2018 ANNUAL MONITORING REPORT

NIAGARA COUNTY REFUSE DISTRICT SITE

Wheatfield, Niagara County, New York **(NYSDEC Site No. 9-32-026)**

SUBMITTED TO:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NEW YORK STATE DEPARMENT OF ENVIRONMENTAL CONSERVATION

SUBMITTED BY:

Niagara County Refuse District and PRP Group

PREPARED BY:

PARSONS
40 La Riviere Drive, Suite 350
Buffalo, New York 14202
(716) 541-0730 Fax (716) 541-0760

February 2019

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Submitted To:

The New York State Department of Environmental Conservation Division of Hazardous Waste Remediation

and

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INTRODUCTION

1.1 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Record of Decision (USEPA, 1993), the United States District Court Consent Decree (USA, 1995), and the USEPA-approved Operation, Maintenance, and Monitoring (OM&M) Manual (CRA, 2000), the Niagara County Refuse Site Potentially Responsible Parties (PRP) Group performed a remedial action at the Niagara County Refuse Site (Site), Wheatfield, New York. The PRP Group currently provides site-related OM&M services. This Annual Monitoring Report summarizes monitoring activities from January through December 2018.

The Site is a closed municipal landfill, approximately 60 acres in size, located along the eastern border of the Town of Wheatfield, New York, and the western border of the City of North Tonawanda, New York. The southern edge of the Site lies approximately 500 feet north of the Niagara River. A perimeter collection system and a perimeter barrier system are used to provide hydraulic containment of Site-related leachate and groundwater. These systems began operation in November of 2000.

1.2 PROCEDURES

1.2.1 Groundwater Sampling

In accordance with the OM&M Manual (CRA, 2000), samples were collected from wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S in April 2018. These four wells are screened in the shallow overburden materials. Groundwater sampling on an annual schedule commenced in 2006.

Each groundwater monitoring well was purged prior to sample collection using a dedicated disposable HDPE bailer. Each well was bailed dry the day prior to sampling. Physical parameters including pH, temperature, conductivity, and turbidity of the purge water were periodically measured and recorded. All purge water was placed in an onsite wet-well. Wet well water is discharged to the City of North Tonawanda publicly owned treatment works (POTW). The dedicated disposable bailer was also used to collect the groundwater samples.

Since 2006, volatile organic compounds (VOCs) and semi-volatile organic compound (SVOCs) samples have been collected every other year and total metals samples have been collected annually. In April 2018, in accordance with this schedule, groundwater samples were collected and analyzed for:

- Volatile organics in accordance with EPA Method 8260;
- Semivolatile organics in accordance with EPA Method 8270;
- Mercury in accordance with EPA Method 245.1 and Method SW-7470; and
- Inorganics in accordance with EPA Method 200.7 and Method SW-6010.

The groundwater samples were analyzed by TestAmerica Laboratories of Amherst, New York. A chain-of-custody (COC) accompanied the sample bottles from the laboratory, to the field, and back to the laboratory.

Beginning in 2014, in addition to samples for total metals, samples for dissolved-phase metals were also collected and analyzed. Samples for dissolved-phase metals samples were collected based on comments in the USEPA's Third Five Year Review Report (September 2014) concerning metals concentrations and the potential for sample turbidity to change the total metals concentrations.

1.2.2 Effluent Sampling

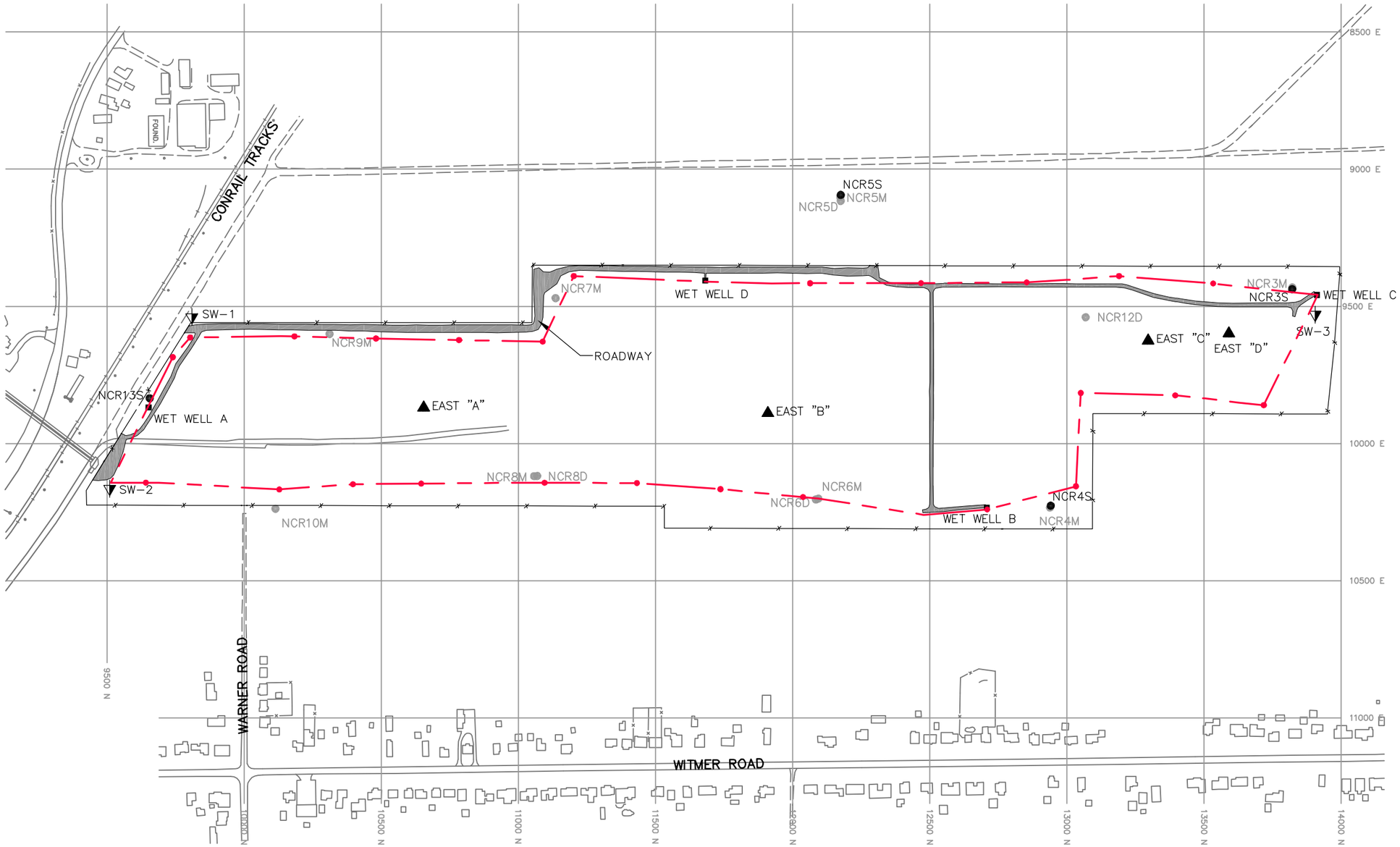
Groundwater from the perimeter collection system is discharged to the City of North Tonawanda treatment system without pre-treatment. A monitoring station in Wet Well A allows both the effluent water quality and the volume of effluent to be verified by the City of North Tonawanda. In compliance with the City of North Tonawanda Industrial Wastewater Discharge Permit (the Permit), the effluent was sampled monthly through February 2007. A revised permit was issued covering from February 2007 through March 2010, requiring only semi-annual sampling. A new Industrial Wastewater Discharge Permit (Appendix A) was issued by the City of North Tonawanda in 2016 and is effective from March 31, 2016 through April 1, 2019. The new permit has a reduced analytical parameter list compared to the original permit, but continues to require a semi-annual sampling frequency. Semi-annual samples were collected in April and October 2018. The effluent samples were collected in compliance with the permit using the procedures identified in the OM&M Manual. Effluent samples were analyzed by the City of North Tonawanda. The sole purpose of these analyses is for compliance with the Industrial Wastewater Discharge Permit.

1.2.3 Water Levels

Water levels (depths to water) were measured in four monitoring well locations and at four wet well locations inside the limits of the landfill. Water level measurements were collected monthly during 2018. The water levels were measured with an electronic water level indicator, and reported as an elevation above mean sea level. Figure 1.1 shows the locations of the water level monitoring points.

1.2.4 Site Inspections

The Site was inspected by GHD on a monthly basis throughout 2018, in accordance with procedures in the OM&M Manual. The perimeter collection system, offsite force main, wetlands, perimeter fence, drainage ditches, swale outlets, culverts, gas vents, wells, and landfill cap were visually inspected, and the results documented on inspection logs.



LEGEND

▲EAST "A"	WATER LEVEL MONITORING WELL LOCATION
▼SW-2	SURFACE WATER MONITORING LOCATION
■ WET WELL A	EFFLUENT MONITORING LOCATION
● NCR13S	GROUNDWATER QUALITY MONITORING LOCATION SHADED IF ABANDONED)
——X——	FENCELINE
— — —	PERIMETER BARRIER TRENCH
●	PERIMETER COLLECTION SYSTEM MANHOLE

400 200 0 400 800

SCALE: 1"=400'

FILE NAME: P:\738641\TECH\CAD\38641C001-PCS.DWG
PLOT DATE: 2/21/2019 8:17 AM PLOTTED BY: RUSSO, JILL

FIGURE 1.1

NIAGARA COUNTY REFUSE SITE
WHEATFIELD, NEW YORK

SITE PLAN

PARSONS
180 LAWRENCE BELL DRIVE, SUITE 104, WILLIAMSVILLE, N.Y. 14221, PHONE: 716-633-7074

SECTION 2
RESULTS

2.1 ANALYTICAL RESULTS

2.1.1 Effluent Samples

Effluent samples were collected in April and October 2018 by GHD and analyzed by the City of North Tonawanda. The analytical results from these samples were used by the City to confirm that the effluent received from the Site met the criteria for acceptance by the City treatment system. All analytical results were found to be compliant with the March 31, 2016 discharge permit. Effluent analytical results for 2018 and the Permit are presented in Appendix A.

2.1.2 Groundwater Analytical Results

Analytical results for the sampling event during this reporting period are summarized in Table 2.1. The results were compared to NYSDEC ambient water quality standards (AWQS), NYSDOH maximum contaminant levels (MCLs), and USEPA MCLs (see Table 2.1). This reporting period includes months 206 to 218, since the start-up of the perimeter collection system in November 2000. The collection of quarterly and semi-annual groundwater samples has been completed as outlined in the OM&M Manual. Annual collection and analysis of groundwater samples began in 2006. Groundwater sample analytes are currently scheduled to include mercury and inorganics annually, and VOCs and SVOCs every two years, as approved by the USEPA (see Appendix B). The groundwater samples collected during this reporting period were analyzed for VOCs, SVOCs, and total and dissolved mercury and inorganics. Beginning in 2019, annual groundwater sampling will include only total and dissolved inorganics annually. VOCs, SVOCs, and mercury have been eliminated from the analysis list, as approved by the USEPA (see Appendix B).

Beginning in 2014, in addition to total mercury and inorganic samples, dissolved-phase mercury and inorganic samples were also collected and analyzed. Sampling for both total and dissolved-phase inorganics is planned to continue in future annual groundwater sampling events.

The analytical results received from the laboratory are presented in Appendix C, along with the COC. A Sample Collection Data Sheet for each well, which includes required and actual purge volumes, sample date, time, description, required analyses, and the COC number, is included in Appendix C. This sheet also indicates which well was used to collect the matrix spike (MS) and the matrix spike duplicate (MSD). Well purging information, including pH, conductivity, turbidity, odor, comments, and well volumes, is also provided in Appendix C.

April 2018 Event

Monitoring wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S were sampled on April 18 and 24, 2018. The locations of the monitoring wells are provided in Figure 1.1. The data validation report is presented in Appendix D.

No VOCs were detected in the groundwater samples from the monitoring wells; however, acetone (4.0 J µg/L) and methylene chloride (2.9 µg/L) were found in the trip blank. No SVOC

were identified. Mercury was not identified in any of the samples. Sixteen metals were identified in one or more of the groundwater samples. Four of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs (screening criteria), which is consistent with previous sampling events. In general, the detected values are consistent with ranges observed in previous sampling events. Plots of selected total metals concentrations over time are presented in Figures 2.1A through Figure 2.1C. Key results are summarized below.

- Total iron was identified in each of the samples and exceeded the AWQS and the NYSDOH MCL. The Record of Decision (ROD) (USEPA, 1993) identifies iron as typically exceeding MCLs in the regional groundwater indicating that exceedances of iron are likely related to background conditions. Dissolved iron was detected in each of the four samples and exceeded the NYSDEC AWQS and NYSDOH MCL in samples from NCR-4S and NCR-13S.
- Total and dissolved magnesium were identified in each of the four samples and exceeded the AWQS guidance value (not a standard) in each of the samples. Historically, total magnesium has exceeded the AWQS guidance value.
- Total and dissolved manganese was identified in each of the samples and exceeded the NYSDEC AWQS and NYSDOH MCL in NCR-4S.
- Total and dissolved sodium was found above the NYSDEC AWQS, the NYSDOH MCL, and USEPA MCL in one of the four samples (NCR-4S). The ROD identifies sodium as typically exceeding MCLs in the regional groundwater, indicating that exceedances of sodium are likely related to background conditions.

Data Validation

Groundwater analytical results were reviewed and validated by Parsons for usability (see Appendix D for the complete report). The laboratory data packages were found to be of good overall quality. Groundwater samples were collected, properly preserved, shipped under a COC record, and received at the laboratory within one day of sampling. The analytical results are considered compliant and usable. A summary of the data validation report is provided below:

All volatile organic data was considered compliant and acceptable in accordance with the validation with the exception of blank contamination:

- Blank contamination - The field QC trip blank associated with all samples contained acetone and methylene chloride at concentrations of 4 µg/L and 2.9 µg/L, respectively. Therefore, results for these compounds at less than validation action concentrations were considered not detected and qualified "U" for the affected samples.

All semivolatile sample results were considered usable following data validation, with the exception of initial calibration:

- Initial Calibrations – All initial calibration compounds were considered acceptable with average relative response factors (RRFs) greater than 0.05 and percent relative standard deviations (%RSD) less than 20% with the exception of

pentachlorophenol (23.6%RSD) in the initial calibration. Therefore, non-detect sample results for this compound were considered estimated and qualified "UJ" for the affected samples.

Although all metals sample results were considered usable following data validation, five minor issues were noted:

- Blank contamination – The laboratory preparation blank associated with the project samples contained total manganese, total zinc, and dissolved manganese at concentrations of 0.00325, 0.00228, and 0.00264 mg/L, respectively. Validation qualification of the sample results was not required since samples were not affected by the contamination in this blank.
- Matrix spike recoveries – All MS/MSD recoveries were considered acceptable and within 75-125%R QC limit for all analytes with the exception of dissolved manganese (148%R) associated with sample NCR-5S. Therefore, positive results for this analyte were considered estimated and qualified "J" for this sample.
- LCS Recoveries – All LCS recoveries were considered acceptable and within the 80 to 120%R QC limit with the exception of total cadmium (124%R), total calcium (121%R), total iron (124%R), and total zinc (124%R) associated with samples NCR-4S, NCR-5S, NCR-6S, and NCR-13S. Therefore, positive results for these analytes were considered estimated, possibly biased high, and qualified "J+" for the affected samples.
- Field duplicate precision – All field duplicate results were considered acceptable with the exception of dissolved iron (159%RPD), dissolved manganese (112%RPD), and dissolved sodium (61%RPD) associated with sample NCR-13S and its field duplicate sample NCR-6S. Therefore, results for these analytes were considered estimated and qualified "J" for these samples.
- It was noted that dissolved results were significantly higher than total results for manganese in sample NCR-3S (104%D) and NCR-13S (70%D). Therefore, results for total and dissolved manganese were considered estimated and qualified "J" for the affected samples.

2.2 SITE INSPECTIONS

Monthly Site inspections were conducted between January and December 2018. During the inspections, the perimeter collection system, offsite force main, manholes, wet wells, landfill cap, wetlands, perimeter fence, drainage ditches, swale outlets, culverts, gas vents, and monitoring wells were each visually inspected. A summary of the inspection findings is included in Table 2.2. Copies of the Monthly Inspection Logs have been included in Appendix E.

Each of the inspections found the manholes and wet wells to be in good condition. Water levels in the wet wells were measured during each inspection visit (see Table 2.3). Examination of the landfill cap vegetative cover included checking for erosion, bare areas, washouts, leachate seeps, length of vegetation, and dead/dying vegetation. Additionally, during the examination of the landfill cap, the access roads were examined for bare areas, dead/dying vegetation, erosion, potholes/puddles, and obstructions. No surface erosion, bare

spots, or leachate seeps were noted. No issues with the condition of the grass covering on the landfill were noted during each of the inspections. The landfill cap was mowed in June.

