
Methylene Chloride	4.0	U	4.0	1.8	ug/L			11/08/20 19:16	4
Styrene	4.0	U	4.0	2.9	ug/L			11/08/20 19:16	4
Tetrachloroethene	4.0	U	4.0	1.4	ug/L			11/08/20 19:16	4
Toluene	4.0	U	4.0	2.0	ug/L			11/08/20 19:16	4
trans-1,2-Dichloroethene	4.0	U	4.0	3.6	ug/L			11/08/20 19:16	4
trans-1,3-Dichloropropene	4.0	U	4.0	1.5	ug/L			11/08/20 19:16	4
Trichloroethene	4.0	U	4.0	1.8	ug/L			11/08/20 19:16	4
Trichlorofluoromethane	4.0	U	4.0	3.5	ug/L			11/08/20 19:16	4
Vinyl chloride	4.0	U	4.0	3.6	ug/L			11/08/20 19:16	4
Xylenes, Total	8.0	U	8.0	2.6	ug/L			11/08/20 19:16	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*80 - 120*		*11/08/20 19:16*	*4*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*11/08/20 19:16*	*4*
4-Bromofluorobenzene (Surr)	*91*		*73 - 120*		*11/08/20 19:16*	*4*
Dibromofluoromethane (Surr)	*106*		*75 - 123*		*11/08/20 19:16*	*4*

Client Sample ID: WG-11192740-110320-DT-009

Lab Sample ID: 480-177679-10

Date Collected: 11/03/20 14:25

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/08/20 19:41	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 19:41	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/08/20 19:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/08/20 19:41	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/08/20 19:41	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/08/20 19:41	1

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: WG-11192740-110320-DT-009
Date Collected: 11/03/20 14:25
Date Received: 11/04/20 11:30

Lab Sample ID: 480-177679-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/08/20 19:41	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/08/20 19:41	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/08/20 19:41	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 19:41	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/08/20 19:41	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/08/20 19:41	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/08/20 19:41	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/08/20 19:41	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/08/20 19:41	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/08/20 19:41	1
Acetone	10	U	10	3.0	ug/L			11/08/20 19:41	1
Benzene	1.0	U	1.0	0.41	ug/L			11/08/20 19:41	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/08/20 19:41	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/08/20 19:41	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/08/20 19:41	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/08/20 19:41	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/08/20 19:41	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/08/20 19:41	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/08/20 19:41	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/08/20 19:41	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/08/20 19:41	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/08/20 19:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			11/08/20 19:41	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/08/20 19:41	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/08/20 19:41	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/08/20 19:41	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/08/20 19:41	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/08/20 19:41	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/08/20 19:41	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/08/20 19:41	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/08/20 19:41	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/08/20 19:41	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/08/20 19:41	1
Styrene	1.0	U	1.0	0.73	ug/L			11/08/20 19:41	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/08/20 19:41	1
Toluene	1.0	U	1.0	0.51	ug/L			11/08/20 19:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/08/20 19:41	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/08/20 19:41	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/08/20 19:41	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/08/20 19:41	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/08/20 19:41	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/08/20 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 120*		*11/08/20 19:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*11/08/20 19:41*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*11/08/20 19:41*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*11/08/20 19:41*	*1*

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: WG-11192740-110320-SG-010
Date Collected: 11/03/20 14:35
Date Received: 11/04/20 11:30

Lab Sample ID: 480-177679-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.0	U	2.0	1.6	ug/L			11/08/20 20:06	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 20:06	2
1,1,2-Trichloroethane	2.0	U	2.0	0.46	ug/L			11/08/20 20:06	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.62	ug/L			11/08/20 20:06	2
1,1-Dichloroethane	2.0	U	2.0	0.76	ug/L			11/08/20 20:06	2
1,1-Dichloroethene	2.0	U	2.0	0.58	ug/L			11/08/20 20:06	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.82	ug/L			11/08/20 20:06	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.78	ug/L			11/08/20 20:06	2
1,2-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 20:06	2
1,2-Dichloroethane	2.0	U	2.0	0.42	ug/L			11/08/20 20:06	2
1,2-Dichloropropane	2.0	U	2.0	1.4	ug/L			11/08/20 20:06	2
1,3-Dichlorobenzene	2.0	U	2.0	1.6	ug/L			11/08/20 20:06	2
1,4-Dichlorobenzene	2.0	U	2.0	1.7	ug/L			11/08/20 20:06	2
2-Butanone (MEK)	20	U	20	2.6	ug/L			11/08/20 20:06	2
2-Hexanone	10	U	10	2.5	ug/L			11/08/20 20:06	2
4-Methyl-2-pentanone (MIBK)	10	U	10	4.2	ug/L			11/08/20 20:06	2
Acetone	20	U	20	6.0	ug/L			11/08/20 20:06	2
Benzene	2.0	U	2.0	0.82	ug/L			11/08/20 20:06	2
Bromodichloromethane	2.0	U	2.0	0.78	ug/L			11/08/20 20:06	2
Bromoform	2.0	U	2.0	0.52	ug/L			11/08/20 20:06	2
Bromomethane	2.0	U	2.0	1.4	ug/L			11/08/20 20:06	2
Carbon disulfide	2.0	U	2.0	0.38	ug/L			11/08/20 20:06	2
Carbon tetrachloride	2.0	U	2.0	0.54	ug/L			11/08/20 20:06	2
Chlorobenzene	2.0	U	2.0	1.5	ug/L			11/08/20 20:06	2
Dibromochloromethane	2.0	U	2.0	0.64	ug/L			11/08/20 20:06	2
Chloroethane	2.0	U	2.0	0.64	ug/L			11/08/20 20:06	2
Chloroform	2.0	U	2.0	0.68	ug/L			11/08/20 20:06	2
Chloromethane	2.0	U	2.0	0.70	ug/L			11/08/20 20:06	2
cis-1,2-Dichloroethene	**14**		2.0	1.6	ug/L			11/08/20 20:06	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.72	ug/L			11/08/20 20:06	2
Cyclohexane	2.0	U	2.0	0.36	ug/L			11/08/20 20:06	2
Dichlorodifluoromethane	2.0	U	2.0	1.4	ug/L			11/08/20 20:06	2
Ethylbenzene	2.0	U	2.0	1.5	ug/L			11/08/20 20:06	2
1,2-Dibromoethane	2.0	U	2.0	1.5	ug/L			11/08/20 20:06	2
Isopropylbenzene	2.0	U	2.0	1.6	ug/L			11/08/20 20:06	2
Methyl acetate	5.0	U	5.0	2.6	ug/L			11/08/20 20:06	2
Methyl tert-butyl ether	2.0	U	2.0	0.32	ug/L			11/08/20 20:06	2
Methylcyclohexane	2.0	U	2.0	0.32	ug/L			11/08/20 20:06	2
Methylene Chloride	2.0	U	2.0	0.88	ug/L			11/08/20 20:06	2
Styrene	2.0	U	2.0	1.5	ug/L			11/08/20 20:06	2
Tetrachloroethene	2.0	U	2.0	0.72	ug/L			11/08/20 20:06	2
Toluene	2.0	U	2.0	1.0	ug/L			11/08/20 20:06	2
trans-1,2-Dichloroethene	2.0	U	2.0	1.8	ug/L			11/08/20 20:06	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.74	ug/L			11/08/20 20:06	2
Trichloroethene	**2.3**		2.0	0.92	ug/L			11/08/20 20:06	2
Trichlorofluoromethane	2.0	U	2.0	1.8	ug/L			11/08/20 20:06	2
Vinyl chloride	2.0	U	2.0	1.8	ug/L			11/08/20 20:06	2
Xylenes, Total	4.0	U	4.0	1.3	ug/L			11/08/20 20:06	2

Client Sample ID: WG-11192740-110320-SG-010

Lab Sample ID: 480-177679-11

Date Collected: 11/03/20 14:35

Matrix: Water

Date Received: 11/04/20 11:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*110*		*80 - 120*		*11/08/20 20:06*	*2*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*11/08/20 20:06*	*2*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*11/08/20 20:06*	*2*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*11/08/20 20:06*	*2*

Client Sample ID: WG-11192740-110420-DT-011

Lab Sample ID: 480-177679-12

Date Collected: 11/04/20 08:00

Matrix: Water

Date Received: 11/04/20 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	20	U	20	16	ug/L			11/08/20 20:31	20
1,1,2,2-Tetrachloroethane	20	U	20	4.2	ug/L			11/08/20 20:31	20
1,1,2-Trichloroethane	20	U	20	4.6	ug/L			11/08/20 20:31	20
1,1,2-Trichloro-1,2,2-trifluoroethane	20	U	20	6.2	ug/L			11/08/20 20:31	20
1,1-Dichloroethane	20	U	20	7.6	ug/L			11/08/20 20:31	20
1,1-Dichloroethene	20	U	20	5.8	ug/L			11/08/20 20:31	20
1,2,4-Trichlorobenzene	20	U	20	8.2	ug/L			11/08/20 20:31	20
1,2-Dibromo-3-Chloropropane	20	U	20	7.8	ug/L			11/08/20 20:31	20
1,2-Dichlorobenzene	20	U	20	16	ug/L			11/08/20 20:31	20
1,2-Dichloroethane	20	U	20	4.2	ug/L			11/08/20 20:31	20
1,2-Dichloropropane	20	U	20	14	ug/L			11/08/20 20:31	20
1,3-Dichlorobenzene	20	U	20	16	ug/L			11/08/20 20:31	20
1,4-Dichlorobenzene	20	U	20	17	ug/L			11/08/20 20:31	20
2-Butanone (MEK)	200	U	200	26	ug/L			11/08/20 20:31	20
2-Hexanone	100	U	100	25	ug/L			11/08/20 20:31	20
4-Methyl-2-pentanone (MIBK)	100	U	100	42	ug/L			11/08/20 20:31	20
Acetone	200	U	200	60	ug/L			11/08/20 20:31	20
Benzene	20	U	20	8.2	ug/L			11/08/20 20:31	20
Bromodichloromethane	20	U	20	7.8	ug/L			11/08/20 20:31	20
Bromoform	20	U	20	5.2	ug/L			11/08/20 20:31	20
Bromomethane	20	U	20	14	ug/L			11/08/20 20:31	20
Carbon disulfide	20	U	20	3.8	ug/L			11/08/20 20:31	20
Carbon tetrachloride	20	U	20	5.4	ug/L			11/08/20 20:31	20
Chlorobenzene	20	U	20	15	ug/L			11/08/20 20:31	20
Dibromochloromethane	20	U	20	6.4	ug/L			11/08/20 20:31	20
Chloroethane	20	U	20	6.4	ug/L			11/08/20 20:31	20
Chloroform	20	U	20	6.8	ug/L			11/08/20 20:31	20
Chloromethane	20	U	20	7.0	ug/L			11/08/20 20:31	20
cis-1,2-Dichloroethene	20	U	20	16	ug/L			11/08/20 20:31	20
cis-1,3-Dichloropropene	20	U	20	7.2	ug/L			11/08/20 20:31	20
Cyclohexane	20	U	20	3.6	ug/L			11/08/20 20:31	20
Dichlorodifluoromethane	20	U	20	14	ug/L			11/08/20 20:31	20
Ethylbenzene	20	U	20	15	ug/L			11/08/20 20:31	20
1,2-Dibromoethane	20	U	20	15	ug/L			11/08/20 20:31	20
Isopropylbenzene	20	U	20	16	ug/L			11/08/20 20:31	20
Methyl acetate	50	U	50	26	ug/L			11/08/20 20:31	20
Methyl tert-butyl ether	20	U	20	3.2	ug/L			11/08/20 20:31	20
Methylcyclohexane	20	U	20	3.2	ug/L			11/08/20 20:31	20
Methylene Chloride	**12**	**J**	20	8.8	ug/L			11/08/20 20:31	20