Post-construction monitoring of the wetland replacement was performed annually between 2001 and 2005. Monitoring results indicated that the wetland creation was successful. Although the formal annual inspections are no longer required, monthly visual inspection of the wetlands has continued, to document general conditions. A drainage project was completed by the City of North Tonawanda in December 2012. This project included excavation of a drainage ditch across the northern end of the landfill property, north of the landfill's northern perimeter collection system and perimeter barrier system in an effort to alleviate seasonal flooding in the yards of homes along Witmer Road. The excavation was oriented through the wetlands in an east-west direction. The drainage project does not appear to have affected the water balance or the established vegetation in the wetland area.

The wetlands were visually examined during monthly inspections for growth and propagation of wetland species, dead/dying vegetation, presence of invasive species (i.e., purple loosestrife), change in water budget, and general conditions. No signs of damage to the wetlands due to loss of vegetation, or changes in the water budget, were observed during each of the inspections. No issues were identified in changes in the water budget of the wetlands during each of the inspections in 2018. No issues were identified with the wetland vegetation (no dead or dying vegetation) during each of the inspections in 2018.

The complete landfill system, including the perimeter fence, drainage ditches, swale outlets, culverts, gas vents, monitoring wells, and wetlands was found to be in acceptable condition.

2.3 MAINTENANCE

Maintenance completed during 2018 included:

- Wet wells C and D pumps were pulled, cleaned, tested with a volt meter, and re-installed.
- The perimeter of the Site was mowed along the perimeter fence, and paths to wet wells and monitoring wells were mowed.
- The landfill cap was mowed, and brush along the roadway was cut and pushed back.

Occasional unscheduled maintenance at the landfill is required. During this reporting period, only a single unscheduled maintenance item was addressed:

- Wet Well A was found to have a broken discharge hose. The pump was removed, the broken hose was replaced, the pump was cleaned and tested with a voltmeter, and the pump was returned to service.

Maintenance Record Logs are included in Appendix F.

2.4 WATER LEVELS

Monthly water level measurements were collected to (1) ensure that water levels inside the landfill are lowered by the operation of the perimeter collection system; and (2) allow planning for groundwater sampling dates, when the maximum number of wells could be

sampled. Water levels were collected from the wet wells, the piezometers (hydraulic monitoring locations) within the limits of the landfill, and the groundwater monitoring wells (see Figure 1.1). Water levels in the wet wells were collected during the monthly inspections and recorded on water level records (Appendix G). The water level data, including depths to water and elevations, are summarized on Table 2.3. During 2018, water levels were collected from the monitoring wells on a monthly basis. Water levels varied (rose or fell) between 1.2 and 4.4 feet over the course of the year.

2.5 PERIMETER COLLECTION SYSTEM (PCS)

The PCS encloses the landfill and capped area of the Site. Leachate is passively collected at Wet Wells B, C, and D and pumped to Wet Well A, which then discharges the leachate to the City of North Tonawanda Waste Water Treatment Plant. The PCS is functioning as designed, based on the following observations:

- The effectiveness of the PCS is directly observed through collection of groundwater samples from the four monitoring wells that are located outside the perimeter of the PCS. Analytical results from the groundwater samples have shown that VOCs or SVOCs have not been observed outside the PCS.
- Analytical results for inorganics analyses have not shown sustained concentration increases or increasing trends which could potentially indicate a breach of the PCS.

Table 2.1
Detected Analytes in Groundwater Samples
Niagara County Refuse Site
Wheatfield, Niagara County, New York

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event		Location ID: Sample ID: Lab Id: Source: SDG: Matrix: Sampled:	NYS DEC AWQS*	NYS DOH MCL	US EPA MCL	NCR-3S WG-11109668-0418 18/042418-SG-NCR3S 480-134493/134747-1 TALBUFF 480134493/480134747 WATER 4/18/2018 & 4/24/18	NCR-4S WG-11109668-0418 18/042418-SG-NCR4S 480-134493/134747-2 TALBUFF 480134493/480134747 WATER 4/18/2018 & 4/24/18	NCR-5S WG-11109668-0418 18/042418-SG-NCR5S 480-134493/134747-3 TALBUFF 480134493/480134747 WATER 4/18/2018 & 4/24/18	NCR-13S WG-11109668-0418 18/042418-SG-NCR13S 480-134493/134747-5 TALBUFF 480134493/480134747 WATER 4/18/2018 & 4/24/18	Field Duplicate WG-11109668-0418 18/042418-SG-NCR6S 480-134493/134747-4 TALBUFF 480134493/480134747 WATER 4/18/2018 & 4/24/18
CAS NO.	COMPOUND	Validated:				5/16/2018	5/16/2018	5/16/2018	5/16/2018	5/16/2018
	VOLATILES	UNITS:								Dup of NCR-5S
	NONE DETECTED									
	SEMIVOLATILES									
	NONE DETECTED									
	TOTAL METALS									
7429-90-5	ALUMINUM	mg/l	-	-	-	0.260	7.20	2.90	0.250	0.350
7440-39-3	BARIUM	mg/l	1	2	2	0.037	0.081	0.200	0.053	0.056
7440-41-7	BERYLLIUM	mg/l	0.003+	0.004	0.004	0.002 U	0.00033 J	0.002 U	0.002 U	0.002 U
7440-70-2	CALCIUM	mg/l	-	-	-	99.9	159 J+	104	158 J+	157 J+
7440-47-3	CHROMIUM	mg/l	0.05	0.10	0.10	0.003 J	0.0067	0.0098	0.0033 J	0.003 J
7440-48-4	COBALT	mg/l	-	-	-	0.004 U	0.00072 J	0.00066 J	0.004 U	0.004 U
7440-50-8	COPPER	mg/l	0.2	-	-	0.004 J	0.011	0.0048 J	0.0016 J	0.002 J
7439-89-6	IRON	mg/l	0.3>	0.3+	-	**0.350**	**25.5 J+**	**2.1 J+**	**0.540 J+**	**0.490 J+**
7439-92-1	LEAD	mg/l	0.025	0.025	0.015	0.01 U	0.014	0.0069 J	0.01 U	0.01 U
7439-95-4	MAGNESIUM	mg/l	35	-	-	49	50.9	55.7	67.4	65.3
7439-96-5	MANGANESE	mg/l	0.3>	0.3+	-	0.006 J	**0.53**	0.088	0.053 J	0.04
7440-02-0	NICKEL	mg/l	0.10	-	-	0.005 J	0.0052 J	0.0082 J	0.0025 J	0.0026 J
7440-09-7	POTASSIUM	mg/l	-	-	-	2.1	8.8	0.86	0.83	0.90
7440-23-5	SODIUM	mg/l	20	20	20	5.6	**24.7**	7.3	12.0	10.8
7440-62-2	VANADIUM	mg/l	-	-	-	0.005 U	0.0034 J	0.0029 J	0.005 U	0.005 U
7440-66-6	ZINC	mg/l	2.0+	5	-	0.021	0.37 J	0.014 J+	0.0031 J	0.0062 J
	DISSOLVED METALS									
7440-39-3	BARIUM	mg/l	1	2	2	0.041	0.058	0.160	0.043	0.053
7440-43-9	CADMIUM	mg/l	0.005	0.005	0.005	0.00051 J	0.002 U	0.002 U	0.002 U	0.002 U
7440-70-2	CALCIUM	mg/l	-	-	-	118	153	92.4	157	149
7440-50-8	COPPER	mg/l	0.2	-	-	0.0042 J	0.010 U	0.010 U	0.010 U	0.010 U
7439-89-6	IRON	mg/l	0.3>	0.3+	-	0.053	**1.2**	0.019 J	**0.340 J**	**0.039 J**
7439-92-1	LEAD	mg/l	0.025	0.025	0.015	0.01 U	0.0033 J	0.01 U	0.0047 J	0.01 U
7439-95-4	MAGNESIUM	mg/l	35	-	-	59.3	51.5	52.1	77.1	62.4
7439-96-5	MANGANESE	mg/l	0.3>	0.3+	-	0.019 J	**0.510**	0.055 J	0.110 J	0.031 J
7440-02-0	NICKEL	mg/l	0.10	-	-	0.0054 J	0.0018 J	0.010 U	0.0024 J	0.0014 J
7440-09-7	POTASSIUM	mg/l	-	-	-	1.7	8.7	0.28 J	0.66	0.78
7440-23-5	SODIUM	mg/l	20	20	20	6.9	**26.4**	7.0	18.4 J	9.8 J
7440-66-6	ZINC	mg/l	2.0+	5	-	0.023	0.0084 J	0.0035 J	0.0051 J	0.0028 J

* = NYSDEC Ambient Water Quality Standards + = Guidance value

> = Sum of iron and manganese should not exceed 500 ug/L NYSDEC or 300 ug/L NYSDOH

J = estimated value. J+ = estimated biased high. - = No standard identified. U = Not detected at given value.

Boxed values exceed NYSDEC AWQS.

Bold values exceed NYSDOH maximum contaminant levels (MCL).

Shaded values exceed USEPA maximum contaminant levels.

Table 2.2 Monthly Site Inspection Summary

Inspection Item	Acceptable	Not Acceptable	Comments
Manholes	X		
Wet Wells	X		Water levels were measured monthly. Pump maintenance was completed at Wet Wells C&D in June and at Wet Well A in July.
Wetlands	X		No issues were observed in the wetlands or their water levels during the monthly inspections.
Perimeter Fence	X		No repairs were required in 2018.
Condition of Roads	X		No erosion or other problems.
Integrity of the Cap	X		No problems were noted in 2018.
Drainage Ditches/Swales	X		
Gas Venting System	X		
Wells	X		Water levels were measured monthly.
Culverts	X		
Vegetative Cover	X		No issues were identified with the vegetative cover on the cap. The cap was mowed in June 2018.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	12/5/2000 Depth to Water (ft)	12/5/2000 Elevation (ft. msl)	1/8/2001 Depth to Water (ft)	1/8/2001 Elevation (ft. msl)	2/1/2001 Depth to Water (ft)	2/1/2001 Elevation (ft. msl)	3/8/2001 Depth to Water (ft)	3/8/2001 Elevation (ft. msl)	4/4/2001 Depth to Water (ft)	4/4/2001 Elevation (ft. msl)	5/8/2001 Depth to Water (ft)	5/8/2001 Elevation (ft. msl)	6/5/2001 Depth to Water (ft)	6/5/2001 Elevation (ft. msl)	7/2/2001 Depth to Water (ft)	7/2/2001 Elevation (ft. msl)	8/1/2001 Depth to Water (ft)	8/1/2001 Elevation (ft. msl)	9/5/2001 Depth to Water (ft)	9/5/2001 Elevation (ft. msl)	10/4/2001 Depth to Water (ft)	10/4/2001 Elevation (ft. msl)	11/5/2001 Depth to Water (ft)	11/5/2001 Elevation (ft. msl)	12/11/2001 Depth to Water (ft)	12/11/2001 Elevation (ft. msl)
East "A"	598.93	22.05	576.88	-	-	-	-	21.34	577.59	-	-	22.21	576.72	21.98	576.95	-	-	22.51	576.42	22.63	576.30	22.61	576.32	22.74	576.19	22.88	576.05
East "B"	596.23	19.12	577.11	-	-	-	-	19.35	576.88	-	-	19.23	577.00	19.30	576.93	-	-	20.50	575.73	19.44	576.79	19.22	577.01	19.36	576.87	19.44	576.79
East "C"	598.69	17.46	581.23	-	-	-	-	17.86	580.83	-	-	18.37	580.32	18.38	580.31	-	-	18.65	580.04	18.64	580.05	18.20	580.49	18.80	579.89	18.75	579.94
East "D"	593.20	11.10	582.10	-	-	-	-	12.45	580.75	-	-	12.86	580.34	12.79	580.41	-	-	13.00	580.20	12.8	580.40	12.24	580.96	12.74	580.46	12.94	580.26
WW A	-	2.50	-	2.67	-	2.33	-	1.13	-	2.29	-	1.83	-	2.17	-	1.58	-	1.83	-	-	-	1.83	-	2.33	-	2.08	-
WW B	-	2.20	-	2.42	-	1.96	-	1.09	-	1.79	-	2.17	-	1.92	-	1.50	-	2.00	-	1.92	-	1.58	-	1.50	-	2.08	-
WW C	-	1.50	-	2.42	-	1.70	-	0.92	-	2.04	-	2.00	-	1.67	-	1.33	-	2.08	-	2.33	-	1.25	-	2.00	-	1.58	-
WW D	-	1.70	-	-	-	1.50	-	0.99	-	1.08	-	1.50	-	1.33	-	2.0	-	1.25	-	2.25	-	2.00	-	2.08	-	1.33	-
NCR-3S	579.60	-	-	-	-	-	-	-	-	-	-	-	-	3.71	575.89	-	-	dry	-	dry	-	dry	-	5.10	574.50	4.64	574.96
NCR-4S	577.88	-	-	-	-	-	-	-	-	-	-	-	-	4.28	573.60	-	-	dry	-	dry	-	dry	-	4.51	573.37	3.92	573.96
NCR-5S	579.34	-	-	-	-	-	-	-	-	-	-	-	-	9.10	570.24	-	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	-	-	-	-	-	-	-	-	-	-	-	-	7.05	570.10	-	-	7.85	569.30	7.80	569.35	7.70	569.45	6.65	570.50	6.11	571.04

Observation Point	Elevation Top of Casing (ft. msl)	1/2/2002 Depth to Water (ft)	1/2/2002 Elevation (ft. msl)	2/4/2002 Depth to Water (ft)	2/4/2002 Elevation (ft. msl)	3/4/2002 Depth to Water (ft)	3/4/2002 Elevation (ft. msl)	4/1/2002 Depth to Water (ft)	4/1/2002 Elevation (ft. msl)	5/3/2002 Depth to Water (ft)	5/3/2002 Elevation (ft. msl)	6/4/2002 Depth to Water (ft)	6/4/2002 Elevation (ft. msl)	7/2/2002 Depth to Water (ft)	7/2/2002 Elevation (ft. msl)	8/7/2002 Depth to Water (ft)	8/7/2002 Elevation (ft. msl)	9/6/2002 Depth to Water (ft)	9/6/2002 Elevation (ft. msl)	10/3/2002 Depth to Water (ft)	10/3/2002 Elevation (ft. msl)	11/7/2002 Depth to Water (ft)	11/7/2002 Elevation (ft. msl)	12/3/2002 Depth to Water (ft)	12/3/2002 Elevation (ft. msl)
East "A"	598.93	22.90	576.03	22.81	576.12	22.03	576.90	22.25	576.68	20.06	578.87	19.84	579.09	22.00	576.93	22.65	576.28	22.78	576.15	28.48	570.45	23.25	575.68	23.36	575.57
East "B"	596.23	19.63	576.60	19.39	576.84	19.46	576.77	19.49	576.74	19.44	576.79	20.59	575.64	19.56	576.67	19.40	576.83	19.40	576.83	19.46	576.77	19.35	576.88	-	-
East "C"	598.69	18.70	579.99	18.51	580.18	18.70	579.99	18.63	580.06	18.80	579.89	18.74	579.95	18.78	579.91	18.95	579.74	18.92	579.77	18.99	579.70	19.30	579.39	19.35	579.34
East "D"	593.20	13.16	580.04	12.95	580.25	13.3	579.90	13.35	579.85	13.50	579.70	13.73	579.47	13.74	579.46	13.81	579.39	13.58	579.62	14.01	579.19	13.2	580.00	13.54	579.66
WW A	-	1.17	-	2.17	-	1.67	-	2.00	-	2.00	-	2.17	-	1.50	-	2.50	-	1.83	-	1.50	-	1.42	-	2.00	-
WW B	-	1.00	-	2.00	-	1.25	-	1.33	-	1.67	-	2.00	-	1.58	-	1.67	-	1.42	-	1.33	-	1.17	-	1.25	-
WW C	-	1.50	-	1.42	-	1.58	-	1.50	-	1.83	-	1.25	-	1.67	-	2.17	-	1.50	-	1.33	-	1.25	-	1.50	-
WW D	-	1.50	-	1.00	-	1.42	-	1.17	-	1.58	-	1.50	-	1.92	-	2.00	-	1.67	-	2.00	-	1.33	-	1.50	-
NCR-3S	579.60	4.54	575.06	4.52	575.08	3.90	575.70	4.10	575.50	4.43	575.17	5.20	574.40	5.71	573.89	5.90	573.70	dry	-	5.91	573.69	dry	-	4.46	575.14
NCR-4S	577.88	3.71	574.17	3.70	574.18	3.80	574.08	3.66	574.22	3.75	574.13	4.02	573.86	4.45	573.43	dry	-	dry	-	dry	-	dry	-	3.95	573.93
NCR-5S	579.34	8.42	570.92	7.69	571.65	7.68	571.66	7.61	571.73	8.28	571.06	9.10	570.24	9.52	569.82	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	5.85	571.30	5.76	571.39	5.74	571.41	5.81	571.34	6.07	571.08	6.27	570.88	7.25	569.90	7.57	569.58	dry	-	7.78	569.37	dry	-	6.40	570.75

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/6/2003 Depth to Water (ft)	1/6/2003 Elevation (ft. msl)	2/5/2003 Depth to Water (ft)	2/5/2003 Elevation (ft. msl)	3/6/2003 Depth to Water (ft)	3/6/2003 Elevation (ft. msl)	4/2/2003 Depth to Water (ft)	4/2/2003 Elevation (ft. msl)	5/5/2003 Depth to Water (ft)	5/5/2003 Elevation (ft. msl)	6/5/2003 Depth to Water (ft)	6/5/2003 Elevation (ft. msl)	7/1/2003 Depth to Water (ft)	7/1/2003 Elevation (ft. msl)	8/11/2003 Depth to Water (ft)	8/11/2003 Elevation (ft. msl)	9/2/2003 Depth to Water (ft)	9/2/2003 Elevation (ft. msl)	10/8/2003 Depth to Water (ft)	10/8/2003 Elevation (ft. msl)	11/12/2003 Depth to Water (ft)	11/12/2003 Elevation (ft. msl)	12/6/2003 Depth to Water (ft)	12/6/2003 Elevation (ft. msl)
East "A"	598.93	23.48	575.45	23.51	575.42	23.65	575.28	23.75	575.18	23.81	575.12	23.25	575.68	23.11	575.82	23.25	575.68	23.41	575.52	23.35	575.58	23.71	575.22	23.85	575.08
East "B"	596.23	19.53	576.70	19.40	576.83	19.59	576.64	19.61	576.62	19.70	576.53	19.66	576.57	19.77	576.46	19.58	576.65	19.64	576.59	19.59	576.64	19.65	576.58	NA	-
East "C"	598.69	18.82	579.87	19.11	579.58	18.99	579.70	19.07	579.62	18.98	579.71	19.00	579.69	19.39	579.30	19.19	579.50	19.25	579.44	19.24	579.45	18.81	579.88	19.27	579.42
East "D"	593.20	13.24	579.96	13.52	579.68	13.7	579.50	13.88	579.32	14.15	579.05	14.07	579.13	14.31	578.89	14.04	579.16	14.04	579.16	13.97	579.23	13.64	579.56	14.02	579.18
WW A	-	1.42	-	1.25	-	1.50	-	1.42	-	1.58	-	1.33	-	1.33	-	1.17	-	1.42	-	1.33	-	2.00	-	1.33	-
WW B	-	1.08	-	1.17	-	1.67	-	1.17	-	0.75	-	1.25	-	1.42	-	1.50	-	1.50	-	1.17	-	1.42	-	1.67	-
WW C	-	1.33	-	1.50	-	1.25	-	1.33	-	1.50	-	1.42	-	1.00	-	1.08	-	1.08	-	1.08	-	1.00	-	1.67	-
WW D	-	1.42	-	1.67	-	1.08	-	1.25	-	1.50	-	1.50	-	1.25	-	1.58	-	1.33	-	1.50	-	1.58	-	1.50	-
NCR-3S	579.60	3.84	575.76	4.06	575.54	4.55	575.05	4.39	575.21	4.39	575.21	4.41	575.19	5.80	573.80	5.92	573.68	dry	-	dry	-	4.45	575.15	4.24	575.36
NCR-4S	577.88	2.91	574.97	-	-	-	-	3.65	574.23	3.60	574.28	2.65	575.23	4.05	573.83	3.98	573.90	dry	-	4.37	573.51	2.93	574.95	2.88	575.00
NCR-5S	579.34	7.95	571.39	8.69	570.65	8.11	571.23	7.66	571.68	8.58	570.76	8.08	571.26	9.26	570.08	10.12	569.22	10.95	568.39	dry	-	10.40	568.94	8.11	571.23
NCR-13S	577.15	5.89	571.26	5.54	571.61	6.16	570.99	6.05	571.10	6.13	571.02	6.11	571.04	7.21	569.94	7.48	569.67	7.59	569.56	7.77	569.38	6.35	570.80	6.07	571.08

Observation Point	Elevation Top of Casing (ft. msl)	1/2/2004 Depth to Water (ft)	1/2/2004 Elevation (ft. msl)	2/5/2004 Depth to Water (ft)	2/5/2004 Elevation (ft. msl)	3/1/2004 Depth to Water (ft)	3/1/2004 Elevation (ft. msl)	4/5/2004 Depth to Water (ft)	4/5/2004 Elevation (ft. msl)	5/4/2004 Depth to Water (ft)	5/4/2004 Elevation (ft. msl)	6/11/2004 Depth to Water (ft)	6/11/2004 Elevation (ft. msl)	7/10/2004 Depth to Water (ft)	7/10/2004 Elevation (ft. msl)	8/9/2004 Depth to Water (ft)	8/9/2004 Elevation (ft. msl)	9/8/2004 Depth to Water (ft)	9/8/2004 Elevation (ft. msl)	10/2/2004 Depth to Water (ft)	10/2/2004 Elevation (ft. msl)	11/4/2004 Depth to Water (ft)	11/4/2004 Elevation (ft. msl)	12/3/2004 Depth to Water (ft)	12/3/2004 Elevation (ft. msl)
East "A"	598.93	23.90	575.03	23.93	575.00	24.00	574.93	23.26	575.67	22.14	576.79	19.44	579.49	19.19	579.74	20.70	578.23	23.31	575.62	23.34	575.59	22.44	576.49	22.48	576.45
East "B"	596.23	19.83	576.40	NA	-	NA	-	19.60	576.63	19.65	576.58	19.81	576.42	19.75	576.48	19.85	576.38	19.68	576.55	19.53	576.70	17.51	578.72	17.49	578.74
East "C"	598.69	19.12	579.57	19.79	578.90	19.22	579.47	19.36	579.33	19.24	579.45	19.42	579.27	19.28	579.41	19.56	579.13	19.48	579.21	19.36	579.33	18.95	579.74	18.94	579.75
East "D"	593.20	13.9	579.30	14.52	578.68	14.11	579.09	14.05	579.15	14.25	578.95	14.5	578.70	14.4	578.80	14.64	578.56	14.3	578.90	14.18	579.02	14.05	579.15	14.01	579.19
WW A	-	1.58	-	1.17	-	2.17	-	0.75	-	1.25	-	1.50	-	1.25	-	1.25	-	1.33	-	1.25	-	1.42	-	1.67	-
WW B	-	1.33	-	NA	-	1.50	-	1.30	-	1.17	-	1.17	-	1.17	-	1.25	-	1.00	-	1.00	-	1.17	-	0.42	-
WW C	-	1.08	-	1.00	-	1.17	-	1.17	-	1.00	-	1.08	-	1.17	-	1.08	-	1.17	-	1.17	-	1.58	-	0.25	-
WW D	-	1.17	-	1.08	-	1.67	-	0.65	-	1.50	-	1.33	-	1.00	-	1.00	-	1.25	-	1.00	-	1.17	-	0.25	-
NCR-3S	579.60	4.11	575.49	4.21	575.39	3.19	576.41	4.09	575.51	3.37	576.23	4.92	574.68	dry	-	4.36	575.24	5.44	574.16	dry	-	2.42	577.18	3.06	576.54
NCR-4S	577.88	2.65	575.23	2.72	575.16	2.42	575.46	2.53	575.35	2.76	575.12	2.99	574.89	3.74	574.14	3.50	574.38	3.32	574.56	3.65	574.23	2.74	575.14	2.75	575.13
NCR-5S	579.34	7.53	571.81	8.34	571.00	7.01	572.33	7.10	572.24	7.99	571.35	8.80	570.54	9.20	570.14	9.40	569.94	9.20	570.14	9.28	570.06	9.90	569.44	7.27	572.07
NCR-13S	577.15	5.72	571.43	5.95	571.20	5.88	571.27	5.49	571.66	6.08	571.07	6.22	570.93	7.08	570.07	7.09	570.06	6.75	570.40	7.16	569.99	5.95	571.20	4.28	572.87

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/5/2005 Depth to Water (ft)	1/5/2005 Elevation (ft. msl)	2/3/2005 Depth to Water (ft)	2/3/2005 Elevation (ft. msl)	3/9/2005 Depth to Water (ft)	3/9/2005 Elevation (ft. msl)	4/2/2005 Depth to Water (ft)	4/2/2005 Elevation (ft. msl)	6/4/2005 Depth to Water (ft)	6/4/2005 Elevation (ft. msl)	7/6/2005 Depth to Water (ft)	7/6/2005 Elevation (ft. msl)	8/4/2005 Depth to Water (ft)	8/4/2005 Elevation (ft. msl)	9/3/2005 Depth to Water (ft)	9/3/2005 Elevation (ft. msl)	10/7/2005 Depth to Water (ft)	10/7/2005 Elevation (ft. msl)	12/10/2005 Depth to Water (ft)	12/10/2005 Elevation (ft. msl)
East "A"	598.93	24.20	574.73	21.21	577.72	19.45	579.48	22.21	576.72	22.19	576.74	23.24	575.69	23.49	575.44	23.57	575.36	24.07	574.86	24.47	574.46
East "B"	596.23	19.68	576.55	19.52	576.71	19.79	576.44	19.66	576.57	19.97	576.26	19.89	576.34	19.96	576.27	19.70	576.53	19.51	576.72	19.50	576.73
East "C"	598.69	19.60	579.09	19.42	579.27	19.33	579.36	19.15	579.54	19.71	578.98	19.76	578.93	19.57	579.12	19.51	579.18	19.65	579.04	19.39	579.30
East "D"	593.20	14.2	579.00	14.35	578.85	13.89	579.31	14.29	578.91	14.68	578.52	14.64	578.56	14.62	578.58	14.47	578.73	14.4	578.80	14.24	578.96
WW A	-	0.58	-	1.08	-	0.50	-	1.00	-	1.00	-	1.00	-	1.25	-	1.17	-	1.33	-	1.50	-
WW B	-	1.50	-	1.17	-	0.83	-	1.25	-	1.17	-	1.50	-	1.42	-	0.92	-	1.17	-	1.17	-
WW C	-	0.67	-	1.00	-	1.00	-	1.00	-	1.25	-	0.92	-	1.25	-	1.00	-	1.00	-	0.83	-
WW D	-	1.25	-	1.25	-	1.00	-	1.17	-	1.33	-	0.92	-	1.50	-	1.00	-	1.08	-	1.08	-
NCR-3S	579.60	1.82	577.78	3.39	576.21	3.11	576.49	1.50	578.10	5.93	573.67	dry	-	5.96	573.64	dry	-	5.63	573.97	4.21	575.39
NCR-4S	577.88	2.60	575.28	3.08	574.80	frozen	-	2.51	575.37	3.87	574.01	dry	-	dry	-	dry	-	3.69	574.19	2.99	574.89
NCR-5S	579.34	5.46	573.88	6.57	572.77	6.14	573.20	6.36	572.98	8.10	571.24	10.60	568.74	dry	-	dry	-	dry	-	8.17	571.17
NCR-13S	577.15	3.60	573.55	5.14	572.01	4.34	572.81	3.19	573.96	6.59	570.56	7.52	569.63	7.79	569.36	dry	-	7.21	569.94	6.06	571.09

Observation Point	Elevation Top of Casing (ft. msl)	1/13/2006 Depth to Water (ft)	1/13/2006 Elevation (ft. msl)	2/10/2006 Depth to Water (ft)	2/10/2006 Elevation (ft. msl)	3/3/2006 Depth to Water (ft)	3/3/2006 Elevation (ft. msl)	4/8/2006 Depth to Water (ft)	4/8/2006 Elevation (ft. msl)	5/1/2006 Depth to Water (ft)	5/1/2006 Elevation (ft. msl)	6/7/2006 Depth to Water (ft)	6/7/2006 Elevation (ft. msl)	7/14/2006 Depth to Water (ft)	7/14/2006 Elevation (ft. msl)	8/8/2006 Depth to Water (ft)	8/8/2006 Elevation (ft. msl)	9/18/2006 Depth to Water (ft)	9/18/2006 Elevation (ft. msl)	10/7/2006 Depth to Water (ft)	10/7/2006 Elevation (ft. msl)	11/3/2006 Depth to Water (ft)	11/3/2006 Elevation (ft. msl)	12/1/2006 Depth to Water (ft)	12/1/2006 Elevation (ft. msl)
East "A"	598.93	24.55	574.38	24.68	574.25	24.72	574.21	24.22	574.71	24.81	574.12	23.53	575.40	24.77	574.16	24.23	574.70	24.68	574.25	24.78	574.15	24.74	574.19	24.53	574.40
East "B"	596.23	19.45	576.78	19.85	576.38	19.87	576.36	19.86	576.37	21.10	575.13	19.80	576.43	19.79	576.44	19.84	576.39	19.51	576.72	19.80	576.43	19.86	576.37	18.80	577.43
East "C"	598.69	19.28	579.41	19.75	578.94	19.84	578.85	19.77	578.92	20.09	578.60	19.69	579.00	19.71	578.98	19.66	579.03	19.37	579.32	20.78	577.91	20.03	578.66	19.26	579.43
East "D"	593.20	14.15	579.05	14.48	578.72	14.44	578.76	14.46	578.74	14.74	578.46	14.87	578.33	14.83	578.37	14.71	578.49	14.45	578.75	14.95	578.25	14.67	578.53	14.45	578.75
WW A	-	1.17	-	1.17	-	1.17	-	1.00	-	1.25	-	1.25	-	1.00	-	1.17	-	1.17	-	1.17	-	1.08	-	1.33	-
WW B	-	0.83	-	1.17	-	0.92	-	1.08	-	1.08	-	1.08	-	1.25	-	1.00	-	0.83	-	0.92	-	1.00	-	0.83	-
WW C	-	0.92	-	1.00	-	1.00	-	1.08	-	1.08	-	1.00	-	1.25	-	1.00	-	0.83	-	1.00	-	0.92	-	0.67	-
WW D	-	1.08	-	1.00	-	0.92	-	0.92	-	1.00	-	1.17	-	0.92	-	0.92	-	0.92	-	1.00	-	1.00	-	1.00	-
NCR-3S	579.60	2.77	576.83	3.02	576.58	3.48	576.12	2.45	577.15	3.44	576.16	dry	-	dry	-	5.85	573.75	3.67	575.93	3.06	576.54	3.51	576.09	1.35	578.25
NCR-4S	577.88	2.83	575.05	2.91	574.97	3.30	574.58	2.72	575.16	3.26	574.62	4.31	573.57	4.59	573.29	dry	-	3.51	574.37	2.97	574.91	3.15	574.73	2.44	575.44
NCR-5S	579.34	7.43	571.91	7.96	571.38	8.58	570.76	7.91	571.43	8.79	570.55	8.97	570.37	dry	-	dry	-	dry	-	7.37	571.97	6.22	573.12	4.21	575.13
NCR-13S	577.15	5.78	571.37	5.99	571.16	6.08	571.07	5.84	571.31	6.15	571.00	7.33	569.82	7.57	569.58	7.69	569.46	6.36	570.79	5.72	571.43	4.33	572.82	2.77	574.38

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/19/2007 Depth to Water (ft)	1/19/2007 Elevation (ft. msl)	2/9/2007 Depth to Water (ft)	2/9/2007 Elevation (ft. msl)	3/10/2007 Depth to Water (ft)	3/10/2007 Elevation (ft. msl)	4/2/2007 Depth to Water (ft)	4/2/2007 Elevation (ft. msl)	5/4/2007 Depth to Water (ft)	5/4/2007 Elevation (ft. msl)	6/1/2007 Depth to Water (ft)	6/1/2007 Elevation (ft. msl)	7/2/2007 Depth to Water (ft)	7/2/2007 Elevation (ft. msl)	8/2/2007 Depth to Water (ft)	8/2/2007 Elevation (ft. msl)	9/17/2007 Depth to Water (ft)	9/17/2007 Elevation (ft. msl)	10/12/2007 Depth to Water (ft)	10/12/2007 Elevation (ft. msl)	11/1/2007 Depth to Water (ft)	11/1/2007 Elevation (ft. msl)	12/1/2007 Depth to Water (ft)	12/1/2007 Elevation (ft. msl)
East "A"	598.93	24.98	573.95	24.65	574.28	24.84	574.09	24.88	574.05	25.02	573.91	25.50	573.43	24.98	573.95	24.96	573.97	25.03	573.90	24.98	573.95	25.11	573.82	25.13	573.80
East "B"	596.23	19.38	576.85	19.56	576.67	-	-	19.98	576.25	20.07	576.16	19.78	576.45	19.86	576.37	19.85	576.38	19.81	576.42	19.50	576.73	19.52	576.71	19.59	576.64
East "C"	598.69	19.51	579.18	19.81	578.88	19.71	578.98	20.10	578.59	20.17	578.52	19.87	578.82	19.99	578.70	19.97	578.72	20.19	578.50	19.78	578.91	19.93	578.76	19.97	578.72
East "D"	593.20	14.38	578.82	14.68	578.52	14.82	578.38	15.24	577.96	15.09	578.11	15.1	578.10	15.19	578.01	15.11	578.09	15.16	578.04	14.64	578.56	14.8	578.40	14.86	578.34
WW A	-	1.17	-	1.08	-	1.25	-	1.08	-	1.25	-	1.17	-	1.00	-	0.83	-	0.67	-	1.00	-	0.92	-	1.00	-
WW B	-	1.00	-	1.00	-	0.67	-	1.17	-	0.75	-	0.92	-	0.83	-	0.83	-	0.83	-	0.92	-	1.08	-	1.17	-
WW C	-	0.83	-	0.83	-	0.67	-	0.83	-	0.83	-	0.83	-	0.67	-	0.50	-	0.67	-	0.50	-	1.00	-	1.08	-
WW D	-	1.00	-	0.83	-	1.00	-	0.83	-	0.83	-	1.00	-	0.83	-	1.00	-	0.75	-	0.83	-	1.00	-	1.00	-
NCR-3S	579.60	3.04	576.56	3.75	575.85	2.70	576.90	3.26	576.34	3.50	576.10	5.89	573.71	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-4S	577.88	2.94	574.94	3.42	574.46	2.80	575.08	2.93	574.95	3.19	574.69	3.90	573.98	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-5S	579.34	5.77	573.57	6.83	572.51	6.28	573.06	6.08	573.26	6.75	572.59	8.87	570.47	10.99	568.35	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	3.85	573.30	4.51	572.64	4.39	572.76	4.25	572.90	4.81	572.34	7.01	570.14	7.44	569.71	7.70	569.45	dry	-	7.72	569.43	7.75	569.40	dry	-