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: WG-11192740-110420-DT-011
Date Collected: 11/04/20 08:00
Date Received: 11/04/20 11:30

Lab Sample ID: 480-177679-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	20	U	20	15	ug/L			11/08/20 20:31	20
Tetrachloroethene	20	U	20	7.2	ug/L			11/08/20 20:31	20
Toluene	20	U	20	10	ug/L			11/08/20 20:31	20
trans-1,2-Dichloroethene	20	U	20	18	ug/L			11/08/20 20:31	20
trans-1,3-Dichloropropene	20	U	20	7.4	ug/L			11/08/20 20:31	20
Trichloroethene	**21**		20	9.2	ug/L			11/08/20 20:31	20
Trichlorofluoromethane	20	U	20	18	ug/L			11/08/20 20:31	20
Vinyl chloride	20	U	20	18	ug/L			11/08/20 20:31	20
Xylenes, Total	40	U	40	13	ug/L			11/08/20 20:31	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 120*		*11/08/20 20:31*	*20*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*11/08/20 20:31*	*20*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*		*11/08/20 20:31*	*20*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*11/08/20 20:31*	*20*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(80-120)	(77-120)	(73-120)	(75-123)
480-177679-1	TB-11192740-110320-DT	105	113	108	118
480-177679-2	WG-11192740-110320-DT-001	109	105	86	108
480-177679-3	WG-11192740-110320-SG-002	111	107	92	103
480-177679-3 MS	WG-11192740-110320-SG-002	109	104	94	106
480-177679-3 MSD	WG-11192740-110320-SG-002	111	105	89	105
480-177679-4	WG-11192740-110320-DT-003	102	104	85	107
480-177679-5	WG-11192740-110320-SG-004	106	102	86	105
480-177679-6	WG-11192740-110320-DT-005	102	104	85	105
480-177679-7	WG-11192740-110320-SG-006	108	106	87	105
480-177679-8	WG-11192740-110320-DT-007	105	107	89	109
480-177679-9	WG-11192740-110320-SG-008	112	107	91	106
480-177679-10	WG-11192740-110320-DT-009	101	108	87	108
480-177679-11	WG-11192740-110320-SG-010	110	108	88	105
480-177679-12	WG-11192740-110420-DT-011	108	106	92	105
LCS 480-558005/5	Lab Control Sample	107	104	90	108
LCS 480-558344/5	Lab Control Sample	110	112	108	120
MB 480-558005/7	Method Blank	102	101	82	100
MB 480-558344/7	Method Blank	109	110	108	114

Surrogate Legend

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

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

Lab Sample ID: MB 480-558005/7
Matrix: Water
Analysis Batch: 558005

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/08/20 13:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 13:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/08/20 13:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/08/20 13:54	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/08/20 13:54	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/08/20 13:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/08/20 13:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/08/20 13:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/08/20 13:54	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			11/08/20 13:54	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/08/20 13:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/08/20 13:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/08/20 13:54	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/08/20 13:54	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/08/20 13:54	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/08/20 13:54	1
Acetone	10	U	10	3.0	ug/L			11/08/20 13:54	1
Benzene	1.0	U	1.0	0.41	ug/L			11/08/20 13:54	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/08/20 13:54	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/08/20 13:54	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/08/20 13:54	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/08/20 13:54	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/08/20 13:54	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/08/20 13:54	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/08/20 13:54	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/08/20 13:54	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/08/20 13:54	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/08/20 13:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			11/08/20 13:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/08/20 13:54	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/08/20 13:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/08/20 13:54	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/08/20 13:54	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/08/20 13:54	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/08/20 13:54	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/08/20 13:54	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/08/20 13:54	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/08/20 13:54	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/08/20 13:54	1
Styrene	1.0	U	1.0	0.73	ug/L			11/08/20 13:54	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/08/20 13:54	1
Toluene	1.0	U	1.0	0.51	ug/L			11/08/20 13:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/08/20 13:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/08/20 13:54	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/08/20 13:54	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/08/20 13:54	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/08/20 13:54	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/08/20 13:54	1

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

Lab Sample ID: MB 480-558005/7
Matrix: Water
Analysis Batch: 558005

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*102*		*80 - 120*		*11/08/20 13:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*11/08/20 13:54*	*1*
4-Bromofluorobenzene (Surr)	*82*		*73 - 120*		*11/08/20 13:54*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*11/08/20 13:54*	*1*

Lab Sample ID: LCS 480-558005/5
Matrix: Water
Analysis Batch: 558005

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	27.6		ug/L		110	73 - 126
1,1,2,2-Tetrachloroethane	25.0	23.9		ug/L		96	76 - 120
1,1,2-Trichloroethane	25.0	25.1		ug/L		100	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.9		ug/L		103	61 - 148
1,1-Dichloroethane	25.0	25.6		ug/L		103	77 - 120
1,1-Dichloroethene	25.0	26.4		ug/L		106	66 - 127
1,2,4-Trichlorobenzene	25.0	25.3		ug/L		101	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	27.6		ug/L		111	56 - 134
1,2-Dichlorobenzene	25.0	24.6		ug/L		98	80 - 124
1,2-Dichloroethane	25.0	26.3		ug/L		105	75 - 120
1,2-Dichloropropane	25.0	26.0		ug/L		104	76 - 120
1,3-Dichlorobenzene	25.0	23.6		ug/L		95	77 - 120
1,4-Dichlorobenzene	25.0	23.0		ug/L		92	80 - 120
2-Butanone (MEK)	125	126		ug/L		101	57 - 140
2-Hexanone	125	124		ug/L		99	65 - 127
4-Methyl-2-pentanone (MIBK)	125	138		ug/L		110	71 - 125
Acetone	125	146		ug/L		117	56 - 142
Benzene	25.0	25.4		ug/L		102	71 - 124
Bromodichloromethane	25.0	27.3		ug/L		109	80 - 122
Bromoform	25.0	25.0		ug/L		100	61 - 132
Bromomethane	25.0	25.2		ug/L		101	55 - 144
Carbon disulfide	25.0	25.8		ug/L		103	59 - 134
Carbon tetrachloride	25.0	29.2		ug/L		117	72 - 134
Chlorobenzene	25.0	23.1		ug/L		93	80 - 120
Dibromochloromethane	25.0	28.4		ug/L		114	75 - 125
Chloroethane	25.0	25.6		ug/L		102	69 - 136
Chloroform	25.0	25.6		ug/L		103	73 - 127
Chloromethane	25.0	25.4		ug/L		102	68 - 124
cis-1,2-Dichloroethene	25.0	26.0		ug/L		104	74 - 124
cis-1,3-Dichloropropene	25.0	26.1		ug/L		104	74 - 124
Cyclohexane	25.0	26.1		ug/L		104	59 - 135
Dichlorodifluoromethane	25.0	23.2		ug/L		93	59 - 135
Ethylbenzene	25.0	23.7		ug/L		95	77 - 123
1,2-Dibromoethane	25.0	24.0		ug/L		96	77 - 120
Isopropylbenzene	25.0	26.3		ug/L		105	77 - 122
Methyl acetate	50.0	50.6		ug/L		101	74 - 133
Methyl tert-butyl ether	25.0	26.7		ug/L		107	77 - 120
Methylcyclohexane	25.0	25.6		ug/L		102	68 - 134

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

Lab Sample ID: LCS 480-558005/5
Matrix: Water
Analysis Batch: 558005

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	25.0	28.2		ug/L		113	75 - 124
Styrene	25.0	22.8		ug/L		91	80 - 120
Tetrachloroethene	25.0	25.3		ug/L		101	74 - 122
Toluene	25.0	25.3		ug/L		101	80 - 122
trans-1,2-Dichloroethene	25.0	26.1		ug/L		105	73 - 127
trans-1,3-Dichloropropene	25.0	25.3		ug/L		101	80 - 120
Trichloroethene	25.0	25.6		ug/L		102	74 - 123
Trichlorofluoromethane	25.0	25.7		ug/L		103	62 - 150
Vinyl chloride	25.0	25.3		ug/L		101	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*
Dibromofluoromethane (Surr)	*108*		*75 - 123*

Lab Sample ID: 480-177679-3 MS
Matrix: Water
Analysis Batch: 558005

Client Sample ID: WG-11192740-110320-SG-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	1.0	U F1	25.0	32.6	F1	ug/L		130	73 - 126
1,1,2,2-Tetrachloroethane	1.0	U	25.0	27.8		ug/L		111	76 - 120
1,1,2-Trichloroethane	1.0	U	25.0	27.9		ug/L		112	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	25.0	28.5		ug/L		114	61 - 148
1,1-Dichloroethane	1.0	F1	25.0	31.6	F1	ug/L		122	77 - 120
1,1-Dichloroethene	1.0	U F1	25.0	32.2	F1	ug/L		129	66 - 127
1,2,4-Trichlorobenzene	1.0	U	25.0	28.2		ug/L		113	79 - 122
1,2-Dibromo-3-Chloropropane	1.0	U	25.0	30.0		ug/L		120	56 - 134
1,2-Dichlorobenzene	1.0	U	25.0	27.7		ug/L		111	80 - 124
1,2-Dichloroethane	2.1	F1	25.0	32.6	F1	ug/L		122	75 - 120
1,2-Dichloropropane	1.0	U F1	25.0	30.9	F1	ug/L		124	76 - 120
1,3-Dichlorobenzene	1.0	U	25.0	26.5		ug/L		106	77 - 120
1,4-Dichlorobenzene	1.0	U	25.0	25.8		ug/L		103	78 - 124
2-Butanone (MEK)	10	U	125	162		ug/L		129	57 - 140
2-Hexanone	5.0	U	125	144		ug/L		115	65 - 127
4-Methyl-2-pentanone (MIBK)	5.0	U F1	125	158	F1	ug/L		127	71 - 125
Acetone	10	U	125	176		ug/L		141	56 - 142
Benzene	1.0	U F1	25.0	31.4	F1	ug/L		126	71 - 124
Bromodichloromethane	1.0	U F1	25.0	32.4	F1	ug/L		129	80 - 122
Bromoform	1.0	U	25.0	25.3		ug/L		101	61 - 132
Bromomethane	1.0	U	25.0	28.4		ug/L		114	55 - 144
Carbon disulfide	1.0	U	25.0	28.9		ug/L		116	59 - 134
Carbon tetrachloride	1.0	U F1	25.0	34.3	F1	ug/L		137	72 - 134
Chlorobenzene	1.0	U	25.0	27.7		ug/L		111	80 - 120
Dibromochloromethane	1.0	U	25.0	30.4		ug/L		121	75 - 125
Chloroethane	1.0	U	25.0	29.6		ug/L		118	69 - 136
Chloroform	1.0	U	25.0	29.9		ug/L		120	73 - 127

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

Lab Sample ID: 480-177679-3 MS
Matrix: Water
Analysis Batch: 558005

Client Sample ID: WG-11192740-110320-SG-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	1.0	U	25.0	29.3		ug/L		117	68 - 124
cis-1,2-Dichloroethene	41		25.0	69.3		ug/L		113	74 - 124
cis-1,3-Dichloropropene	1.0	U	25.0	28.7		ug/L		115	74 - 124
Cyclohexane	1.0	U	25.0	29.5		ug/L		118	59 - 135
Dichlorodifluoromethane	1.0	U	25.0	27.1		ug/L		108	59 - 135
Ethylbenzene	1.0	U	25.0	28.2		ug/L		113	77 - 123
1,2-Dibromoethane	1.0	U	25.0	27.0		ug/L		108	77 - 120
Isopropylbenzene	1.0	U F1	25.0	30.6		ug/L		122	77 - 122
Methyl acetate	2.5	U	50.0	57.6		ug/L		115	74 - 133
Methyl tert-butyl ether	1.0	U	25.0	28.5		ug/L		114	77 - 120
Methylcyclohexane	1.0	U	25.0	28.7		ug/L		115	68 - 134
Methylene Chloride	1.0	U F1	25.0	32.0	F1	ug/L		128	75 - 124
Styrene	1.0	U	25.0	26.3		ug/L		105	80 - 120
Tetrachloroethene	1.0	U F1	25.0	31.2	F1	ug/L		125	74 - 122
Toluene	1.0	U F1	25.0	31.0	F1	ug/L		124	80 - 122
trans-1,2-Dichloroethene	3.5		25.0	34.8		ug/L		125	73 - 127
trans-1,3-Dichloropropene	1.0	U	25.0	27.6		ug/L		111	80 - 120
Trichloroethene	0.56	J F1	25.0	32.0	F1	ug/L		126	74 - 123
Trichlorofluoromethane	1.0	U	25.0	29.3		ug/L		117	62 - 150
Vinyl chloride	1.4		25.0	32.1		ug/L		123	65 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 123*

Lab Sample ID: 480-177679-3 MSD
Matrix: Water
Analysis Batch: 558005

Client Sample ID: WG-11192740-110320-SG-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	1.0	U F1	25.0	31.2		ug/L		125	73 - 126	4	15
1,1,2,2-Tetrachloroethane	1.0	U	25.0	28.1		ug/L		112	76 - 120	1	15
1,1,2-Trichloroethane	1.0	U	25.0	27.3		ug/L		109	76 - 122	2	15
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	25.0	27.4		ug/L		110	61 - 148	4	20
1,1-Dichloroethane	1.0	F1	25.0	30.6		ug/L		118	77 - 120	3	20
1,1-Dichloroethene	1.0	U F1	25.0	30.2		ug/L		121	66 - 127	6	16
1,2,4-Trichlorobenzene	1.0	U	25.0	29.3		ug/L		117	79 - 122	4	20
1,2-Dibromo-3-Chloropropane	1.0	U	25.0	30.3		ug/L		121	56 - 134	1	15
1,2-Dichlorobenzene	1.0	U	25.0	28.4		ug/L		114	80 - 124	3	20
1,2-Dichloroethane	2.1	F1	25.0	31.6		ug/L		118	75 - 120	3	20
1,2-Dichloropropane	1.0	U F1	25.0	30.5	F1	ug/L		122	76 - 120	1	20
1,3-Dichlorobenzene	1.0	U	25.0	27.6		ug/L		110	77 - 120	4	20
1,4-Dichlorobenzene	1.0	U	25.0	26.7		ug/L		107	78 - 124	3	20
2-Butanone (MEK)	10	U	125	149		ug/L		119	57 - 140	8	20
2-Hexanone	5.0	U	125	133		ug/L		107	65 - 127	8	15
4-Methyl-2-pentanone (MIBK)	5.0	U F1	125	150		ug/L		120	71 - 125	5	35

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

Lab Sample ID: 480-177679-3 MSD
Matrix: Water
Analysis Batch: 558005

Client Sample ID: WG-11192740-110320-SG-002
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	125	162		ug/L		130	56 - 142	8	15
Benzene	1.0	U F1	25.0	29.8		ug/L		119	71 - 124	5	13
Bromodichloromethane	1.0	U F1	25.0	31.0	F1	ug/L		124	80 - 122	4	15
Bromoform	1.0	U	25.0	24.9		ug/L		100	61 - 132	2	15
Bromomethane	1.0	U	25.0	26.9		ug/L		107	55 - 144	5	15
Carbon disulfide	1.0	U	25.0	27.4		ug/L		110	59 - 134	5	15
Carbon tetrachloride	1.0	U F1	25.0	33.2		ug/L		133	72 - 134	3	15
Chlorobenzene	1.0	U	25.0	26.8		ug/L		107	80 - 120	3	25
Dibromochloromethane	1.0	U	25.0	30.3		ug/L		121	75 - 125	0	15
Chloroethane	1.0	U	25.0	29.6		ug/L		118	69 - 136	0	15
Chloroform	1.0	U	25.0	28.2		ug/L		113	73 - 127	6	20
Chloromethane	1.0	U	25.0	29.6		ug/L		118	68 - 124	1	15
cis-1,2-Dichloroethene	41		25.0	67.9		ug/L		107	74 - 124	2	15
cis-1,3-Dichloropropene	1.0	U	25.0	27.6		ug/L		110	74 - 124	4	15
Cyclohexane	1.0	U	25.0	28.7		ug/L		115	59 - 135	3	20
Dichlorodifluoromethane	1.0	U	25.0	26.7		ug/L		107	59 - 135	1	20
Ethylbenzene	1.0	U	25.0	27.6		ug/L		110	77 - 123	2	15
1,2-Dibromoethane	1.0	U	25.0	27.0		ug/L		108	77 - 120	0	15
Isopropylbenzene	1.0	U F1	25.0	31.5	F1	ug/L		126	77 - 122	3	20
Methyl acetate	2.5	U	50.0	52.2		ug/L		104	74 - 133	10	20
Methyl tert-butyl ether	1.0	U	25.0	27.9		ug/L		112	77 - 120	2	37
Methylcyclohexane	1.0	U	25.0	27.4		ug/L		110	68 - 134	5	20
Methylene Chloride	1.0	U F1	25.0	30.6		ug/L		122	75 - 124	4	15
Styrene	1.0	U	25.0	25.2		ug/L		101	80 - 120	5	20
Tetrachloroethene	1.0	U F1	25.0	30.7	F1	ug/L		123	74 - 122	2	20
Toluene	1.0	U F1	25.0	29.9		ug/L		120	80 - 122	4	15
trans-1,2-Dichloroethene	3.5		25.0	32.4		ug/L		116	73 - 127	7	20
trans-1,3-Dichloropropene	1.0	U	25.0	27.5		ug/L		110	80 - 120	1	15
Trichloroethene	0.56	J F1	25.0	29.9		ug/L		117	74 - 123	7	16
Trichlorofluoromethane	1.0	U	25.0	28.7		ug/L		115	62 - 150	2	20
Vinyl chloride	1.4		25.0	32.2		ug/L		123	65 - 133	0	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*
Dibromofluoromethane (Surr)	*105*		*75 - 123*

Lab Sample ID: MB 480-558344/7
Matrix: Water
Analysis Batch: 558344

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			11/10/20 22:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			11/10/20 22:10	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			11/10/20 22:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			11/10/20 22:10	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			11/10/20 22:10	1

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

Lab Sample ID: MB 480-558344/7
Matrix: Water
Analysis Batch: 558344

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			11/10/20 22:10	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			11/10/20 22:10	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			11/10/20 22:10	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			11/10/20 22:10	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			11/10/20 22:10	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			11/10/20 22:10	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			11/10/20 22:10	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			11/10/20 22:10	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			11/10/20 22:10	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			11/10/20 22:10	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			11/10/20 22:10	1
Acetone	10	U	10	3.0	ug/L			11/10/20 22:10	1
Benzene	1.0	U	1.0	0.41	ug/L			11/10/20 22:10	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			11/10/20 22:10	1
Bromoform	1.0	U	1.0	0.26	ug/L			11/10/20 22:10	1
Bromomethane	1.0	U	1.0	0.69	ug/L			11/10/20 22:10	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			11/10/20 22:10	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			11/10/20 22:10	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			11/10/20 22:10	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			11/10/20 22:10	1
Chloroethane	1.0	U	1.0	0.32	ug/L			11/10/20 22:10	1
Chloroform	1.0	U	1.0	0.34	ug/L			11/10/20 22:10	1
Chloromethane	1.0	U	1.0	0.35	ug/L			11/10/20 22:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			11/10/20 22:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			11/10/20 22:10	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			11/10/20 22:10	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			11/10/20 22:10	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			11/10/20 22:10	1
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			11/10/20 22:10	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			11/10/20 22:10	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			11/10/20 22:10	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			11/10/20 22:10	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			11/10/20 22:10	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			11/10/20 22:10	1
Styrene	1.0	U	1.0	0.73	ug/L			11/10/20 22:10	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			11/10/20 22:10	1
Toluene	1.0	U	1.0	0.51	ug/L			11/10/20 22:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			11/10/20 22:10	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			11/10/20 22:10	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			11/10/20 22:10	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			11/10/20 22:10	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			11/10/20 22:10	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			11/10/20 22:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*80 - 120*		*11/10/20 22:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*77 - 120*		*11/10/20 22:10*	*1*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*11/10/20 22:10*	*1*

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

Lab Sample ID: MB 480-558344/7
Matrix: Water
Analysis Batch: 558344

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	114		75 - 123		11/10/20 22:10	1

Lab Sample ID: LCS 480-558344/5
Matrix: Water
Analysis Batch: 558344

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	24.1		ug/L		96	73 - 126
1,1,2,2-Tetrachloroethane	25.0	25.1		ug/L		100	76 - 120
1,1,2-Trichloroethane	25.0	24.9		ug/L		100	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.4		ug/L		98	61 - 148
1,1-Dichloroethane	25.0	24.7		ug/L		99	77 - 120
1,1-Dichloroethene	25.0	22.1		ug/L		88	66 - 127
1,2,4-Trichlorobenzene	25.0	25.4		ug/L		102	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	21.3		ug/L		85	56 - 134
1,2-Dichlorobenzene	25.0	24.6		ug/L		99	80 - 124
1,2-Dichloroethane	25.0	26.1		ug/L		105	75 - 120
1,2-Dichloropropane	25.0	26.9		ug/L		107	76 - 120
1,3-Dichlorobenzene	25.0	25.3		ug/L		101	77 - 120
1,4-Dichlorobenzene	25.0	25.4		ug/L		101	80 - 120
2-Butanone (MEK)	125	127		ug/L		102	57 - 140
2-Hexanone	125	123		ug/L		98	65 - 127
4-Methyl-2-pentanone (MIBK)	125	117		ug/L		94	71 - 125
Acetone	125	107		ug/L		86	56 - 142
Benzene	25.0	25.9		ug/L		104	71 - 124
Bromodichloromethane	25.0	25.0		ug/L		100	80 - 122
Bromoform	25.0	23.0		ug/L		92	61 - 132
Bromomethane	25.0	20.2		ug/L		81	55 - 144
Carbon disulfide	25.0	21.7		ug/L		87	59 - 134
Carbon tetrachloride	25.0	22.9		ug/L		92	72 - 134
Chlorobenzene	25.0	25.3		ug/L		101	80 - 120
Dibromochloromethane	25.0	23.5		ug/L		94	75 - 125
Chloroethane	25.0	20.6		ug/L		82	69 - 136
Chloroform	25.0	25.3		ug/L		101	73 - 127
Chloromethane	25.0	19.9		ug/L		80	68 - 124
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	74 - 124
cis-1,3-Dichloropropene	25.0	25.5		ug/L		102	74 - 124
Cyclohexane	25.0	23.7		ug/L		95	59 - 135
Dichlorodifluoromethane	25.0	25.4		ug/L		102	59 - 135
Ethylbenzene	25.0	24.7		ug/L		99	77 - 123
1,2-Dibromoethane	25.0	25.6		ug/L		102	77 - 120
Isopropylbenzene	25.0	23.9		ug/L		96	77 - 122
Methyl acetate	50.0	51.1		ug/L		102	74 - 133
Methyl tert-butyl ether	25.0	23.3		ug/L		93	77 - 120
Methylcyclohexane	25.0	24.6		ug/L		99	68 - 134
Methylene Chloride	25.0	24.7		ug/L		99	75 - 124
Styrene	25.0	25.6		ug/L		102	80 - 120
Tetrachloroethene	25.0	26.3		ug/L		105	74 - 122