Observation Point	Elevation Top of Casing (ft. msl)	1/4/2008 Depth to Water (ft)	1/4/2008 Elevation (ft. msl)	2/8/2008 Depth to Water (ft)	2/8/2008 Elevation (ft. msl)	3/7/2008 Depth to Water (ft)	3/7/2008 Elevation (ft. msl)	4/4/2008 Depth to Water (ft)	4/4/2008 Elevation (ft. msl)	5/8/2008 Depth to Water (ft)	5/8/2008 Elevation (ft. msl)	6/5/2008 Depth to Water (ft)	6/5/2008 Elevation (ft. msl)	7/1/2008 Depth to Water (ft)	7/1/2008 Elevation (ft. msl)	8/7/2008 Depth to Water (ft)	8/7/2008 Elevation (ft. msl)	9/11/2008 Depth to Water (ft)	9/11/2008 Elevation (ft. msl)	10/9/2008 Depth to Water (ft)	10/9/2008 Elevation (ft. msl)	11/3/2008 Depth to Water (ft)	11/3/2008 Elevation (ft. msl)	12/5/2008 Depth to Water (ft)	12/5/2008 Elevation (ft. msl)
East "A"	598.93	25.31	573.62	25.22	573.71	25.27	573.66	25.37	573.56	25.39	573.54	25.46	573.47	25.49	573.44	25.44	573.49	25.50	573.43	25.41	573.52	25.39	573.54	25.41	573.52
East "B"	596.23	19.95	576.28	19.65	576.58	19.90	576.33	19.70	576.53	19.71	576.52	19.96	576.27	19.91	576.32	19.87	576.36	20.04	576.19	19.60	576.63	19.83	576.40	19.99	576.24
East "C"	598.69	20.30	578.39	19.97	578.72	20.26	578.43	19.85	578.84	19.99	578.70	20.18	578.51	20.20	578.49	20.13	578.56	20.44	578.25	20.03	578.66	20.20	578.49	20.20	578.49
East "D"	593.20	15.15	578.05	14.66	578.54	14.89	578.31	15.11	578.09	15.02	578.18	15.2	578.00	15.4	577.80	15.34	577.86	15.51	577.69	15.16	578.04	15.4	577.80	15.13	578.07
WW A	-	1.00	-	0.83	-	1.08	-	0.92	-	1.08	-	1.00	-	0.83	-	0.83	-	0.83	-	0.83	-	1.00	-	1.00	-
WW B	-	0.83	-	0.92	-	1.00	-	1.00	-	0.83	-	0.83	-	0.83	-	0.83	-	0.67	-	0.75	-	0.67	-	0.92	-
WW C	-	1.00	-	0.83	-	0.75	-	0.50	-	0.75	-	0.83	-	0.67	-	0.83	-	0.42	-	0.50	-	0.58	-	0.83	-
WW D	-	1.08	-	1.00	-	0.83	-	0.33	-	0.50	-	0.50	-	0.59	-	0.67	-	0.50	-	0.50	-	0.50	-	0.50	-
NCR-3S	579.60	3.46	576.14	3.29	576.31	3.56	576.04	3.21	576.39	4.17	575.43	dry	-	dry	-	3.81	575.79	dry	-	5.44	574.16	3.81	-	3.22	576.38
NCR-4S	577.88	3.06	574.82	2.82	575.06	2.89	574.99	2.59	575.29	2.91	574.97	3.61	574.27	4.53	573.35	3.43	574.45	4.27	573.61	3.90	573.98	3.17	574.71	3.52	574.36
NCR-5S	579.34	10.80	568.54	6.26	573.08	7.11	572.23	5.84	573.50	7.45	571.89	9.00	570.34	10.24	569.10	dry	-	dry	-	dry	-	7.75	571.59	6.24	573.10
NCR-13S	577.15	4.64	572.51	4.30	572.85	4.74	572.41	4.16	572.99	5.31	571.84	6.92	570.23	7.47	569.68	7.26	569.89	7.54	569.61	7.48	569.67	5.75	571.40	4.53	572.62

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/9/2009		2/5/2009		3/5/2009		4/3/2009		5/1/2009		6/4/2009		7/10/2009		8/12/2009		9/5/2009		10/9/2009		11/8/2009		12/4/2009	
		Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)
East "A"	598.93	25.34	573.59	25.54	573.39	25.60	573.33	25.42	573.51	25.64	573.29	25.66	573.27	25.62	573.31	25.51	573.42	25.52	573.41	25.45	573.48	25.63	573.30	25.53	573.40
East "B"	596.23	19.85	576.38	20.05	576.18	19.94	576.29	19.44	576.79	19.99	576.24	20.00	576.23	20.15	576.08	19.77	576.46	19.83	576.40	19.78	576.45	19.85	576.38	19.66	576.57
East "C"	598.69	20.22	578.47	20.56	578.13	20.20	578.49	19.36	579.33	20.35	578.34	20.55	578.14	20.51	578.18	20.33	578.36	20.30	578.39	20.04	578.65	20.45	578.24	20.30	578.39
East "D"	593.20	14.85	578.35	15.25	577.95	15.54	577.66	14.81	578.39	15.65	577.55	15.75	577.45	15.62	577.58	15.51	577.69	15.69	577.51	15.22	577.98	15.45	577.75	18.98	574.22
WW A	-	1.33	-	0.83	-	0.83	-	1.00	-	0.83	-	0.83	-	0.67	-	0.50	-	0.75	-	1.00	-	0.75	-	0.75	-
WW B	-	1.00	-	0.67	-	1.00	-	0.92	-	1.00	-	0.67	-	0.83	-	0.83	-	0.67	-	1.00	-	1.00	-	0.42	-
WW C	-	0.75	-	0.67	-	0.50	-	0.50	-	0.50	-	0.58	-	0.50	-	0.58	-	0.50	-	0.42	-	0.33	-	0.83	-
WW D	-	0.67	-	1.00	-	0.50	-	0.58	-	0.50	-	0.50	-	0.42	-	0.67	-	0.50	-	0.67	-	0.58	-	0.75	-
NCR-3S	579.60	2.97	576.63	4.11	575.49	3.55	576.05	2.20	577.40	3.48	576.12	dry	-	dry	-	3.66	575.94	dry	-	4.52	575.08	3.74	575.86	2.57	577.03
NCR-4S	577.88	2.90	574.98	3.19	574.69	3.36	574.52	2.39	575.49	2.90	574.98	dry	-	4.65	573.23	2.98	574.90	dry	-	3.49	574.39	3.15	574.73	2.78	575.10
NCR-5S	579.34	6.33	573.01	7.42	571.92	6.78	572.56	8.00	571.34	6.46	572.88	6.87	572.47	10.10	569.24	7.47	571.87	9.88	569.46	dry	-	9.78	569.56	5.92	573.42
NCR-13S	577.15	4.40	572.75	5.09	572.06	5.01	572.14	4.04	573.11	4.77	572.38	5.95	571.20	7.47	569.68	5.92	571.23	7.45	569.70	dry	-	6.16	570.99	4.27	572.88

Observation Point	Elevation Top of Casing (ft. msl)	1/7/2010		2/1/2010		3/11/2010		4/1/2010		5/6/2010		6/1/2010		7/2/2010		8/12/2010		9/16/2010		10/8/2010		11/5/2010		12/2/2010	
		Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)
East "A"	598.93	25.62	573.31	25.72	573.21	25.77	573.16	25.81	573.12	25.79	573.14	25.73	573.20	25.78	573.15	25.74	573.19	25.78	573.15	25.77	573.16	25.82	573.11	25.88	573.05
East "B"	596.23	19.78	576.45	19.97	576.26	19.83	576.40	19.83	576.40	19.79	576.44	19.83	576.40	19.99	576.24	19.84	576.39	19.87	576.36	19.70	576.53	19.52	576.71	19.52	576.71
East "C"	598.69	20.24	578.45	20.46	578.23	20.25	578.44	20.31	578.38	20.21	578.48	20.24	578.45	20.65	578.04	20.22	578.47	20.19	578.50	20.32	578.37	19.98	578.71	20.40	578.29
East "D"	593.20	15.25	577.95	15.42	577.78	15.38	577.82	15.48	577.72	15.49	577.71	15.59	577.61	15.7	577.50	15.65	577.55	15.65	577.55	15.43	577.77	15.53	577.67	15.22	577.98
WW A	-	0.83	-	0.83	-	0.83	-	0.67	-	0.58	-	0.83	-	0.67	-	0.75	-	0.67	-	0.67	-	0.83	-	0.67	-
WW B	-	0.58	-	0.58	-	0.75	-	0.50	-	0.50	-	0.50	-	0.42	-	0.50	-	0.50	-	0.50	-	0.42	-	0.42	-
WW C	-	0.33	-	0.50	-	0.50	-	0.50	-	0.50	-	0.58	-	0.67	-	0.58	-	0.58	-	0.42	-	0.58	-	0.67	-
WW D	-	0.67	-	0.58	-	0.92	-	0.58	-	0.67	-	0.50	-	0.50	-	0.50	-	0.50	-	0.58	-	0.50	-	0.50	-
NCR-3S	579.60	3.19	576.41	3.48	576.12	2.06	577.54	3.30	576.30	4.61	574.99	3.98	575.62	dry	-	dry	-	dry	-	dry	-	dry	-	2.78	576.82
NCR-4S	577.88	2.85	575.03	frozen	frozen	2.60	575.28	2.94	574.94	2.84	575.04	2.86	575.02	dry	-	dry	-	dry	-	dry	-	dry	-	2.91	574.97
NCR-5S	579.34	6.45	572.89	6.33	573.01	5.81	573.53	6.18	573.16	7.93	571.41	7.75	571.59	9.11	570.23	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	4.64	572.51	4.65	572.50	3.68	573.47	4.71	572.44	5.10	572.05	4.97	572.18	7.40	569.75	dry	-	dry	-	dry	-	dry	-	5.82	571.33

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/7/2011 Depth to Water (ft)	1/7/2011 Elevation (ft. msl)	2/9/2011 Depth to Water (ft)	2/9/2011 Elevation (ft. msl)	3/3/2011 Depth to Water (ft)	3/3/2011 Elevation (ft. msl)	4/9/2011 Depth to Water (ft)	4/9/2011 Elevation (ft. msl)	5/6/2011 Depth to Water (ft)	5/6/2011 Elevation (ft. msl)	6/3/2011 Depth to Water (ft)	6/3/2011 Elevation (ft. msl)	7/15/2011 Depth to Water (ft)	7/15/2011 Elevation (ft. msl)	8/5/2011 Depth to Water (ft)	8/5/2011 Elevation (ft. msl)	9/5/2011 Depth to Water (ft)	9/5/2011 Elevation (ft. msl)	10/7/2011 Depth to Water (ft)	10/7/2011 Elevation (ft. msl)	11/3/2011 Depth to Water (ft)	11/3/2011 Elevation (ft. msl)	12//2011 Depth to Water (ft)	12//2011 Elevation (ft. msl)
East "A"	598.93	25.88	573.05	26.05	572.88	26.12	572.81	26.13	572.80	26.15	572.78	26.22	572.71	25.78	573.15	26.44	573.42	26.54	573.41	26.10	572.83	26.05	572.88	26.04	572.89
East "B"	596.23	19.43	576.80	19.95	576.28	20.17	576.06	20.12	576.11	20.31	575.92	19.98	576.25	20.00	576.23	19.99	576.46	20.05	576.40	19.10	577.13	19.11	577.12	15.70	580.53
East "C"	598.69	19.83	578.86	20.45	578.24	21.01	577.68	20.65	578.04	20.37	578.32	20.82	577.87	20.65	578.04	20.75	578.36	20.95	578.39	20.86	577.83	20.45	578.24	20.74	577.95
East "D"	593.20	14.99	578.21	15.21	577.99	15.8	577.40	15.65	577.55	15.75	577.45	15.92	577.28	15.71	577.49	15.88	577.69	15.96	577.51	15.9	577.30	15.73	577.47	15.44	577.76
WW A	-	0.67	-	0.50	-	0.67	-	1.00	-	0.83	-	0.67	-	0.58	-	0.58	-	0.83	-	0.67	-	0.83	-	0.83	-
WW B	-	0.33	-	0.42	-	0.50	-	0.50	-	0.50	-	0.42	-	0.50	-	0.50	-	0.50	-	0.50	-	0.50	-	0.42	-
WW C	-	0.33	-	0.33	-	1..67	-	1.00	-	0.67	-	0.75	-	0.83	-	0.83	-	0.92	-	0.83	-	0.83	-	0.75	-
WW D	-	0.83	-	0.58	-	0.58	-	0.58	-	0.50	-	0.50	-	0.50	-	0.50	-	0.83	-	0.58	-	0.50	-	0.42	-
NCR-3S	579.60	3.56	576.04	3.90	575.70	3.39	576.21	3.48	576.12	3.31	576.29	3.61	575.99	dry	-	dry	-	dry	-	5.37	574.23	3.76	575.84	3.20	576.40
NCR-4S	577.88	3.04	574.84	2.90	574.98	2.65	575.23	2.91	574.97	2.90	574.98	3.37	574.51	dry	-	dry	-	dry	-	dry	-	3.47	574.41	2.79	575.09
NCR-5S	579.34	7.68	571.66	7.33	572.01	5.95	573.39	6.23	573.11	6.21	573.13	7.16	572.18	dry	-	dry	-	dry	-	dry	-	dry	-	9.90	569.44
NCR-13S	577.15	4.60	572.55	4.77	572.38	4.40	572.75	4.51	572.64	4.52	572.63	5.20	571.95	dry	-	dry	-	dry	-	dry	-	5.67	571.48	4.23	572.92

Observation Point	Elevation Top of Casing (ft. msl)	1/5/2012 Depth to Water (ft)	1/5/2012 Elevation (ft. msl)	2/6/2012 Depth to Water (ft)	2/6/2012 Elevation (ft. msl)	3/1/2012 Depth to Water (ft)	3/1/2012 Elevation (ft. msl)	4/12/2012 Depth to Water (ft)	4/12/2012 Elevation (ft. msl)	5/1/2012 Depth to Water (ft)	5/1/2012 Elevation (ft. msl)	6/4/2012 Depth to Water (ft)	6/4/2012 Elevation (ft. msl)	7/13/2012 Depth to Water (ft)	7/13/2012 Elevation (ft. msl)	8/2/2012 Depth to Water (ft)	8/2/2012 Elevation (ft. msl)	9/4/2012 Depth to Water (ft)	9/4/2012 Elevation (ft. msl)	10/8/2012 Depth to Water (ft)	10/8/2012 Elevation (ft. msl)	11/12/2012 Depth to Water (ft)	11/12/2012 Elevation (ft. msl)	12/10/2012 Depth to Water (ft)	12/10/2012 Elevation (ft. msl)
East "A"	598.93	26.12	572.81	26.25	572.68	26.22	572.71	26.31	572.62	26.33	572.60	26.24	572.69	26.40	572.53	26.34	572.59	26.35	572.58	26.41	572.52	26.45	572.48	26.42	572.51
East "B"	596.23	15.56	580.67	15.80	580.43	15.82	580.41	16.01	580.22	15.99	580.24	18.53	577.70	19.90	576.33	16.54	579.69	19.99	576.24	20.11	576.12	19.12	577.11	16.03	580.20
East "C"	598.69	20.45	578.24	20.55	578.14	20.28	578.41	20.85	577.84	20.64	578.05	20.54	578.15	20.82	577.87	20.63	578.06	20.60	578.09	20.85	577.84	20.70	577.99	20.20	578.49
East "D"	593.20	15.51	577.69	16.61	576.59	15.4	577.80	15.71	577.49	17.77	575.43	15.73	577.47	16.15	577.05	15.97	577.23	16	577.20	15.9	577.30	15.94	577.26	15.46	577.74
WW A	-	0.50	-	0.75	-	0.67	-	0.75	-	1.25	-	0.67	-	0.58	-	0.50	-	0.67	-	0.92	-	0.50	-	1.25	-
WW B	-	0.42	-	0.42	-	0.42	-	0.42	-	0.42	-	0.50	-	0.42	-	0.83	-	0.83	-	0.42	-	0.42	-	0.50	-
WW C	-	0.83	-	0.83	-	0.67	-	0.75	-	0.83	-	1.00	-	0.75	-	0.83	-	0.83	-	0.50	-	0.50	-	0.67	-
WW D	-	0.42	-	0.58	-	0.50	-	0.50	-	0.58	-	0.58	-	0.50	-	0.42	-	0.58	-	0.50	-	0.50	-	0.42	-
NCR-3S	579.60	3.50	576.10	3.60	576.00	3.50	576.10	4.48	575.12	3.75	575.85	dry	-	dry	-	dry	-	dry	-	dry	-	4.27	575.33	2.56	577.04
NCR-4S	577.88	2.96	574.92	2.85	575.03	2.59	575.29	3.20	574.68	2.58	575.30	3.17	574.71	dry	-	dry	-	dry	-	dry	-	3.40	574.48	3.55	574.33
NCR-5S	579.34	6.51	572.83	6.44	572.90	6.41	572.93	7.41	571.93	6.80	572.54	9.45	569.89	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	4.63	572.52	4.62	572.53	4.63	572.52	5.11	572.04	4.60	572.55	7.42	569.73	dry	-	dry	-	dry	-	dry	-	6.32	570.83	4.36	572.79