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

Lab Sample ID: LCS 480-558344/5
Matrix: Water
Analysis Batch: 558344

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	25.0	23.9		ug/L		96	80 - 122
trans-1,2-Dichloroethene	25.0	25.4		ug/L		101	73 - 127
trans-1,3-Dichloropropene	25.0	23.3		ug/L		93	80 - 120
Trichloroethene	25.0	26.4		ug/L		106	74 - 123
Trichlorofluoromethane	25.0	21.6		ug/L		86	62 - 150
Vinyl chloride	25.0	19.8		ug/L		79	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*112*		*77 - 120*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*
Dibromofluoromethane (Surr)	*120*		*75 - 123*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

GC/MS VOA

Analysis Batch: 558005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-177679-2	WG-11192740-110320-DT-001	Total/NA	Water	8260C	
480-177679-3	WG-11192740-110320-SG-002	Total/NA	Water	8260C	
480-177679-4	WG-11192740-110320-DT-003	Total/NA	Water	8260C	
480-177679-5	WG-11192740-110320-SG-004	Total/NA	Water	8260C	
480-177679-6	WG-11192740-110320-DT-005	Total/NA	Water	8260C	
480-177679-7	WG-11192740-110320-SG-006	Total/NA	Water	8260C	
480-177679-8	WG-11192740-110320-DT-007	Total/NA	Water	8260C	
480-177679-9	WG-11192740-110320-SG-008	Total/NA	Water	8260C	
480-177679-10	WG-11192740-110320-DT-009	Total/NA	Water	8260C	
480-177679-11	WG-11192740-110320-SG-010	Total/NA	Water	8260C	
480-177679-12	WG-11192740-110420-DT-011	Total/NA	Water	8260C	
MB 480-558005/7	Method Blank	Total/NA	Water	8260C	
LCS 480-558005/5	Lab Control Sample	Total/NA	Water	8260C	
480-177679-3 MS	WG-11192740-110320-SG-002	Total/NA	Water	8260C	
480-177679-3 MSD	WG-11192740-110320-SG-002	Total/NA	Water	8260C	

Analysis Batch: 558344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-177679-1	TB-11192740-110320-DT	Total/NA	Water	8260C	
MB 480-558344/7	Method Blank	Total/NA	Water	8260C	
LCS 480-558344/5	Lab Control Sample	Total/NA	Water	8260C	

Lab Chronicle

Client: GHD Services Inc.
Job ID: 480-177679-1
Project/Site: 11192740, Niagara River World

Client Sample ID: TB-11192740-110320-DT
Lab Sample ID: 480-177679-1
Date Collected: 11/03/20 00:00
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	558344	11/10/20 22:34	AMM	TAL BUF

Client Sample ID: WG-11192740-110320-DT-001
Lab Sample ID: 480-177679-2
Date Collected: 11/03/20 10:15
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	558005	11/08/20 16:23	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-SG-002
Lab Sample ID: 480-177679-3
Date Collected: 11/03/20 10:35
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	558005	11/08/20 16:48	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-DT-003
Lab Sample ID: 480-177679-4
Date Collected: 11/03/20 10:15
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	558005	11/08/20 17:12	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-SG-004
Lab Sample ID: 480-177679-5
Date Collected: 11/03/20 11:45
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	558005	11/08/20 17:37	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-DT-005
Lab Sample ID: 480-177679-6
Date Collected: 11/03/20 11:55
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	558005	11/08/20 18:02	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-SG-006
Lab Sample ID: 480-177679-7
Date Collected: 11/03/20 12:45
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	558005	11/08/20 18:27	RJF	TAL BUF

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Client Sample ID: WG-11192740-110320-DT-007
Lab Sample ID: 480-177679-8
Date Collected: 11/03/20 13:15
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	558005	11/08/20 18:51	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-SG-008
Lab Sample ID: 480-177679-9
Date Collected: 11/03/20 13:40
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	558005	11/08/20 19:16	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-DT-009
Lab Sample ID: 480-177679-10
Date Collected: 11/03/20 14:25
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	558005	11/08/20 19:41	RJF	TAL BUF

Client Sample ID: WG-11192740-110320-SG-010
Lab Sample ID: 480-177679-11
Date Collected: 11/03/20 14:35
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	558005	11/08/20 20:06	RJF	TAL BUF

Client Sample ID: WG-11192740-110420-DT-011
Lab Sample ID: 480-177679-12
Date Collected: 11/04/20 08:00
Matrix: Water
Date Received: 11/04/20 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	558005	11/08/20 20:31	RJF	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 480-177679-1
Project/Site: 11192740, Niagara River World

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

Method Summary

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

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

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: GHD Services Inc.
Project/Site: 11192740, Niagara River World

Job ID: 480-177679-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-177679-1	TB-11192740-110320-DT	Water	11/03/20 00:00	11/04/20 11:30	
480-177679-2	WG-11192740-110320-DT-001	Water	11/03/20 10:15	11/04/20 11:30	
480-177679-3	WG-11192740-110320-SG-002	Water	11/03/20 10:35	11/04/20 11:30	
480-177679-4	WG-11192740-110320-DT-003	Water	11/03/20 10:15	11/04/20 11:30	
480-177679-5	WG-11192740-110320-SG-004	Water	11/03/20 11:45	11/04/20 11:30	
480-177679-6	WG-11192740-110320-DT-005	Water	11/03/20 11:55	11/04/20 11:30	
480-177679-7	WG-11192740-110320-SG-006	Water	11/03/20 12:45	11/04/20 11:30	
480-177679-8	WG-11192740-110320-DT-007	Water	11/03/20 13:15	11/04/20 11:30	
480-177679-9	WG-11192740-110320-SG-008	Water	11/03/20 13:40	11/04/20 11:30	
480-177679-10	WG-11192740-110320-DT-009	Water	11/03/20 14:25	11/04/20 11:30	
480-177679-11	WG-11192740-110320-SG-010	Water	11/03/20 14:35	11/04/20 11:30	
480-177679-12	WG-11192740-110420-DT-011	Water	11/04/20 08:00	11/04/20 11:30	

CHAIN OF CUSTODY RECORD

COC NO.: 60250

Address: NF office

PAGE 1 OF 1

Phone: _____ Fax: _____

Project No/ Phase/Task Code: 11192740-200	Laboratory Name: Eurofins TestAmerica	Lab Location:	SSOW ID:
Project Name: Niagara River Works 5yr GW Sampling	Lab Contact: Denise Heckler	Amherst NY	Cooler No:
Project Location: 4000 River Rd Tonawanda			Carrier: Hand Delivered
GHD Chemistry Contact: Kathy Willy			Airbill No:
Sampler(s): D. Tyran / S. Gardner			Total # of Containers: 41

Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	VOCs											Tot. Containers/sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						HC													
1	TB-11192740-110320-DT	11-3-20		TB	G	N	X											2		
2	WG-11192740-110320-DT-001	11-3-20	1015	WG	G	N	X											3		
3	WG-11192740-110320-SG-002	11-3-20	1035	WG	G	N	X											9	X	
4	WG-11192740-110320-DT-003	11-3-20	1015	WG	G	N	X											3		
5	WG-11192740-110320-SG-004	11-3-20	1145	WG	G	N	X											3		
6	WG-11192740-110320-DT-005	11-3-20	1155	WG	G	N	X											3		
7	WG-11192740-110320-SG-006	11-3-20	1245	WG	G	N	X											3		
8	WG-11192740-110320-DT-007	11-3-20	1315	WG	G	N	X											3		
9	WG-11192740-110320-SG-008	11-3-20	1340	WG	G	N	X											3		
10	WG-11192740-110320-DT-009	11-3-20	1425	WG	G	N	X											3		
11	WG-11192740-110320-SG-010	11-3-20	1435	WG	G	N	X											3		
12	WG-11192740-110420-DT-011	11-4-20	0800	WG	G	N	X											3		

TAT Required in business days (use separate COCs for different TATs):

☐ ☐1 Day ☑2 Days ☐3 Days ☐1Week ☒Week

Notes/ Special Requirements: Temp 4.7 # 1 ICE

	Relinquished By	Company	Date	Time		Received By	Company	Date	Time
1.	Dave Tyran	GHD	11/4/20	0813	1.	[illegible]	TA	11/04/20	1130
2.					2.				
3.					3.				

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

11/14/2020

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-177679-1

Login Number: 177679
List Number: 1
Creator: Wallace, Cameron

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Appendix D
Data Usability Report (DUSR)

Memorandum

December 11, 2020

To:	Kathy Galanti	Ref. No.:	11192740
From:	Kathy Willy/adh/2	Tel:	716-205-1942

Subject: **Data Usability Summary Report**
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

1. Introduction

The following details the data usability and quality assessment and validation of the analytical data resulting from the collection of groundwater samples at the Niagara River World Site in Tonawanda, New York. The sample summary detailing sample identification, sample location, quality control (QC) samples, and analytical parameters is presented in Table 1. Samples were submitted to Eurofins TestAmerica Laboratory located in Amherst, New York. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation "DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B-Guidance for Data Deliverables and the Development of Data Usability Summary Reports", (DER-10) May 2010.

2. Analytical Methodology and Data Validation

Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spike (MS) samples, and field quality assurance/quality control (QA/QC) samples. The assessment of analytical and in-house data included checks for: adherence to accuracy and precision criteria and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the document entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," United States Environmental Protection Agency (USEPA) 540-R-2016-002, September 2016

This item will subsequently be referred to as the "Guidelines" in this Memorandum.

Standard Level II report deliverables were provided by the laboratory. The data quality assessment and validation presented in the following subsections were performed based on the sample results and supporting QA/QC.

3. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical report were used to determine sample holding times. All samples were analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6ºC).

4. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

5. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the laboratory criteria.

6. Laboratory Control Sample Analyses

LCS are prepared and analyzed as a sample to assess the analytical efficiencies of the method employed independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with all compounds of interest. Most percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable accuracy and precision. Some high MS/MSD recoveries were reported. If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD. For instances in which both the MS and MSD recoveries were high, all associated sample results were non-detect, and no qualification of the data was required.

8. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value for water samples.

All field duplicate results were within agreement, demonstrating acceptable sampling and analytical precision.

9. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limits (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated

(J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

10. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra were evaluated according to the identification criteria established by the methods. The organic compounds reported adhered to the specified identification criteria.

11. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

					Analysis/Parameters	
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**VOCs**	**Comments**
WG-11192740-110320-DT-009	ENV-1	Water	11/03/2020	14:25	X	
WG-11192740-110320-SG-006	ENV-4	Water	11/03/2020	12:45	X	
WG-11192740-110320-SG-008	ENV-7	Water	11/03/2020	13:40	X	
WG-11192740-110320-SG-010	ENV-8	Water	11/03/2020	14:35	X	
WG-11192740-110320-DT-007	ENV-9	Water	11/03/2020	13:15	X	
WG-11192740-110320-DT-005	GW-3	Water	11/03/2020	11:55	X	
WG-11192740-110420-DT-011	NRG-3	Water	11/04/2020	08:00	X	
WG-11192740-110320-SG-004	NRG-4	Water	11/03/2020	11:45	X	
WG-11192740-110320-SG-002	NRG-5	Water	11/03/2020	10:35	X	
WG-11192740-110320-DT-001	NRG-6	Water	11/03/2020	10:15	X	
WG-11192740-110320-DT-003	NRG-6	Water	11/03/2020	10:15	X	Field duplicate of sample WG-11192740-110320-DT-001
TB-11192740-110320-DT	-	Water	11/03/2020	-	X	Trip Blank

Notes:

- - Not applicable

Table 2

Analytical Results Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

	Location ID:	ENV-1	ENV-4	ENV-7	ENV-8
	Sample Name:	WG-11192740-110320-DT-009	WG-11192740-110320-SG-006	WG-11192740-110320-SG-008	WG-11192740-110320-SG-010
	Sample Date:	11/03/2020	11/03/2020	11/03/2020	11/03/2020
Parameters	**Unit**				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,1-Dichloroethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,1-Dichloroethene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,2-Dichloroethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,2-Dichloropropane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	20 U	40 U	20 U
2-Hexanone	µg/L	5.0 U	10 U	20 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	10 U	20 U	10 U
Acetone	µg/L	10 U	20 U	40 U	20 U
Benzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Bromodichloromethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Bromoform	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Carbon disulfide	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Carbon tetrachloride	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Chlorobenzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Chloroethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	2.0 U	4.0 U	14
cis-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Cyclohexane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Dibromochloromethane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Ethylbenzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Isopropyl benzene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Methyl acetate	µg/L	2.5 U	5.0 U	10 U	5.0 U
Methyl cyclohexane	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Methylene chloride	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Styrene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Tetrachloroethene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U

Table 2

Analytical Results Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

	Location ID:	ENV-1	ENV-4	ENV-7	ENV-8
	Sample Name:	WG-11192740-110320-DT-009	WG-11192740-110320-SG-006	WG-11192740-110320-SG-008	WG-11192740-110320-SG-010
	Sample Date:	11/03/2020	11/03/2020	11/03/2020	11/03/2020
Parameters	**Unit**				
Volatile Organic Compounds					
Toluene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Trichloroethene	µg/L	1.0 U	2.0 U	4.0 U	2.3
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Vinyl chloride	µg/L	1.0 U	2.0 U	4.0 U	2.0 U
Xylenes (total)	µg/L	2.0 U	4.0 U	8.0 U	4.0 U

Table 2

Analytical Results Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

	Location ID:	ENV-9	GW-3	NRG-3	NRG-4
	Sample Name:	WG-11192740-110320-DT-007	WG-11192740-110320-DT-005	WG-11192740-110420-DT-011	WG-11192740-110320-SG-004
	Sample Date:	11/03/2020	11/03/2020	11/04/2020	11/03/2020
Parameters	**Unit**				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	200 U	20 U
2-Hexanone	µg/L	5.0 U	5.0 U	100 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	5.0 U	100 U	10 U
Acetone	µg/L	10 U	10 U	200 U	20 U
Benzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
Bromoform	µg/L	1.0 U	1.0 U	20 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	20 U	2.0 U
Carbon disulfide	µg/L	1.0 U	1.0 U	20 U	2.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	20 U	2.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Chloroethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	20 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	1.0 U	20 U	2.0 U
cis-1,2-Dichloroethene	µg/L	0.90 J	1.0 U	20 U	2.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Cyclohexane	µg/L	1.0 U	1.0 U	20 U	2.0 U
Dibromochloromethane	µg/L	1.0 U	1.0 U	20 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	20 U	2.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Isopropyl benzene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Methyl acetate	µg/L	2.5 U	2.5 U	50 U	5.0 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	20 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	1.0 U	1.0 U	20 U	2.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	12 J	2.0 U
Styrene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	20 U	2.0 U

Table 2

Analytical Results Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

	Location ID:	ENV-9	GW-3	NRG-3	NRG-4
	Sample Name:	WG-11192740-110320-DT-007	WG-11192740-110320-DT-005	WG-11192740-110420-DT-011	WG-11192740-110320-SG-004
	Sample Date:	11/03/2020	11/03/2020	11/04/2020	11/03/2020
Parameters	**Unit**				
Volatile Organic Compounds					
Toluene	µg/L	1.0 U	1.0 U	20 U	2.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	20 U	2.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	20 U	2.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	21	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	20 U	2.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	20 U	2.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	20 U	2.0 U
Xylenes (total)	µg/L	2.0 U	2.0 U	40 U	4.0 U

Table 2

Analytical Results Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

Location ID:		**NRG-5**	**NRG-6**	**NRG-6**
Sample Name:		**WG-11192740-110320-SG-002**	**WG-11192740-110320-DT-001**	**WG-11192740-110320-DT-003**
Sample Date:		**11/03/2020**	**11/03/2020**	**11/03/2020**
				Duplicate
Parameters	**Unit**			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	1.0 U	2.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	2.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	2.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0	2.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	2.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	2.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	2.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U
1,2-Dichloroethane	µg/L	2.1	0.53 J	0.55 J
1,2-Dichloropropane	µg/L	1.0 U	2.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	20 U	10 U
2-Hexanone	µg/L	5.0 U	10 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	10 U	5.0 U
Acetone	µg/L	10 U	20 U	10 U
Benzene	µg/L	1.0 U	2.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	2.0 U	1.0 U
Bromoform	µg/L	1.0 U	2.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	2.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	2.0 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	2.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	2.0 U	1.0 U
Chloroethane	µg/L	1.0 U	2.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	2.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	2.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	41	11	12
cis-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	1.0 U
Cyclohexane	µg/L	1.0 U	2.0 U	1.0 U
Dibromochloromethane	µg/L	1.0 U	2.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	2.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	2.0 U	1.0 U
Isopropyl benzene	µg/L	1.0 U	2.0 U	1.0 U
Methyl acetate	µg/L	2.5 U	5.0 U	2.5 U
Methyl cyclohexane	µg/L	1.0 U	2.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	1.0 U	2.0 U	1.0 U
Methylene chloride	µg/L	1.0 U	2.0 U	1.0 U
Styrene	µg/L	1.0 U	2.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	2.0 U	1.0 U

Table 2

Analytical Results Summary
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

	Location ID:	NRG-5	NRG-6	NRG-6
	Sample Name:	WG-11192740-110320-SG-002	WG-11192740-110320-DT-001	WG-11192740-110320-DT-003
	Sample Date:	11/03/2020	11/03/2020	11/03/2020 Duplicate
Parameters	**Unit**			
Volatile Organic Compounds				
Toluene	µg/L	1.0 U	2.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	3.5	2.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	1.0 U
Trichloroethene	µg/L	0.56 J	2.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	2.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	2.0 U	1.0 U
Vinyl chloride	µg/L	1.4	2.0 U	1.0 U
Xylenes (total)	µg/L	2.0 U	4.0 U	2.0 U

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit

Table 3

Analytical Methods
Emerging Contaminant Sampling
Niagara River World
Tonawanda, New York
November 2020

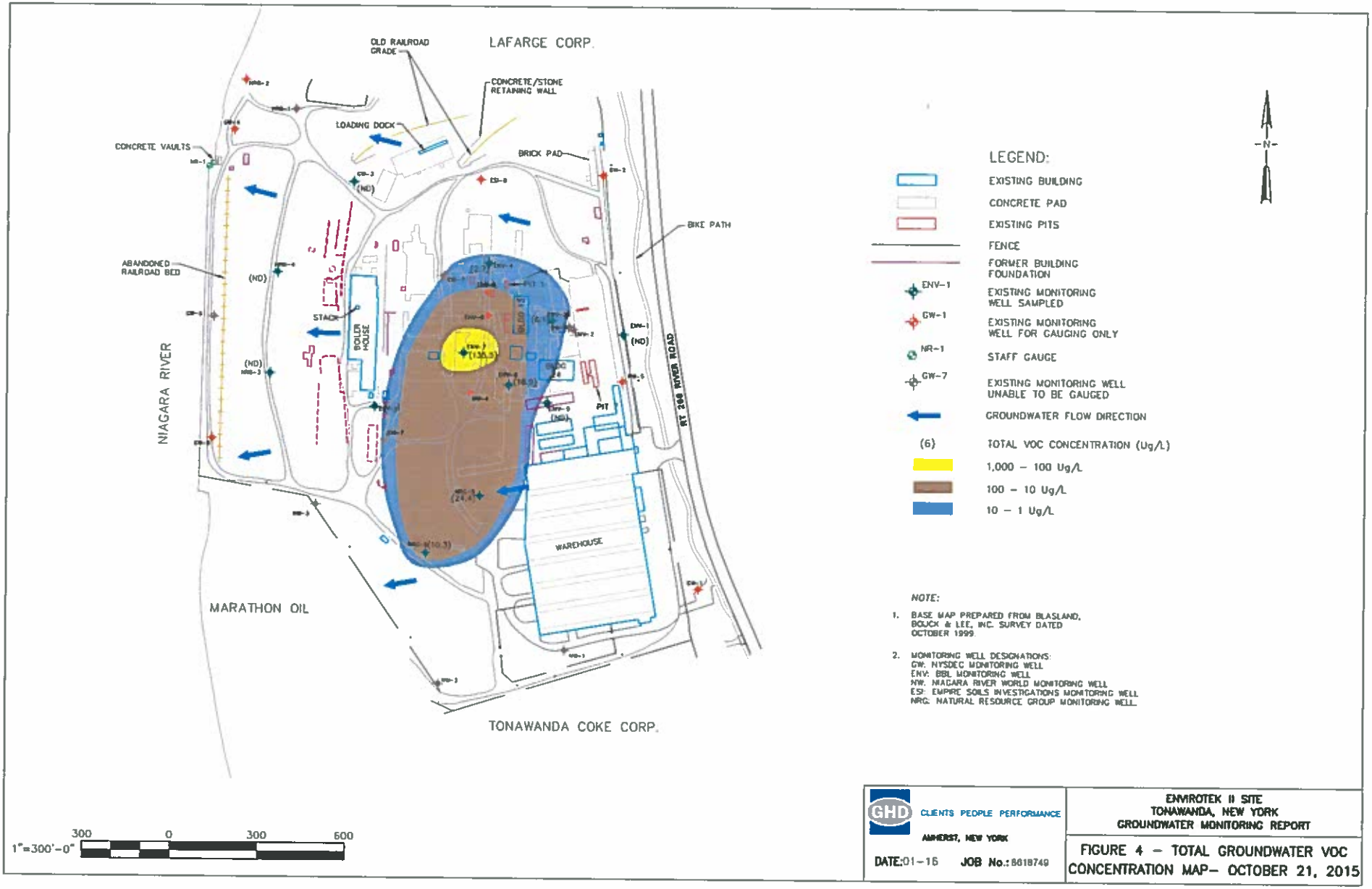
Parameter	Method	Matrix	Holding Time Collection to Analysis (Days)
VOCs	SW-846 8260C	Water	14

Notes:

VOCs - Volatile Organic Compounds

Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Appendix E
Historical Groundwater Total VOC Concentration Figures