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/14/2013		2/4/2013		3/5/2013		4/5/2013		5/7/2013		6/5/2013		7/5/2013		8/1/2013		9/3/2013		10/4/2013		11/15/2013		12/9/2013	
		Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)
East "A"	598.93	26.47	572.46	26.51	572.42	26.61	572.32	26.64	572.29	26.65	572.28	26.65	572.28	26.61	572.32	26.42	572.51	26.32	572.61	26.36	572.57	26.37	572.56	26.54	572.39
East "B"	596.23	16.05	580.18	20.05	578.88	15.83	583.10	15.82	583.11	16.06	582.87	18.09	580.84	15.85	583.08	15.85	583.08	18.99	579.94	15.93	583.00	15.88	583.05	16.10	582.83
East "C"	598.69	20.91	577.78	20.69	578.24	20.84	578.09	20.79	578.14	20.84	578.09	20.98	577.95	20.92	578.01	20.51	578.42	20.59	578.34	20.68	578.25	20.65	578.28	21.21	577.72
East "D"	593.20	15.50	577.70	15.66	583.27	15.61	583.32	15.85	583.08	16.09	582.84	16.11	582.82	16.19	582.74	16.10	582.83	15.90	583.03	16.01	582.92	15.98	582.95	16.11	582.82
WW A	-	0.58	-	0.50	-	0.83	-	1.00	-	0.50	-	0.83	-	1.00	-	1.08	-	1.00	-	0.75	-	1.00	-	0.92	-
WW B	-	0.50	-	0.42	-	0.42	-	0.50	-	0.42	-	0.33	-	0.42	-	0.42	-	0.33	-	0.50	-	0.50	-	0.50	-
WW C	-	0.33	-	0.67	-	0.75	-	0.67	-	0.42	-	0.50	-	0.42	-	0.58	-	0.33	-	0.42	-	0.50	-	0.67	-
WW D	-	0.83	-	0.42	-	0.58	-	0.50	-	0.42	-	0.33	-	0.5	-	0.4	-	0.33	-	0.42	-	1.00	-	0.50	-
NCR-3S	579.60	3.06	576.54	3.80	595.13	3.75	595.18	4.25	594.68	5.10	593.83	4.21	594.72	5.18	593.75	dry	-	dry	-	dry	-	3.69	595.24	3.80	595.13
NCR-4S	577.88	2.51	575.37	2.95	595.98	dry	-	3.16	595.77	3.75	595.18	3.14	595.79	3.40	595.53	3.31	595.62	4.20	594.73	dry	-	3.00	595.93	3.05	595.88
NCR-5S	579.34	5.56	573.78	6.65	592.28	6.58	592.35	7.25	591.68	7.65	591.28	7.63	591.30	8.58	590.35	9.42	589.51	10.37	588.56	dry	-	6.46	592.47	6.58	592.35
NCR-13S	577.15	4.01	573.14	4.94	593.99	5.06	593.87	5.81	593.12	6.78	592.15	5.33	593.60	7.34	591.59	7.20	591.73	dry	-	dry	-	4.76	594.17	4.81	594.12

Observation Point	Elevation Top of Casing (ft. msl)	1/7/2014		2/20/2014		3/11/2014		4/10/2014		5/6/2014		6/2/2014		7/2/2014		8/7/2014		9/8/2014		10/4/2014		11/13/2014		12/10/2014	
		Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)	Depth to Water (ft)	Elevation (ft. msl)
East "A"	598.93	26.12	572.81	26.60	572.33	26.20	572.73	26.48	572.45	26.60	572.33	26.66	572.27	26.56	572.37	26.54	572.39	26.52	572.41	26.55	572.38	26.71	572.22	26.77	572.16
East "B"	596.23	15.56	580.67	15.48	580.75	20.05	576.18	15.80	580.43	20.05	576.18	15.80	580.43	15.94	580.29	15.90	580.33	19.21	577.02	20.13	576.10	15.95	580.28	16.13	580.10
East "C"	598.69	20.69	578.00	20.80	577.89	20.40	578.29	20.64	578.05	20.90	577.79	20.81	577.88	20.72	577.97	20.98	577.71	21.05	577.64	20.42	578.27	20.93	577.76	20.87	577.82
East "D"	593.20	15.41	577.79	15.8	577.40	15.7	577.50	15.71	577.49	16.02	577.18	15.83	577.37	15.7	577.50	15.78	577.42	15.95	577.25	15.25	577.95	15.69	577.51	15.42	577.78
WW A	-	0.83	-	0.42	-	0.50	-	1.00	-	1.25	-	1.08	-	0.83	-	1.00	-	0.83	-	0.75	-	0.75	-	1.00	-
WW B	-	0.42	-	0.50	-	0.50	-	0.42	-	0.33	-	0.42	-	0.58	-	0.42	-	0.42	-	0.42	-	0.33	-	0.33	-
WW C	-	0.42	-	0.50	-	0.50	-	0.50	-	0.50	-	0.50	-	0.58	-	0.50	-	0.50	-	0.58	-	0.42	-	0.50	-
WW D	-	0.42	-	0.58	-	0.58	-	0.33	-	0.42	-	0.33	-	0.50	-	0.50	-	0.58	-	0.50	-	0.50	-	0.42	-
NCR-3S	579.60	3.55	576.05	4.40	575.20	3.50	576.10	3.55	576.05	4.14	575.46	4.91	574.69	dry	-	dry	-	dry	-	dry	-	dry	-	4.80	574.80
NCR-4S	577.88	2.96	574.92	2.90	574.98	3.10	574.78	2.82	575.06	3.25	574.63	3.30	574.58	3.80	574.08	dry	-	dry	-	dry	-	dry	-	4.70	573.18
NCR-5S	579.34	6.48	572.86	7.70	571.64	7.50	571.84	5.90	573.44	6.94	572.40	7.90	571.44	10.02	569.32	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	4.10	573.05	6.30	570.85	4.20	572.95	4.22	572.93	5.34	571.81	6.78	570.37	7.46	569.69	dry	-	dry	-	dry	-	dry	-	dry	-

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/3/2015 Depth to Water (ft)	1/3/2015 Elevation (ft. msl)	2/28/2015 Depth to Water (ft)	2/28/2015 Elevation (ft. msl)	3/22/2015 Depth to Water (ft)	3/22/2015 Elevation (ft. msl)	4/10/2015 Depth to Water (ft)	4/10/2015 Elevation (ft. msl)	5/13/2015 Depth to Water (ft)	5/13/2015 Elevation (ft. msl)	6/2/2015 Depth to Water (ft)	6/2/2015 Elevation (ft. msl)	7/3/2015 Depth to Water (ft)	7/3/2015 Elevation (ft. msl)	8/13/2015 Depth to Water (ft)	8/13/2015 Elevation (ft. msl)	9/8/2015 Depth to Water (ft)	9/8/2015 Elevation (ft. msl)	10/8/2015 Depth to Water (ft)	10/8/2015 Elevation (ft. msl)	11/14/2015 Depth to Water (ft)	11/14/2015 Elevation (ft. msl)	12/1/2015 Depth to Water (ft)	12/1/2015 Elevation (ft. msl)
East "A"	598.93	26.80	572.13	26.12	572.81	26.00	572.93	26.89	572.04	26.97	571.96	23.93	575.00	29.05	569.88	26.85	572.08	26.75	572.18	26.80	572.13	26.79	572.14	26.91	572.02
East "B"	596.23	16.01	580.22	15.56	580.67	20.05	576.18	15.80	580.43	20.05	576.18	Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed	
East "C"	598.69	21.06	577.63	20.45	578.24	20.50	578.19	20.45	578.24	21.27	577.42	21.16	577.53	21.02	577.67	21.13	577.56	20.98	577.71	21.00	577.69	21.05	577.64	20.81	577.88
East "D"	593.20	15.8	577.40	15.51	577.69	15.65	577.55	15.82	577.38	17.4	575.80	19.51	573.69	Oil-like noted		Oil-like noted		37.65	555.55	17.32	575.88	16.08	577.12	16.25	576.95
WW A	-	0.92	-	0.50	-	0.58	-	1.08	-	0.67	-	0.50	-	1.00	-	0.83	-	0.83	-	0.83	-	0.83	-	0.67	-
WW B	-	0.33	-	0.42	-	0.50	-	0.50	-	4.50	-	0.58	-	0.42	-	0.33	-	0.42	-	1.00	-	0.42	-	0.33	-
WW C	-	0.50	-	0.83	-	0.50	-	0.42	-	0.42	-	0.42	-	0.50	-	0.50	-	0.42	-	0.33	-	0.50	-	0.50	-
WW D	-	0.33	-	0.42	-	0.58	-	2.08	-	0.42	-	0.33	-	0.42	-	0.42	-	0.33	-	0.50	-	0.42	-	0.33	-
NCR-3S	579.60	4.10	575.50	3.50	576.10	3.90	575.70	2.91	576.69	4.71	574.89	dry	-	dry	-	dry	-	dry	-	dry	-	4.15	575.45	5.09	574.51
NCR-4S	577.88	3.80	574.08	2.96	574.92	2.10	575.78	1.60	576.28	3.40	574.48	3.10	574.78	dry	-	dry	-	dry	-	dry	-	3.48	574.40	3.72	574.16
NCR-5S	579.34	dry	-	6.51	572.83	7.40	571.94	5.46	573.88	8.43	570.91	9.51	569.83	9.52	569.82	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	6.48	570.67	4.63	572.52	4.10	573.05	3.50	573.65	7.00	570.15	7.54	569.61	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-

Observation Point	Elevation Top of Casing (ft. msl)	1/7/2016 Depth to Water (ft)	1/7/2016 Elevation (ft. msl)	2/2/2016 Depth to Water (ft)	2/2/2016 Elevation (ft. msl)	3/1/2016 Depth to Water (ft)	3/1/2016 Elevation (ft. msl)	4/5/2016 Depth to Water (ft)	4/5/2016 Elevation (ft. msl)	5/4/2016 Depth to Water (ft)	5/4/2016 Elevation (ft. msl)	6/6/2016 Depth to Water (ft)	6/6/2016 Elevation (ft. msl)	7/6/2016 Depth to Water (ft)	7/6/2016 Elevation (ft. msl)	8/9/2016 Depth to Water (ft)	8/9/2016 Elevation (ft. msl)	9/7/2016 Depth to Water (ft)	9/7/2016 Elevation (ft. msl)	10/4/2016 Depth to Water (ft)	10/4/2016 Elevation (ft. msl)	11/2/2016 Depth to Water (ft)	11/2/2016 Elevation (ft. msl)	12/7/2016 Depth to Water (ft)	12/7/2016 Elevation (ft. msl)
East "A"	598.93	26.84	572.09	26.71	572.22	26.50	572.43	26.81	572.12	26.40	572.53	26.79	572.14	26.89	572.04	26.92	572.01	26.91	572.02	26.91	572.02	26.77	572.16	27.02	571.91
East "B"	596.23	Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed	
East "C"	598.69	21.10	577.59	20.32	578.37	21.31	577.38	12.85	585.84	20.90	577.79	20.52	578.17	20.91	577.78	21.10	577.59	21.03	577.66	22.33	576.36	22.21	576.48	20.96	577.73
East "D"	593.20	16.21	576.99	15.41	577.79	21.22	571.98	16.64	576.56	16.3	576.90	17.22	575.98	15.86	577.34	15.93	577.27	15.96	577.24	16.15	577.05	16.08	577.12	15.61	577.59
WW A	-	3.50	-	2.50	-	3.50	-	2.42	-	2.67	-	2.58	-	3.58	-	3..08	-	2.67	-	2.75	-	2.92	-	2.58	-
WW B	-	1.67	-	1.40	-	1.50	-	1.42	-	2.17	-	1.67	-	dry	-	1.08	-	1.58	-	1.75	-	2.08	-	3.08	-
WW C	-	1.50	-	1.75	-	1.75	-	1.75	-	1.25	-	1.58	-	1.67	-	2.08	-	2.08	-	2.17	-	2.33	-	2.25	-
WW D	-	1.17	-	1.17	-	1.17	-	1.17	-	1.17	-	1.50	-	1.25	-	1.67	-	2.08	-	1.92	-	2.17	-	2.50	-
NCR-3S	579.60	5.93	573.67	4.51	575.09	4.45	575.15	4.85	574.75	3.61	575.99	5.92	573.68	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-4S	577.88	3.45	574.43	3.82	574.06	3.65	574.23	4.10	573.78	2.80	575.08	4.21	573.67	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-5S	579.34	dry	-	7.21	572.13	6.33	573.01	4.40	574.94	6.35	572.99	10.14	569.20	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	dry	-	5.21	571.94	4.60	572.55	5.60	571.55	5.40	571.75	7.42	569.73	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/4/2017 Depth to Water (ft)	1/4/2017 Elevation (ft. msl)	2/6/2017 Depth to Water (ft)	2/6/2017 Elevation (ft. msl)	3/6/2017 Depth to Water (ft)	3/6/2017 Elevation (ft. msl)	4/5/2017 Depth to Water (ft)	4/5/2017 Elevation (ft. msl)	5/8/2017 Depth to Water (ft)	5/8/2017 Elevation (ft. msl)	6/7/2017 Depth to Water (ft)	6/7/2017 Elevation (ft. msl)	7/10/2017 Depth to Water (ft)	7/10/2017 Elevation (ft. msl)	8/15/2017 Depth to Water (ft)	8/15/2017 Elevation (ft. msl)	9/6/2017 Depth to Water (ft)	9/6/2017 Elevation (ft. msl)	10/4/2017 Depth to Water (ft)	10/4/2017 Elevation (ft. msl)	11/8/2017 Depth to Water (ft)	11/8/2017 Elevation (ft. msl)	12/13/2017 Depth to Water (ft)	12/13/2017 Elevation (ft. msl)
East "A"	598.93	27.01	571.92	26.31	572.62	26.49	572.44	27.14	571.79	27.08	571.85	27.11	571.82	27.08	571.85	27.94	570.99	26.91	572.02	27.01	571.92	26.98	571.95	26.92	572.01
East "B"	596.23	Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed	
East "C"	598.69	20.57	578.12	17.55	581.14	17.80	580.89	21.31	577.38	21.41	577.28	21.38	577.31	18.51	580.18	18.36	580.33	21.33	577.36	21.62	577.07	21.49	577.20	21.38	577.31
East "D"	593.20	15.24	577.96	15.78	577.42	16.11	577.09	15.82	577.38	15.98	577.22	16.05	577.15	16.09	577.11	15.98	577.22	15.81	577.39	15.89	577.31	16.11	577.09	15.64	577.56
WW A	-	3.33	-	2.25	-	2.67	-	3.33	-	3.17	-	2.17	-	2.83	-	3.33	-	3.58	-	2.92	-	3.17	-	2.92	-
WW B	-	3.17	-	2.08	-	1.33	-	2.92	-	3.08	-	3.25	-	2.92	-	3.25	-	3.25	-	2.08	-	2.92	-	2.75	-
WW C	-	2.08	-	2.67	-	2.92	-	3.25	-	2.92	-	2.92	-	2.75	-	2.75	-	3.00	-	2.75	-	3.33	-	3.33	-
WW D	-	2.92	-	2.08	-	3.42	-	8.17	-	7.08	-	3.08	-	3.17	-	2.92	-	2.75	-	3.33	-	3.42	-	3.17	-
NCR-3S	579.60	3.93	575.67	4.24	575.36	4.43	575.17	3.98	575.62	4.10	575.50	6.62	572.98	4.86	574.74	5.36	574.24	5.84	573.76	dry	-	4.31	575.29	4.57	575.03
NCR-4S	577.88	3.50	574.38	3.32	574.56	3.43	574.45	3.40	574.48	3.45	574.43	3.47	574.41	3.89	573.99	3.88	574.00	3.79	574.09	4.84	573.04	3.23	574.65	3.43	574.45
NCR-5S	579.34	dry	-	dry	-	6.79	572.55	5.85	573.49	6.19	573.15	dry	-	dry	-	10.21	569.13	10.28	569.06	dry	-	6.15	573.19	6.98	572.36
NCR-13S	577.15	dry	-	5.23	571.92	4.89	572.26	4.16	572.99	4.22	572.93	6.85	570.30	7.95	569.20	dry	-	7.76	569.39	dry	-	4.34	572.81	4.90	572.25