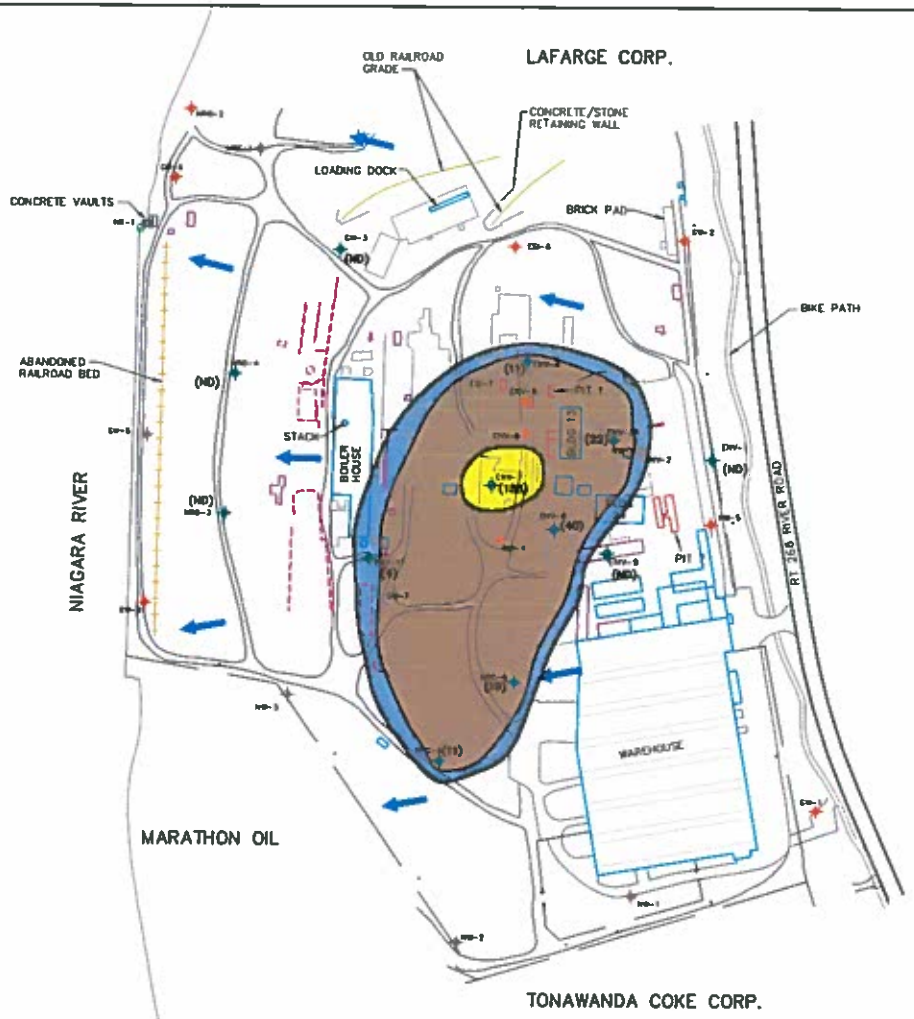
NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
   GW: NYSDEC MONITORING WELL
   ENV: BBL MONITORING WELL
   NW: NIAGARA RIVER WORLD MONITORING WELL
   ESI: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
   NRG: NATURAL RESOURCE GROUP MONITORING WELL

GHD CLIENTS PEOPLE PERFORMANCE
AMHERST, NEW YORK
DATE: 01-16 JOB No.: 8618749

ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

FIGURE 4 – TOTAL GROUNDWATER VOC CONCENTRATION MAP– OCTOBER 21, 2015



LEGEND:

- EXISTING BUILDING
- CONCRETE PAD
- EXISTING PITS
- FENCE
- FORMER BUILDING FOUNDATION
- ENV-1 — EXISTING MONITORING WELL SAMPLED
- GW-1 — EXISTING MONITORING WELL FOR GAUGING ONLY
- NR-1 — STAFF GAUGE
- GW-7 — EXISTING MONITORING WELL UNABLE TO BE GAUGED
- GROUNDWATER FLOW DIRECTION
- (5) — TOTAL VOC CONCENTRATION (Ug/L)
- 1,000 – 100 Ug/L
- 100 – 10 Ug/L
- 10 – 1 Ug/L

N

NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
   GW: NYSDEC MONITORING WELL
   ENV: BBL MONITORING WELL
   NR: NIAGARA RIVER WORLD MONITORING WELL
   ESI: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
   NRG: NATURAL RESOURCE GROUP MONITORING WELL

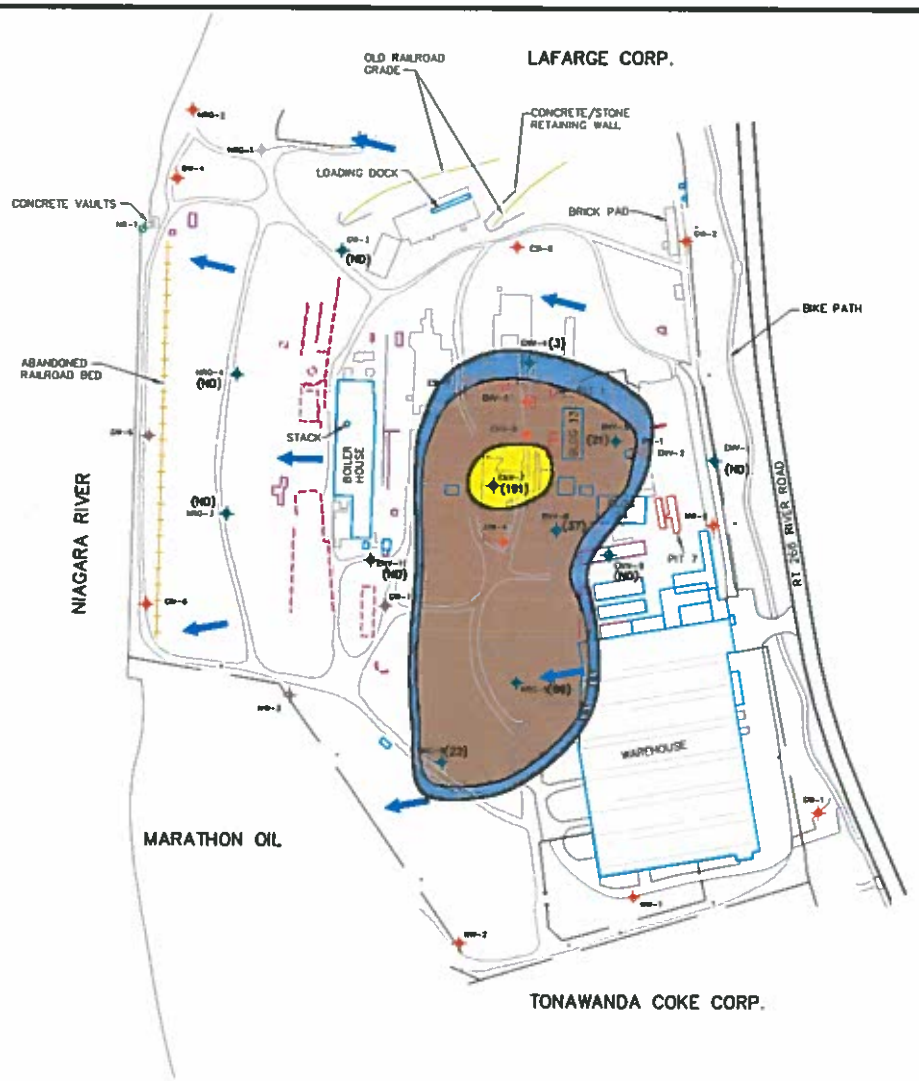
300 0 300 600
1"=300'-0"

STEARNS & WHELER
Environmental Engineers & Scientists
AMHERST, NEW YORK

DATE:03-11 JOB No.:8612315

ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

FIGURE 4 – TOTAL GROUNDWATER VOC CONCENTRATION MAP– OCTOBER 21, 2010



LEGEND:

- EXISTING BUILDING
- CONCRETE PAD
- EXISTING PITS
- FENCE
- FORMER BUILDING FOUNDATION
- ENV-1 — EXISTING MONITORING WELL SAMPLED
- GW-1 — EXISTING MONITORING WELL FOR GAUGING ONLY
- NR-1 — STAFF GAUGE
- GW-7 — EXISTING MONITORING WELL UNABLE TO BE GAUGED
- GROUNDWATER FLOW DIRECTION
- (6) — TOTAL VOC CONCENTRATION (Ug/L)
- 1,000 – 100 Ug/L
- 100 – 10 Ug/L
- 10 – 1 Ug/L

-N-

NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
   GW: NYSDEC MONITORING WELL
   ENV: BBL MONITORING WELL
   NR: NIAGARA RIVER WORLD MONITORING WELL
   ES: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
   NRG: NATURAL RESOURCE GROUP MONITORING WELL

300 0 300 600
1"=300'-0"

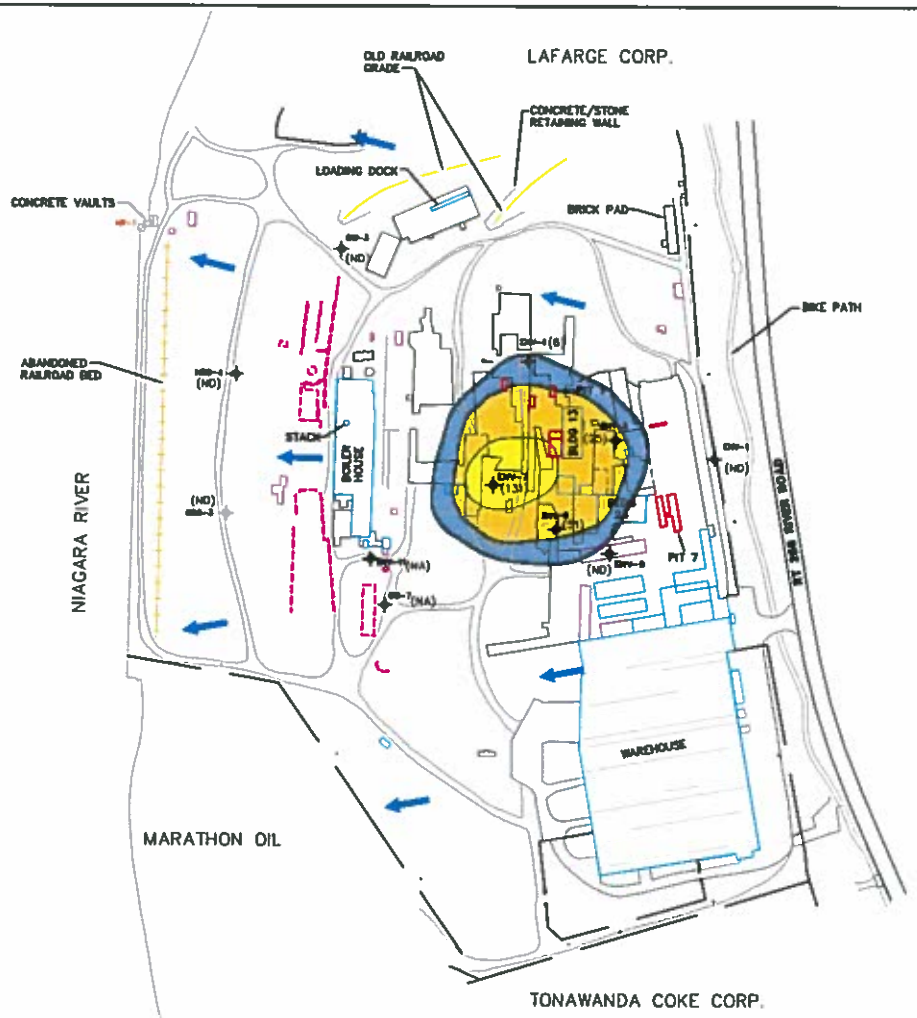
STEARNS & WHELER
Environmental Engineers & Scientists
AMHERST, NEW YORK

DATE:01-10 JOB No.:81193

ENVIROTEX II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORING REPORT

FIGURE 4 – TOTAL GROUNDWATER VOC CONCENTRATION MAP– OCTOBER 27, 2009

18.12.2009 BRIAN DOYLE
J:\60000\81193\WORD PROC\REPORTS\2009 REPORT\FIGURES\FIGURES 2-4.DWG



LEGEND:

- EXISTING BUILDING
- CONCRETE PAD
- EXISTING PITS
- FENCE
- FORMER BUILDING FOUNDATION
- ENV-1 — EXISTING MONITORING WELL
- NR-1 — STAFF GAUGE
- GROUNDWATER FLOW DIRECTION
- (6) — TOTAL VOC CONCENTRATION (Ug/L)
- 1,000 – 100 Ug/L
- 100 – 10 Ug/L
- 10 – 1 Ug/L

NOTE:

1. BASE MAP PREPARED FROM BLASLAND, BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.

1"=300'-0"

300 0 300 600

07.04.2008 BRIAN DOYLE
C:\387\187481\WP\REPORTS\2008 REPORT\FIGURES 2-4.DWG

STEARNS & WHELER
Environmental Engineers & Scientists
AMHERST, NEW YORK

DATE:04-09 JOB No.:81193

ENVIROTEX II SITE
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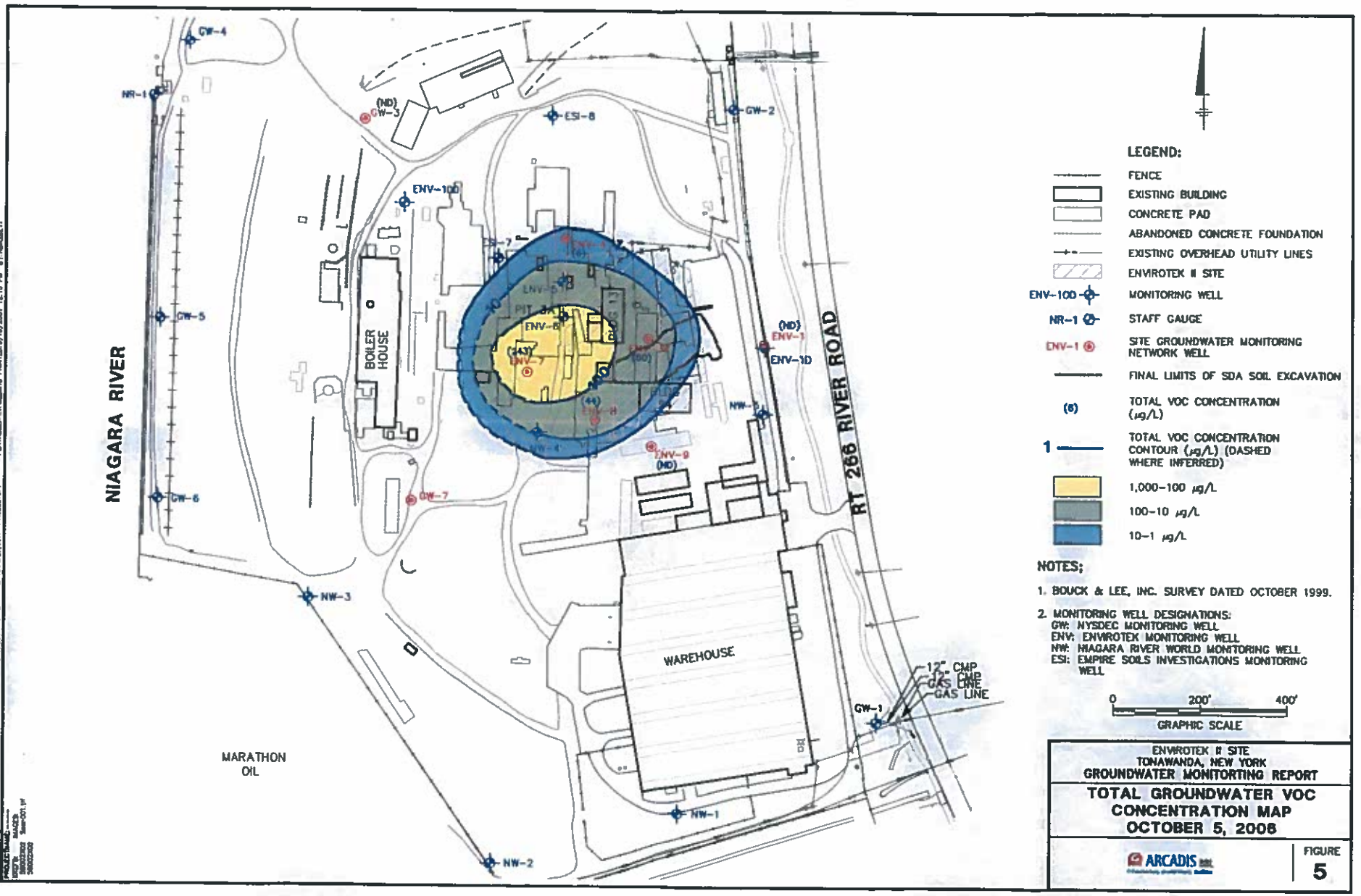
GROUNDWATER MONITORING REPORT