Observation Point	Elevation Top of Casing (ft. msl)	1/10/2018 Depth to Water (ft)	1/10/2018 Elevation (ft. msl)	2/13/2018 Depth to Water (ft)	2/13/2018 Elevation (ft. msl)	3/6/2018 Depth to Water (ft)	3/6/2018 Elevation (ft. msl)	4/16/2018 Depth to Water (ft)	4/16/2018 Elevation (ft. msl)	5/14/2018 Depth to Water (ft)	5/14/2018 Elevation (ft. msl)	6/7/2018 Depth to Water (ft)	6/7/2018 Elevation (ft. msl)	7/17/2018 Depth to Water (ft)	7/17/2018 Elevation (ft. msl)	8/9/2018 Depth to Water (ft)	8/9/2018 Elevation (ft. msl)	9/12/2018 Depth to Water (ft)	9/12/2018 Elevation (ft. msl)	10/9/2018 Depth to Water (ft)	10/9/2018 Elevation (ft. msl)	11/14/2018 Depth to Water (ft)	11/14/2018 Elevation (ft. msl)	12/5/2018 Depth to Water (ft)	12/5/2018 Elevation (ft. msl)
East "A"	598.93	26.45	572.48	26.48	572.45	27.13	571.80	27.24	571.69	28.20	570.73	27.12	571.81	28.18	570.75	27.04	571.89	27.09	571.84	27.09	571.84	27.17	571.76	27.09	571.84
East "B"	596.23	Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed	
East "C"	598.69	21.02	577.67	19.87	578.82	21.24	577.45	20.99	577.70	22.26	576.43	21.54	577.15	22.25	576.44	21.14	577.55	21.68	577.01	21.60	577.09	21.90	576.79	21.16	577.53
East "D"	593.20	15.41	577.79	14.41	578.79	15.93	577.27	15.76	577.44	17.01	576.19	16.02	577.18	16.99	576.21	15.77	577.43	16.14	577.06	16.19	577.01	15.99	577.21	16.01	577.19
WW A	-	2.50	-	3.08	-	3.42	-	3.08	-	2.50	-	2.17	-	3.08	-	2.33	-	3.08	-	2.92	-	2.83	-	3.33	-
WW B	-	3.08	-	2.50	-	2.92	-	2.58	-	2.17	-	2.75	-	2.92	-	2.50	-	3.25	-	2.83	-	3.08	-	2.50	-
WW C	-	3.33	-	3.33	-	3.08	-	5.75	-	2.33	-	3.08	-	3.17	-	2.92	-	2.83	-	3.17	-	3.08	-	2.25	-
WW D	-	2.92	-	2.92	-	3.25	-	5.83	-	2.50	-	2.83	-	2.92	-	3.08	-	3.25	-	3.00	-	3.33	-	3.67	-
NCR-3S	579.60	4.69	574.91	4.43	575.17	4.42	575.18	3.06	576.54	4.65	574.95	dry	-	dry	-	dry	-	dry	-	dry	-	4.47	575.13	4.16	575.44
NCR-4S	577.88	3.52	574.36	3.19	574.69	3.13	574.75	3.75	574.13	4.29	573.59	3.70	574.18	dry	-	dry	-	dry	-	dry	-	3.87	574.01	3.34	574.54
NCR-5S	579.34	7.11	572.23	7.18	-	6.76	572.58	4.97	574.37	7.49	571.85	9.35	569.99	dry	-	dry	-	dry	-	dry	-	dry	-	dry	-
NCR-13S	577.15	5.27	571.88	5.32	571.83	5.04	572.11	3.04	574.11	5.94	571.21	7.42	569.73	dry	-	dry	-	dry	-	dry	-	dry	-	5.22	571.93

Notes:

- = measurment not collected.

dry = no water in well.

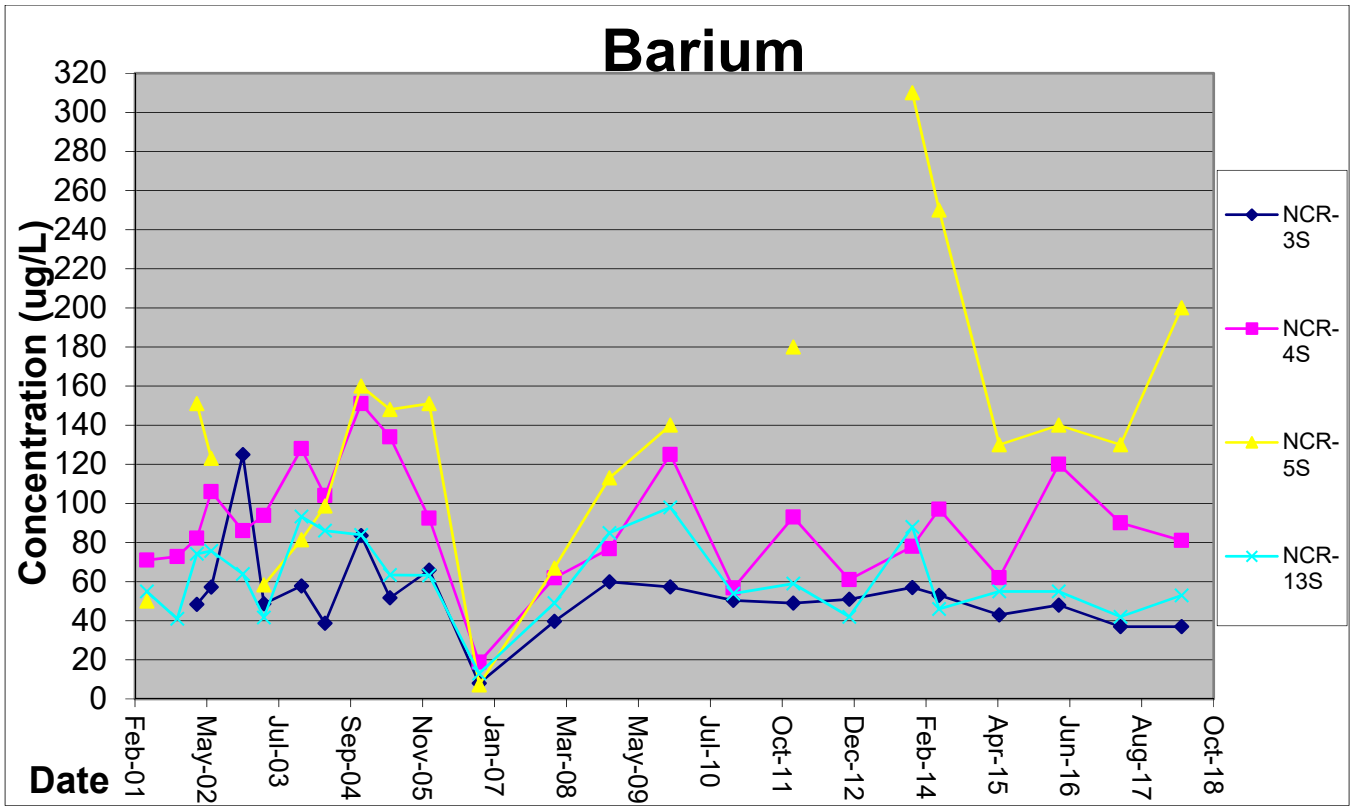


Figure 2.1A: Plot of Historical Total Barium Concentration

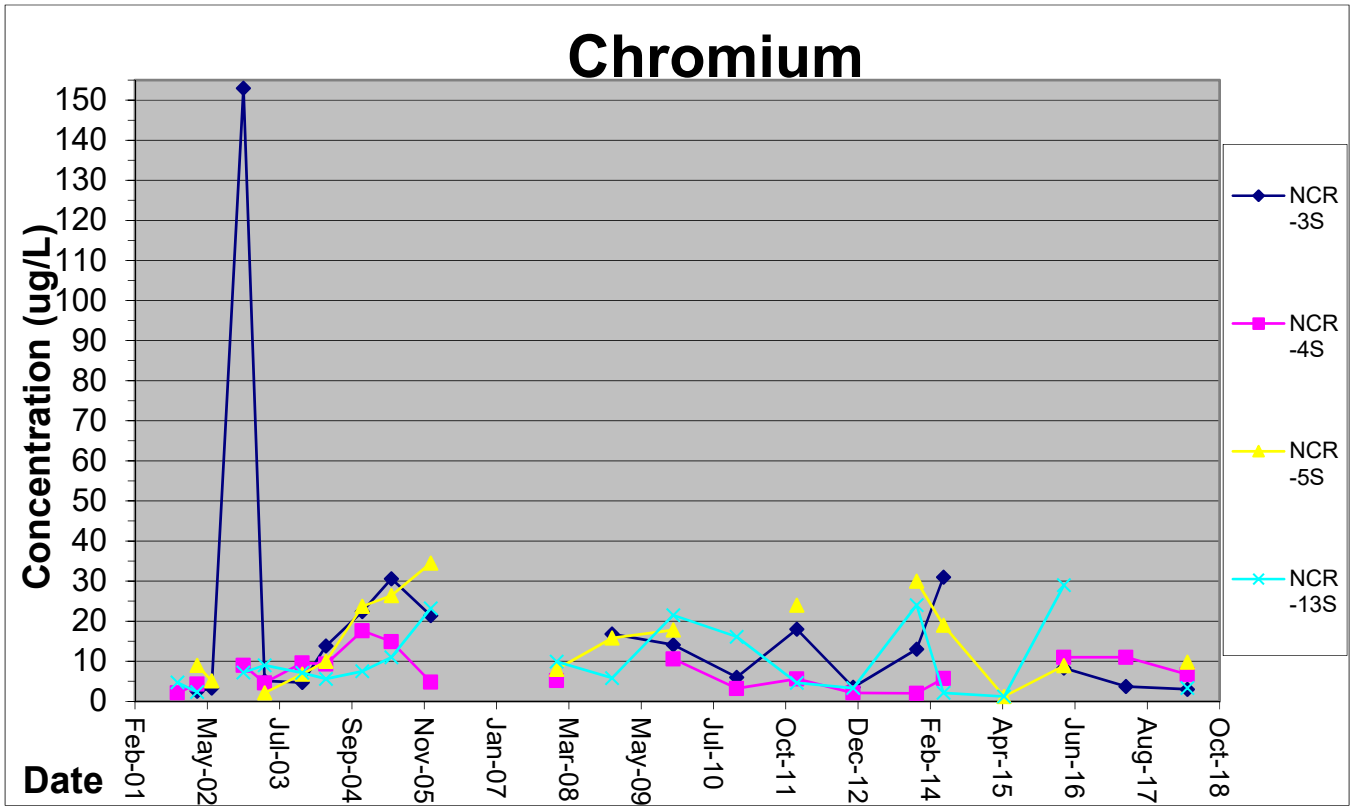


Figure 2.1B: Plot of Historical Total Chromium Concentration

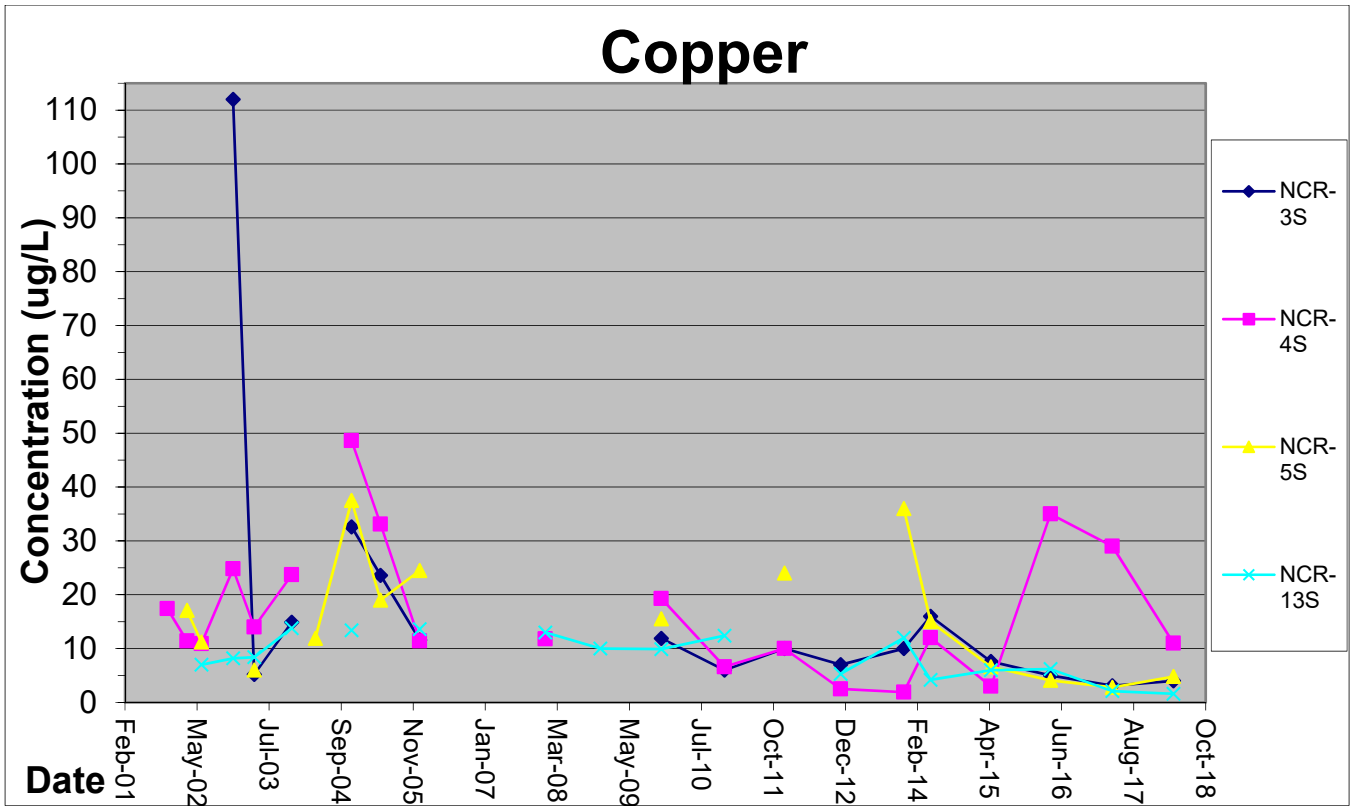


Figure 2.1C: Plot of Historical Total Copper Concentration

SECTION 3
SUMMARY AND CONCLUSIONS

The following summary and conclusions were developed based on the data collected during this reporting period (January through December 2018):

- Volatile organic, semivolatile organic, and inorganics groundwater samples were collected in 2018. The analytical results were consistent with historical results. The annual groundwater samples scheduled for collection in April 2019 will be analyzed for inorganics only.
- No VOCs were detected in the groundwater samples from the monitoring wells; however, acetone and methylene chloride were found in the trip blank. No SVOC were identified. Sixteen metals were identified in one or more of the groundwater samples. Four of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs, which is consistent with previous sampling events. Two of these metals appear to be associated with background conditions. In general, detected values appeared to be consistent with ranges observed in previous sampling events.
- Two effluent samples were collected in 2018. The analytical results were found to be compliant with the discharge permit. During 2018, compliance with the discharge permit was maintained.
- The landfill was inspected monthly and was appropriately maintained. Needed repairs were addressed in a timely manner. Cover vegetation continues to be in good condition.
- Post-construction monitoring of the wetland replacement was performed annually between 2001 and 2005. Monitoring results indicated that the wetland creation was successful. Although the formal annual inspections are no longer required, monthly visual inspection of the wetlands has continued, to document general conditions. In 2018, the wetlands were documented to be in good condition.
- Water levels were collected from the wet wells, monitoring wells, and the locations within the landfill on a monthly basis in 2018. Water levels generally varied between 1.2 and 4.4 feet over the course of the year.
- The groundwater monitoring program is intended to provide data for demonstration of the effectiveness of the hydraulic containment, collection, and extraction of Site-related groundwater. The objectives of the groundwater monitoring program (to monitor the effectiveness of the perimeter collection system and the perimeter barrier system) were met in 2018.

SECTION 4
REFERENCES

USEPA, 1993, Record of Decision, Niagara County Refuse Site, Wheatfield, Niagara County, New York; United States Environmental Protection Agency, September 1993.

USA, 1995, Consent Decree, Docket 946-849; United States Environmental Protection Agency, February 3, 1995.

CRA, 2000, Operations, Maintenance and Monitoring Manual for Niagara County Refuse District Site Remedial Construction, Wheatfield, Niagara County, New York; Conestoga-Rovers & Associates, December 2000.

Parsons, 2016 Annual Monitoring Report, Niagara County Refuse District Site; Parsons, February 2017.

APPENDIX A

CITY OF NORTH TONAWANDA INDUSTRIAL WASTEWATER DISCHARGE PERMIT

CITY OF NORTH TONAWANDA
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

Permit Number: 2628010

In accordance with the provisions of the Clean Water Act as amended, all terms and conditions set forth in this permit, the City of North Tonawanda Local Sewer Use Ordinance and any applicable Federal, State or local laws or regulations, authorization is hereby granted to:

Niagara County Department of Public Works
Engineering Department
59 Park Avenue
Lockport, NY 14094

Site: **Niagara County Refuse Site**
Witmer Road
Town of Wheatfield, NY 14120

Classified by S.I.C. Number(s): N/A

for the discharge of ground water and other wastes generated during Remedial Action construction and implementation into the City of North Tonawanda Sewerage System.

This permit is granted in accordance with an application filed in the offices of the Water/Wastewater Superintendent located at 830 River Road, and in conformity with specifications and other required data submitted in support of the above named application, all of which are filed with and considered part of this permit. This permit is also granted in accordance with discharge limitations and requirements, monitoring and reporting requirements, and all other conditions set forth in Parts I and II hereof.

Effective this 31st day of March, 2016

To expire the 1st day of April, 2019

William M. Davignon

William M. Davignon, Water Works Superintendent
Signed this 11th day of March, 2016

PART I. SPECIFIC CONDITIONS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning the effective date of this permit and lasting until the expiration date, discharge from the permitted facility outfall(s) shall be limited and monitored by the permittee as specified below (Refer to attached map for sampling and monitoring sites).

Sample Point	Parameter	Discharge Limitations mg/l except pH Daily Max.	Sampling Period	Sampling Type
001	Total Flow		1 Sampling Day Monthly	continuous
	pH	Monitor Only	1 Sampling Day Monthly	grab
	Aluminum	2.0	1 Sampling Day semi-annual	24 hr comp.
	Lead	4.6	1 Sampling Day semi-annual	24 hr comp.
	Iron	10	1 Sampling Day semi-annual	24 hr comp.
	Magnesium	Monitor Only	1 Sampling Day semi-annual	24 hr comp.
	Sodium	Monitor Only	1 Sampling Day semi-annual	24 hr comp.
	BOD	Monitor Only	1 Sampling Day semi-annual	24 hr comp.
	Total Suspended Solids	Monitor Only	1 Sampling Day semi-annual	24 hr comp.

PART I. SPECIFIC CONDITIONS

B. DISCHARGE MONITORING AND REPORTING REQUIREMENTS

During the period beginning the effective date of this permit and lasting until the expiration date, discharge monitoring results shall be summarized and reported by the permittee no later than the days specified below.

Sample Point	Parameter	Initial Monitoring Report	Subsequent Monitoring Reports
001	Total Flow	January 31, 2007	Semi-annual
	Lead	January 31, 2007	Semi-annual
	Iron	January 31, 2007	Semi-annual
	Magnesium	January 31, 2007	Semi-annual
	Sodium	January 31, 2007	Semi-annual
	pH	January 31, 2007	Semi-annual
	BOD	January 31, 2007	Semi-annual
	Total Suspended Solids	January 31, 2007	Semi-annual

PART I. SPECIFIC CONDITIONS

C. SPECIAL REQUIREMENTS

1) This permit is written for a duration of three (3) years. Upon renewal of this permit, all parameters will be re-evaluated to develop a parameter list based on chemical concentrations present in the extracted groundwater.

2) Frequency of monitoring is to be re-evaluated yearly.

3) All monitoring reports (initial and subsequent), are to be received by the Superintendent, no later than thirty (30) days after receipt of validated data.

4) It is required that the Permittee have a Site Operations Manual available at all times. All emergency phone numbers must be listed in an appropriate place for easy access by operations personnel. The Permittee shall not discharge into the City of North Tonawanda sewerage treatment works during WWTP overflow conditions. The Permittee is required to cease all pumping operations upon verbal request of the North Tonawanda Water/Wastewater Superintendent or his designee. Pumping operations shall not recommence until approval by the North Tonawanda Water/Wastewater Superintendent or his designee.

5) Analysts are required to use GC/MS method detection limits for most organics (if GC/MS is appropriate); GC/ECD for PCB's/Pesticides and GF method detection limits for metals (where GF is appropriate), as contained in attachment 5 of the NYSDEC TOGs 1.3.8 – New Discharges to Publicly Owned Treatment Works – dated 10/26/94.

Analytical Results: NIAGARA COUNTY REFUSE SITE 2018

PARAMETER	RESULT mg/l	RESULT mg/l	COMPLIANCE
pH (COMP.)	7.41	7.07	YES
COD	< 50	278	YES
SUSPENDED SOLIDS	5	9	YES
BOD	4.92	7.36	YES
PO4	< 0.10	0.170	YES
PHENOLS	< 0.005	<0.100	YES
METALS			
ALUMINUM	< 0.027	<0.035	YES
CHROMIUM	< 0.026	<0.026	YES
LEAD	< 0.027	<0.026	YES
NICKEL	< 0.026	<0.026	YES
ZINC	< 0.027	0.035	YES
IRON	< 0.027	1.812	YES
MAGNESIUM	65.8	171.0	YES
MANGANESE	0.061	0.26	YES
SODIUM	26.4	571.0	YES
PURGEABLES			
Benzene	< 0.005	< 0.005	YES
Toluene	< 0.005	< 0.005	YES
Chlorobenzene	< 0.005	< 0.005	YES
Ethylbenzene	< 0.005	< 0.005	YES
Total Xylenes	< 0.015	< 0.015	YES
1,3 - Dichlorobenzene	< 0.005	< 0.005	YES
1,4-Dichlorobenzene	< 0.005	< 0.005	YES
1,2 - Dichlorobenzene	< 0.005	< 0.005	YES
Vinyl Chloride	< 0.005	< 0.005	YES
1,1-Dichloroethene	< 0.005	< 0.005	YES
Methylene chloride	< 0.005	< 0.005	YES
trans-1,2 Dichloroethene	< 0.005	< 0.005	YES
1,1-Dichloroethane	< 0.005	< 0.005	YES
Chloroform	< 0.005	< 0.005	YES
1,1,1-Trichloroethane	< 0.005	< 0.005	YES
Trichloroethene	< 0.005	< 0.005	YES
TOTAL FLOW (gallons)	**34,000**	**1,000**	
SAMPLE DATE	**4/4/18 & 4/5/18**	**10/10/18 & 10/11/18**	

Unreportable number for Iron in Metals because QC failed. This result is for informational purposes only!

Report prepared by: Michael W. Gibbons, Lab Director / Chemist

APPENDIX B

CORRESPONDENCE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 21 2005

BY FEDEX

Mr. Eric Felter
Project Manager
Parsons
180 Lawrence Bell Drive, Suite 104
Williamsville, New York 14221

Re: Niagara County Refuse Site, Wheatfield, New York; Request for the Reduction of Analytical Parameters in Groundwater Samples

Dear Mr. Felter:

The U.S. Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (NYSDEC) have reviewed your letter dated October 3, 2005 prepared by Parsons on behalf of the Niagara County Refuse (NCR) Site PRP Group requesting a reduction in the analytical parameters in groundwater samples taken at the NCR site as part of the operation and maintenance program. The current analytical parameter list includes 2 volatiles, 4 semi-volatiles, and 16 metals which were determined to be constituents of interest at the site. Your proposal requests reducing the parameters to 5 metals, representing those constituents which have been measured above standards with some regularity in past sampling rounds. The sampling program, involving four monitoring wells, has been in effect since 2001 and your proposal reflects trends evident since the program was initiated. Sampling frequency is currently semi-annual (twice a year).

After discussing this matter with NYSDEC with input from the New York State Department of Health, our preference is that the sampling parameters remain the same for the time being. This is due to the significant residential growth around the site in recent years. After the current sampling round, samples are scheduled to be taken annually. EPA approves changing the current monitoring program only to the extent that the volatiles and semi-volatiles analysis can be conducted every two years while the metals analysis be conducted annually. EPA will, however, consider a further frequency reduction in the future as more data are collected.

Please call me at (212) 637-4278 if you have any questions on this matter.

Sincerely yours,

Michael J. Negrelli
Remedial Project Manager
New York Remediation Branch

cc: J. Konsella - NYSDEC/Region 9
B. Sadowski - NYSDEC/Region 9

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

DEC 11 2018

Mr. Eric Felter
Project Coordinator
Parsons Engineering Science, Inc.
40 LaRiviere Drive, Suite 350
Buffalo, New York 14202

Re: Request for OM&M Plan Modifications; Niagara County Refuse Site, Wheatfield, New York.

Dear Mr. Felter:

This letter is in response to your letter dated August 20, 2018 to the U.S. Environmental Protection Agency (EPA) requesting modifications to the Operations, Maintenance, and Monitoring (OM& M) Plan, dated December 2000, for the Niagara County Refuse Superfund site in Wheatfield, New York. The request is made on behalf of the potentially responsible parties for the site, and seeks EPA approval for the following changes:

- Reduce the analytical suite associated with the OM&M responsibilities;
- Remove the data validation requirement; and
- Change monitoring report requirement from quarterly to annually.

Specifically, your letter presents documentation to support the elimination of sampling for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and mercury from groundwater sample analysis based on these compounds and element being consistently below New York State Department of Environmental Conservation (NYSDEC) ambient water quality standards and New York State Department of Health (NYSDOH) and EPA maximum contaminant levels, and generally below detection limits, since 2005. Additionally, your letter cites that data validation has been completed on groundwater analytical results since the initiation of OM&M sampling in 2001, initially performed quarterly, currently collected annually, and that the substantial volume of validated data collected supports the elimination of the data validation requirement. Finally, you note that reporting has been performed quarterly since the OM&M Plan became effective in 2001 and since groundwater monitoring is performed annually, it would be more economical to provide annual reports, which in addition to providing the groundwater analytical results, would summarize the monthly inspections as well and any other relevant information collected throughout the year.

EPA has consulted with NYSDEC and agrees with all these proposals save for the data validation requirement. Reporting should be done annually within two to three months of groundwater sampling in order to provide current results and VOCs, SVOCs, and mercury can be eliminated from

analysis. Following an evaluation by EPA's Division of Environmental Science and Assessment, Monitoring and Assessment Branch, it has been determined that continued validated groundwater monitoring data is required only for metals in order to support the data summaries in EPA's five-year reviews.

Additionally, based on comments provided by NYSDEC, EPA and NYSDEC provide the following observations on the OM&M reports:

- Concentration versus time graphs for the naturally occurring metals (i.e., aluminum, calcium, iron, magnesium, manganese, potassium, and sodium) can be omitted. Concentration versus time graphs should only be completed for consistently occurring toxic metals.
- Tables only showing water level elevations do not demonstrate the effectiveness of the perimeter collection system (PCS). Future reports should clarify how water level data can be utilized with other data to demonstrate the effectiveness of the PCS. Additionally, past reports have indicated that water level monitoring point East "B" has collapsed. If water level monitoring is to be continued to be used to demonstrate PCS effectiveness, this point should be repaired or replaced.
- The PCS is not shown on any of the figures in the OM&M reports. Figure 1.1 should be modified to include the PCS as well as the location of site access roads.
- There is no NYSDEC groundwater standard for aluminum. The standard of 100 ug/L included in the OM&M reports is for surface water and should be removed from the appropriate table.
- The NYSDEC groundwater standard for copper is 200 ug/L, not 5 ug/L as shown in the OM&M reports. The table should be corrected accordingly.
- There is no NYSDEC groundwater standard for vanadium. The standard of 14 ug/L included in the OM&M reports is for surface water and should be removed from the appropriate table.

If you have any questions regarding this matter, please contact me at (212) 637-4278 or email me at negrelli.mike@epa.gov.

Sincerely yours,

Michael Negrelli, Remedial Project Manager
New York Remediation Branch

cc: John Frankenthal – BP/Atlantic Richfield Company
B. Sadowski - NYSDEC
Michael Mintzer – EPA/ORC

APPENDIX C
ANALYTICAL DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 480-134493-1
Client Project/Site: City of North Tonawanda - NCRS

For:
N Tonawanda Water Works
830 River Road
North Tonawanda, New York 14120

Attn: William Davignon

Joseph V. Giacomazza

Authorized for release by:
5/1/2018 3:42:19 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

Table of Contents

Definitions/Glossary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Qualifiers

GC/MS VOA

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

Glossary

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

Case Narrative

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Job ID: 480-134493-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-134493-1

Receipt
The samples were received on 4/18/2018 11:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6º C.

Receipt Exceptions
The following samples were canceled for metals by the sampler on 4/19/18: WG-11109668-041818-SG-NCR3S (480-134493-1), WG-11109668-041818-SG-NCR4S (480-134493-2), WG-11109668-041818-SG-NCR5S (480-134493-3), WG-11109668-041818-SG-NCR5S (480-134493-3[MS]), WG-11109668-041818-SG-NCR5S (480-134493-3[MSD]), WG-11109668-041818-SG-NCR6S (480-134493-4), WG-11109668-041818-SG-NCR13S (480-134493-5) and TB-11109668-041818-SG (480-134493-6). Due to confusion over the project for this work, the samplers did not collect dissolved metals. They will resample for both total and dissolved metals.

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

GC/MS Semi VOA
Method(s) 8270D: The initial calibration curve analyzed in analytical batch 480-409315 associated with analytical batch 480-410780 was outside acceptance criteria for the analyte Pentachlorophenol. A standard at the reporting limit (RL) was analyzed and found to be acceptable. Since the associated samples are non-detect for this analyte, the data has been reported. The following samples are impacted: WG-11109668-041818-SG-NCR3S (480-134493-1), WG-11109668-041818-SG-NCR4S (480-134493-2), WG-11109668-041818-SG-NCR5S (480-134493-3), WG-11109668-041818-SG-NCR6S (480-134493-4) and WG-11109668-041818-SG-NCR13S (480-134493-5).

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

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

Detection Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR3S — Lab Sample ID: 480-134493-1

No Detections.

Client Sample ID: WG-11109668-041818-SG-NCR4S — Lab Sample ID: 480-134493-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: WG-11109668-041818-SG-NCR5S — Lab Sample ID: 480-134493-3

No Detections.

Client Sample ID: WG-11109668-041818-SG-NCR6S — Lab Sample ID: 480-134493-4

No Detections.