FIGURE 4 – TOTAL GROUNDWATER VOC CONCENTRATION MAP – OCTOBER 7,2008

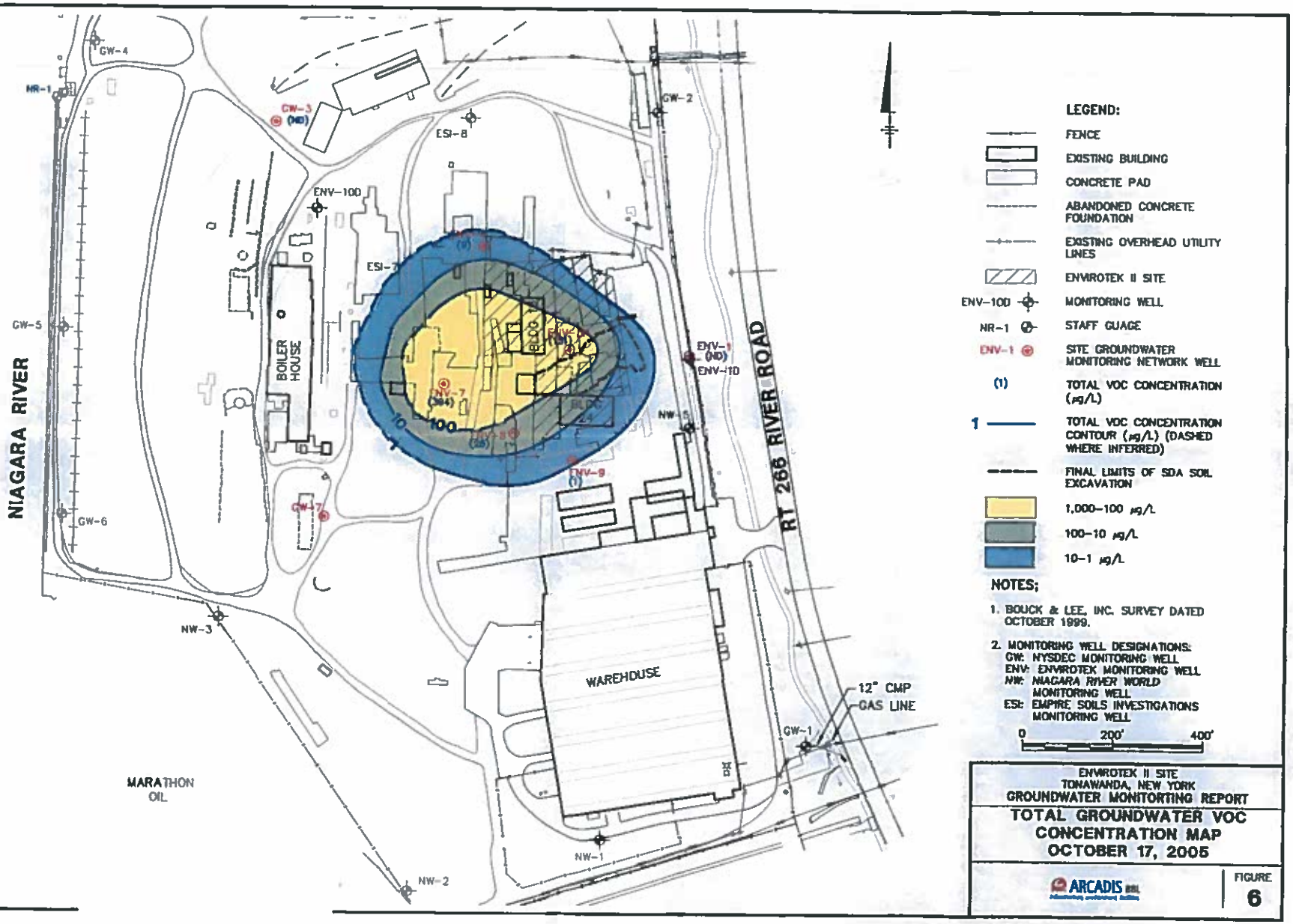


ENVIROTEX II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORTING REPORT

TOTAL GROUNDWATER VOC CONCENTRATION MAP OCTOBER 5, 2008

ARCADIS

FIGURE 5

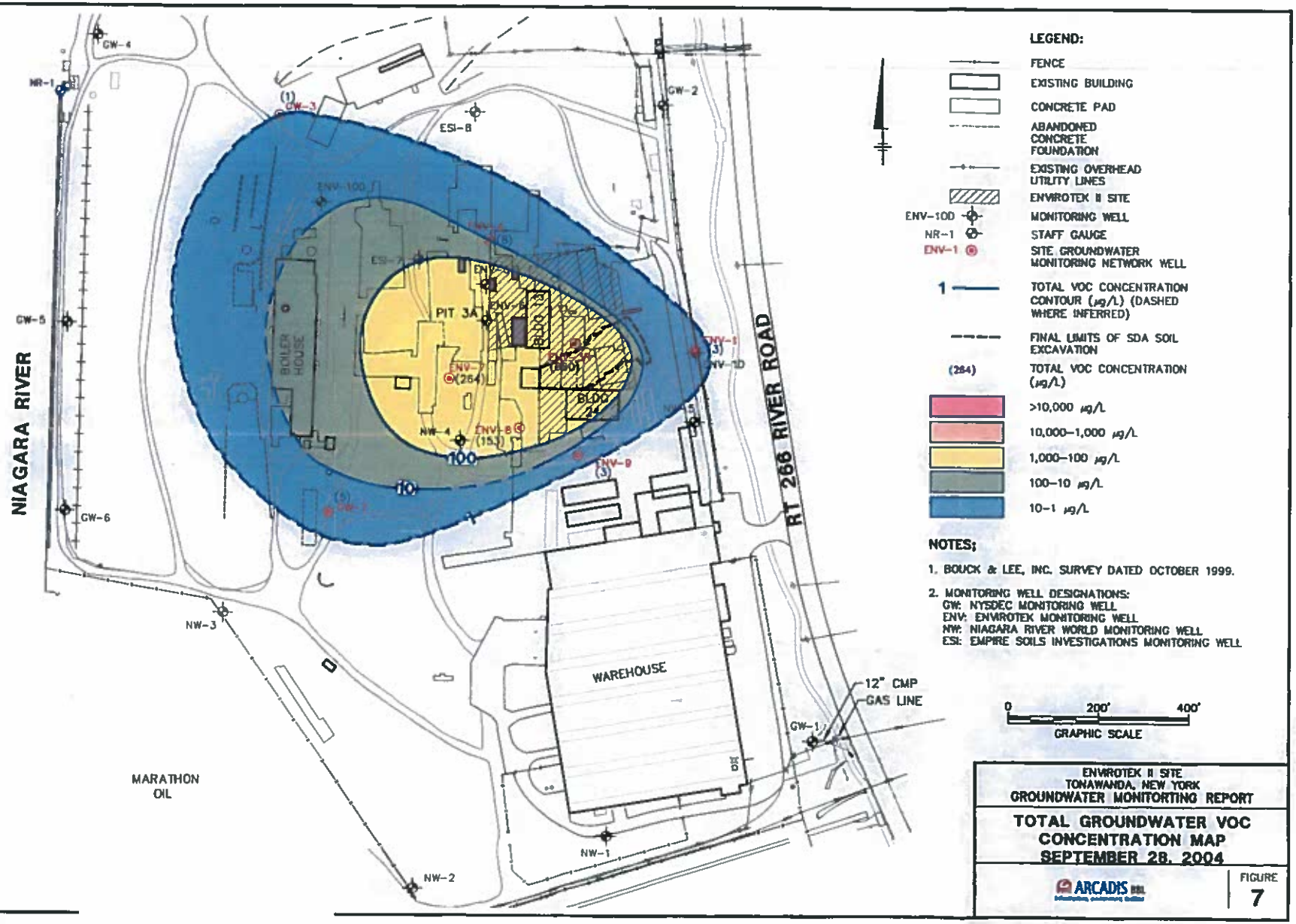


ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORTING REPORT

TOTAL GROUNDWATER VOC CONCENTRATION MAP OCTOBER 17, 2005

ARCADIS BBL

FIGURE 6

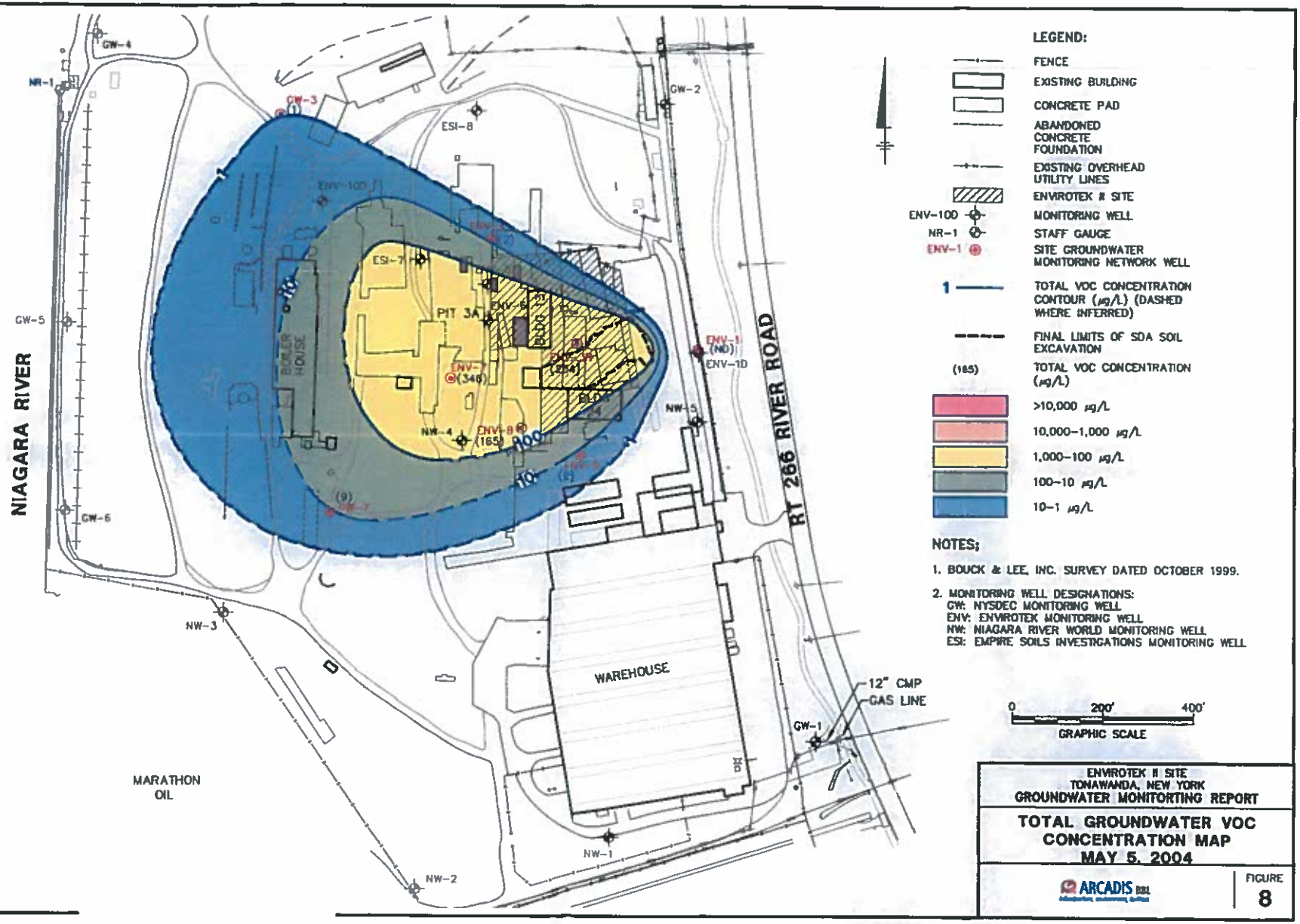


ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORTING REPORT

TOTAL GROUNDWATER VOC CONCENTRATION MAP SEPTEMBER 28, 2004

ARCADIS BBL

FIGURE 7



ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORTING REPORT

TOTAL GROUNDWATER VOC CONCENTRATION MAP MAY 5, 2004

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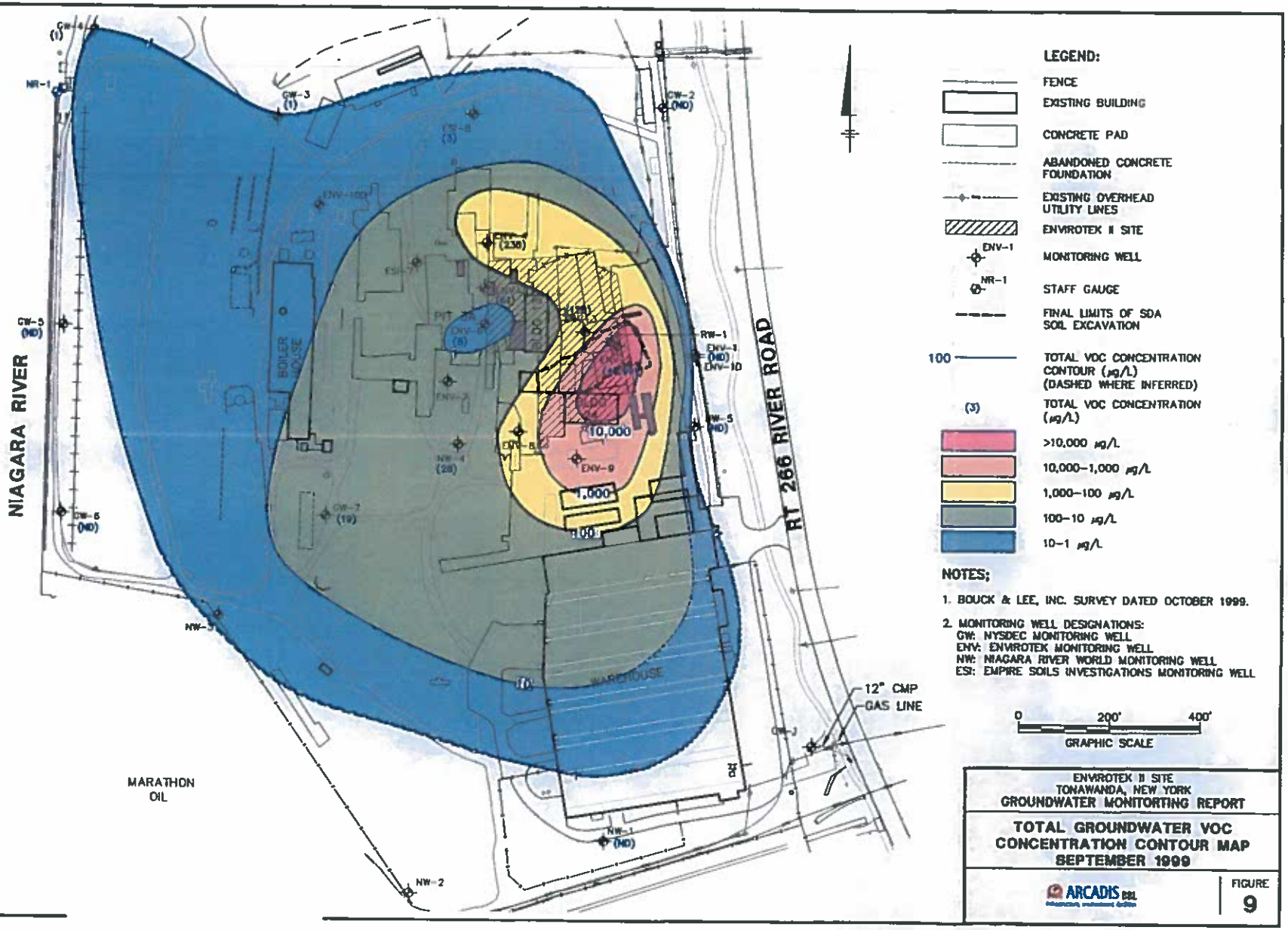
FIGURE 8


NIAGARA RIVER
RT 266 RIVER ROAD
MARATHON OIL
BOILER HOUSE
WAREHOUSE
12" CMP GAS LINE
GW-1 (1)
GW-2 (ND)
GW-3 (1)
GW-4 (1)
GW-5 (ND)
GW-6 (ND)
GW-7 (19)
NR-1
NW-1 (ND)
NW-2
NW-3
NW-4 (28)
NW-5 (ND)
ENV-1 (ND)
ENV-2
ENV-3
ENV-4 (8)
ENV-5
ENV-6
ENV-7 (238)
ENV-8
ENV-9
ENV-10
ENV-100
RW-1
10,000
1,000
100
LEGEND:
FENCE
EXISTING BUILDING
CONCRETE PAD
ABANDONED CONCRETE FOUNDATION
EXISTING OVERHEAD UTILITY LINES
ENVIROTEK II SITE
ENV-1 MONITORING WELL
NR-1 STAFF GAUGE
FINAL LIMITS OF SDA SOIL EXCAVATION
100 TOTAL VOC CONCENTRATION CONTOUR (µg/L) (DASHED WHERE INFERRED)
(3) TOTAL VOC CONCENTRATION (µg/L)
>10,000 µg/L
10,000–1,000 µg/L
1,000–100 µg/L
100–10 µg/L
10–1 µg/L
NOTES;
1. BOUCK & LEE, INC. SURVEY DATED OCTOBER 1999.
2. MONITORING WELL DESIGNATIONS:
GW: NYSDEC MONITORING WELL
ENV: ENVIROTEK MONITORING WELL
NW: NIAGARA RIVER WORLD MONITORING WELL
ESI: EMPIRE SOILS INVESTIGATIONS MONITORING WELL
0 200' 400'
GRAPHIC SCALE
ENVIROTEK II SITE
TONAWANDA, NEW YORK
GROUNDWATER MONITORTING REPORT
TOTAL GROUNDWATER VOC CONCENTRATION CONTOUR MAP SEPTEMBER 1999
ARCADIS BBL
FIGURE 9

about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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