Client Sample ID: WG-11109668-041818-SG-NCR13S — Lab Sample ID: 480-134493-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.5	J	10	3.0	ug/L	1		8260C	Total/NA

Client Sample ID: TB-11109668-041818-SG — Lab Sample ID: 480-134493-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.0	J	10	3.0	ug/L	1		8260C	Total/NA
Methylene Chloride	2.9		1.0	0.44	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR3S
Date Collected: 04/18/18 08:30
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 13:23	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 13:23	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 13:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 13:23	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 13:23	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 13:23	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 13:23	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 13:23	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 13:23	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 13:23	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 13:23	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 13:23	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 13:23	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 13:23	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 13:23	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 13:23	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 13:23	1
Acetone	ND		10	3.0	ug/L			04/29/18 13:23	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 13:23	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 13:23	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 13:23	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 13:23	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 13:23	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 13:23	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 13:23	1
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 13:23	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 13:23	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 13:23	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 13:23	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 13:23	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 13:23	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 13:23	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 13:23	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 13:23	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 13:23	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 13:23	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 13:23	1
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 13:23	1
Methylene Chloride	ND		1.0	0.44	ug/L			04/29/18 13:23	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 13:23	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 13:23	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 13:23	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 13:23	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 13:23	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 13:23	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 13:23	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 13:23	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 13:23	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR3S
Date Collected: 04/18/18 08:30
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-1
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*		*04/29/18 13:23*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/29/18 13:23*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*04/29/18 13:23*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*04/29/18 13:23*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		04/23/18 14:26	04/26/18 02:57	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 02:57	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:57	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 02:57	1
2-Chlorophenol	ND		5.0	0.53	ug/L		04/23/18 14:26	04/26/18 02:57	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		04/23/18 14:26	04/26/18 02:57	1
2-Methylphenol	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:57	1
2-Nitroaniline	ND		10	0.42	ug/L		04/23/18 14:26	04/26/18 02:57	1
2-Nitrophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 02:57	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:57	1
3-Nitroaniline	ND		10	0.48	ug/L		04/23/18 14:26	04/26/18 02:57	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Chloroaniline	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Methylphenol	ND		10	0.36	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Nitroaniline	ND		10	0.25	ug/L		04/23/18 14:26	04/26/18 02:57	1
4-Nitrophenol	ND		10	1.5	ug/L		04/23/18 14:26	04/26/18 02:57	1
Acenaphthene	ND		5.0	0.41	ug/L		04/23/18 14:26	04/26/18 02:57	1
Acenaphthylene	ND		5.0	0.38	ug/L		04/23/18 14:26	04/26/18 02:57	1
Acetophenone	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 02:57	1
Anthracene	ND		5.0	0.28	ug/L		04/23/18 14:26	04/26/18 02:57	1
Atrazine	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 02:57	1
Benzaldehyde	ND		5.0	0.27	ug/L		04/23/18 14:26	04/26/18 02:57	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 02:57	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 02:57	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 02:57	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 02:57	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		04/23/18 14:26	04/26/18 02:57	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 02:57	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:57	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 02:57	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		04/23/18 14:26	04/26/18 02:57	1
Caprolactam	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 02:57	1
Carbazole	ND		5.0	0.30	ug/L		04/23/18 14:26	04/26/18 02:57	1
Chrysene	ND		5.0	0.33	ug/L		04/23/18 14:26	04/26/18 02:57	1

Client Sample ID: WG-11109668-041818-SG-NCR3S — **Lab Sample ID: 480-134493-1**
Date Collected: 04/18/18 08:30 — **Matrix: Water**
Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		04/23/18 14:26	04/26/18 02:57	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 02:57	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		04/23/18 14:26	04/26/18 02:57	1
Dibenzofuran	ND		10	0.51	ug/L		04/23/18 14:26	04/26/18 02:57	1
Diethyl phthalate	ND		5.0	0.22	ug/L		04/23/18 14:26	04/26/18 02:57	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 02:57	1
Fluoranthene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:57	1
Fluorene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 02:57	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 02:57	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		04/23/18 14:26	04/26/18 02:57	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 02:57	1
Hexachloroethane	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 02:57	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 02:57	1
Isophorone	ND		5.0	0.43	ug/L		04/23/18 14:26	04/26/18 02:57	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 02:57	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 02:57	1
Naphthalene	ND		5.0	0.76	ug/L		04/23/18 14:26	04/26/18 02:57	1
Nitrobenzene	ND		5.0	0.29	ug/L		04/23/18 14:26	04/26/18 02:57	1
Pentachlorophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 02:57	1
Phenanthrene	ND		5.0	0.44	ug/L		04/23/18 14:26	04/26/18 02:57	1
Phenol	ND		5.0	0.39	ug/L		04/23/18 14:26	04/26/18 02:57	1
Pyrene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 02:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*103*		*41 - 120*	*04/23/18 14:26*	*04/26/18 02:57*	*1*
2-Fluorobiphenyl	*101*		*48 - 120*	*04/23/18 14:26*	*04/26/18 02:57*	*1*
2-Fluorophenol	*78*		*35 - 120*	*04/23/18 14:26*	*04/26/18 02:57*	*1*
Nitrobenzene-d5	*94*		*46 - 120*	*04/23/18 14:26*	*04/26/18 02:57*	*1*
p-Terphenyl-d14	*103*		*59 - 136*	*04/23/18 14:26*	*04/26/18 02:57*	*1*
Phenol-d5	*55*		*22 - 120*	*04/23/18 14:26*	*04/26/18 02:57*	*1*

Client Sample ID: WG-11109668-041818-SG-NCR4S — **Lab Sample ID: 480-134493-2**
Date Collected: 04/18/18 08:45 — **Matrix: Water**
Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 13:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 13:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 13:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 13:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 13:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 13:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 13:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 13:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 13:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 13:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 13:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 13:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 13:50	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR4S
Date Collected: 04/18/18 08:45
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 13:50	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 13:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 13:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 13:50	1
Acetone	**3.0**	**J**	10	3.0	ug/L			04/29/18 13:50	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 13:50	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 13:50	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 13:50	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 13:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 13:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 13:50	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 13:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 13:50	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 13:50	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 13:50	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 13:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 13:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 13:50	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 13:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 13:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 13:50	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 13:50	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 13:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 13:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 13:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			04/29/18 13:50	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 13:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 13:50	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 13:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 13:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 13:50	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 13:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 13:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 13:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*04/29/18 13:50*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/29/18 13:50*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*04/29/18 13:50*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*04/29/18 13:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		04/23/18 14:26	04/26/18 03:26	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		04/23/18 14:26	04/26/18 03:26	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 03:26	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		04/23/18 14:26	04/26/18 03:26	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 03:26	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		04/23/18 14:26	04/26/18 03:26	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR4S
Date Collected: 04/18/18 08:45
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 03:26	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 03:26	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:26	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 03:26	1
2-Chlorophenol	ND		5.0	0.53	ug/L		04/23/18 14:26	04/26/18 03:26	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		04/23/18 14:26	04/26/18 03:26	1
2-Methylphenol	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:26	1
2-Nitroaniline	ND		10	0.42	ug/L		04/23/18 14:26	04/26/18 03:26	1
2-Nitrophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 03:26	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:26	1
3-Nitroaniline	ND		10	0.48	ug/L		04/23/18 14:26	04/26/18 03:26	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Chloroaniline	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Methylphenol	ND		10	0.36	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Nitroaniline	ND		10	0.25	ug/L		04/23/18 14:26	04/26/18 03:26	1
4-Nitrophenol	ND		10	1.5	ug/L		04/23/18 14:26	04/26/18 03:26	1
Acenaphthene	ND		5.0	0.41	ug/L		04/23/18 14:26	04/26/18 03:26	1
Acenaphthylene	ND		5.0	0.38	ug/L		04/23/18 14:26	04/26/18 03:26	1
Acetophenone	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 03:26	1
Anthracene	ND		5.0	0.28	ug/L		04/23/18 14:26	04/26/18 03:26	1
Atrazine	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 03:26	1
Benzaldehyde	ND		5.0	0.27	ug/L		04/23/18 14:26	04/26/18 03:26	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 03:26	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 03:26	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 03:26	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 03:26	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		04/23/18 14:26	04/26/18 03:26	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 03:26	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:26	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 03:26	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		04/23/18 14:26	04/26/18 03:26	1
Caprolactam	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 03:26	1
Carbazole	ND		5.0	0.30	ug/L		04/23/18 14:26	04/26/18 03:26	1
Chrysene	ND		5.0	0.33	ug/L		04/23/18 14:26	04/26/18 03:26	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		04/23/18 14:26	04/26/18 03:26	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 03:26	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		04/23/18 14:26	04/26/18 03:26	1
Dibenzofuran	ND		10	0.51	ug/L		04/23/18 14:26	04/26/18 03:26	1
Diethyl phthalate	ND		5.0	0.22	ug/L		04/23/18 14:26	04/26/18 03:26	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 03:26	1
Fluoranthene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:26	1
Fluorene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 03:26	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 03:26	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		04/23/18 14:26	04/26/18 03:26	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 03:26	1
Hexachloroethane	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 03:26	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR4S

Lab Sample ID: 480-134493-2

Date Collected: 04/18/18 08:45

Matrix: Water

Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 03:26	1
Isophorone	ND		5.0	0.43	ug/L		04/23/18 14:26	04/26/18 03:26	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 03:26	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 03:26	1
Naphthalene	ND		5.0	0.76	ug/L		04/23/18 14:26	04/26/18 03:26	1
Nitrobenzene	ND		5.0	0.29	ug/L		04/23/18 14:26	04/26/18 03:26	1
Pentachlorophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 03:26	1
Phenanthrene	ND		5.0	0.44	ug/L		04/23/18 14:26	04/26/18 03:26	1
Phenol	ND		5.0	0.39	ug/L		04/23/18 14:26	04/26/18 03:26	1
Pyrene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*100*		*41 - 120*	*04/23/18 14:26*	*04/26/18 03:26*	*1*
2-Fluorobiphenyl	*101*		*48 - 120*	*04/23/18 14:26*	*04/26/18 03:26*	*1*
2-Fluorophenol	*71*		*35 - 120*	*04/23/18 14:26*	*04/26/18 03:26*	*1*
Nitrobenzene-d5	*95*		*46 - 120*	*04/23/18 14:26*	*04/26/18 03:26*	*1*
p-Terphenyl-d14	*87*		*59 - 136*	*04/23/18 14:26*	*04/26/18 03:26*	*1*
Phenol-d5	*52*		*22 - 120*	*04/23/18 14:26*	*04/26/18 03:26*	*1*

Client Sample ID: WG-11109668-041818-SG-NCR5S

Lab Sample ID: 480-134493-3

Date Collected: 04/18/18 08:55

Matrix: Water

Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 14:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 14:16	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 14:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 14:16	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 14:16	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 14:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 14:16	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 14:16	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 14:16	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 14:16	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 14:16	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 14:16	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 14:16	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 14:16	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 14:16	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 14:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 14:16	1
Acetone	ND		10	3.0	ug/L			04/29/18 14:16	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 14:16	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 14:16	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 14:16	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 14:16	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 14:16	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 14:16	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 14:16	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR5S
Date Collected: 04/18/18 08:55
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 14:16	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 14:16	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 14:16	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 14:16	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 14:16	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 14:16	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 14:16	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 14:16	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 14:16	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 14:16	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 14:16	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 14:16	1
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 14:16	1
Methylene Chloride	ND		1.0	0.44	ug/L			04/29/18 14:16	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 14:16	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 14:16	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 14:16	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 14:16	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 14:16	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 14:16	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 14:16	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 14:16	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*04/29/18 14:16*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/29/18 14:16*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*04/29/18 14:16*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 123*		*04/29/18 14:16*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		04/23/18 14:26	04/26/18 02:28	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 02:28	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:28	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 02:28	1
2-Chlorophenol	ND		5.0	0.53	ug/L		04/23/18 14:26	04/26/18 02:28	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		04/23/18 14:26	04/26/18 02:28	1
2-Methylphenol	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:28	1
2-Nitroaniline	ND		10	0.42	ug/L		04/23/18 14:26	04/26/18 02:28	1
2-Nitrophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 02:28	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:28	1
3-Nitroaniline	ND		10	0.48	ug/L		04/23/18 14:26	04/26/18 02:28	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 02:28	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR5S
Date Collected: 04/18/18 08:55
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 02:28	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 02:28	1
4-Chloroaniline	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 02:28	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 02:28	1
4-Methylphenol	ND		10	0.36	ug/L		04/23/18 14:26	04/26/18 02:28	1
4-Nitroaniline	ND		10	0.25	ug/L		04/23/18 14:26	04/26/18 02:28	1
4-Nitrophenol	ND		10	1.5	ug/L		04/23/18 14:26	04/26/18 02:28	1
Acenaphthene	ND		5.0	0.41	ug/L		04/23/18 14:26	04/26/18 02:28	1
Acenaphthylene	ND		5.0	0.38	ug/L		04/23/18 14:26	04/26/18 02:28	1
Acetophenone	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 02:28	1
Anthracene	ND		5.0	0.28	ug/L		04/23/18 14:26	04/26/18 02:28	1
Atrazine	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 02:28	1
Benzaldehyde	ND		5.0	0.27	ug/L		04/23/18 14:26	04/26/18 02:28	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 02:28	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 02:28	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 02:28	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 02:28	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		04/23/18 14:26	04/26/18 02:28	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 02:28	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:28	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 02:28	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		04/23/18 14:26	04/26/18 02:28	1
Caprolactam	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 02:28	1
Carbazole	ND		5.0	0.30	ug/L		04/23/18 14:26	04/26/18 02:28	1
Chrysene	ND		5.0	0.33	ug/L		04/23/18 14:26	04/26/18 02:28	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		04/23/18 14:26	04/26/18 02:28	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 02:28	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		04/23/18 14:26	04/26/18 02:28	1
Dibenzofuran	ND		10	0.51	ug/L		04/23/18 14:26	04/26/18 02:28	1
Diethyl phthalate	ND		5.0	0.22	ug/L		04/23/18 14:26	04/26/18 02:28	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 02:28	1
Fluoranthene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 02:28	1
Fluorene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 02:28	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 02:28	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		04/23/18 14:26	04/26/18 02:28	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 02:28	1
Hexachloroethane	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 02:28	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 02:28	1
Isophorone	ND		5.0	0.43	ug/L		04/23/18 14:26	04/26/18 02:28	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 02:28	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 02:28	1
Naphthalene	ND		5.0	0.76	ug/L		04/23/18 14:26	04/26/18 02:28	1
Nitrobenzene	ND		5.0	0.29	ug/L		04/23/18 14:26	04/26/18 02:28	1
Pentachlorophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 02:28	1
Phenanthrene	ND		5.0	0.44	ug/L		04/23/18 14:26	04/26/18 02:28	1
Phenol	ND		5.0	0.39	ug/L		04/23/18 14:26	04/26/18 02:28	1
Pyrene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*41 - 120*	*04/23/18 14:26*	*04/26/18 02:28*	*1*

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR5S — **Lab Sample ID: 480-134493-3**
Date Collected: 04/18/18 08:55 — **Matrix: Water**
Date Received: 04/18/18 11:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*48 - 120*	*04/23/18 14:26*	*04/26/18 02:28*	*1*
2-Fluorophenol	*68*		*35 - 120*	*04/23/18 14:26*	*04/26/18 02:28*	*1*
Nitrobenzene-d5	*92*		*46 - 120*	*04/23/18 14:26*	*04/26/18 02:28*	*1*
p-Terphenyl-d14	*97*		*59 - 136*	*04/23/18 14:26*	*04/26/18 02:28*	*1*
Phenol-d5	*50*		*22 - 120*	*04/23/18 14:26*	*04/26/18 02:28*	*1*

Client Sample ID: WG-11109668-041818-SG-NCR6S — **Lab Sample ID: 480-134493-4**
Date Collected: 04/18/18 09:10 — **Matrix: Water**
Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 14:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 14:44	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 14:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 14:44	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 14:44	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 14:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 14:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 14:44	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 14:44	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 14:44	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 14:44	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 14:44	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 14:44	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 14:44	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 14:44	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 14:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 14:44	1
Acetone	ND		10	3.0	ug/L			04/29/18 14:44	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 14:44	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 14:44	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 14:44	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 14:44	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 14:44	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 14:44	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 14:44	1
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 14:44	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 14:44	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 14:44	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 14:44	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 14:44	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 14:44	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 14:44	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 14:44	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 14:44	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 14:44	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 14:44	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 14:44	1

Client Sample ID: WG-11109668-041818-SG-NCR6S
Date Collected: 04/18/18 09:10
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 14:44	1
Methylene Chloride	ND		1.0	0.44	ug/L			04/29/18 14:44	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 14:44	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 14:44	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 14:44	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 14:44	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 14:44	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 14:44	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 14:44	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 14:44	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*04/29/18 14:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/29/18 14:44*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*04/29/18 14:44*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 123*		*04/29/18 14:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		04/23/18 14:26	04/26/18 03:54	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 03:54	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:54	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 03:54	1
2-Chlorophenol	ND		5.0	0.53	ug/L		04/23/18 14:26	04/26/18 03:54	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		04/23/18 14:26	04/26/18 03:54	1
2-Methylphenol	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:54	1
2-Nitroaniline	ND		10	0.42	ug/L		04/23/18 14:26	04/26/18 03:54	1
2-Nitrophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 03:54	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:54	1
3-Nitroaniline	ND		10	0.48	ug/L		04/23/18 14:26	04/26/18 03:54	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Chloroaniline	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Methylphenol	ND		10	0.36	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Nitroaniline	ND		10	0.25	ug/L		04/23/18 14:26	04/26/18 03:54	1
4-Nitrophenol	ND		10	1.5	ug/L		04/23/18 14:26	04/26/18 03:54	1
Acenaphthene	ND		5.0	0.41	ug/L		04/23/18 14:26	04/26/18 03:54	1
Acenaphthylene	ND		5.0	0.38	ug/L		04/23/18 14:26	04/26/18 03:54	1
Acetophenone	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 03:54	1
Anthracene	ND		5.0	0.28	ug/L		04/23/18 14:26	04/26/18 03:54	1
Atrazine	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 03:54	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR6S
Date Collected: 04/18/18 09:10
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzaldehyde	ND		5.0	0.27	ug/L		04/23/18 14:26	04/26/18 03:54	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 03:54	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 03:54	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 03:54	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 03:54	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		04/23/18 14:26	04/26/18 03:54	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 03:54	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:54	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 03:54	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		04/23/18 14:26	04/26/18 03:54	1
Caprolactam	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 03:54	1
Carbazole	ND		5.0	0.30	ug/L		04/23/18 14:26	04/26/18 03:54	1
Chrysene	ND		5.0	0.33	ug/L		04/23/18 14:26	04/26/18 03:54	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		04/23/18 14:26	04/26/18 03:54	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 03:54	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		04/23/18 14:26	04/26/18 03:54	1
Dibenzofuran	ND		10	0.51	ug/L		04/23/18 14:26	04/26/18 03:54	1
Diethyl phthalate	ND		5.0	0.22	ug/L		04/23/18 14:26	04/26/18 03:54	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 03:54	1
Fluoranthene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 03:54	1
Fluorene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 03:54	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 03:54	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		04/23/18 14:26	04/26/18 03:54	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 03:54	1
Hexachloroethane	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 03:54	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 03:54	1
Isophorone	ND		5.0	0.43	ug/L		04/23/18 14:26	04/26/18 03:54	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 03:54	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 03:54	1
Naphthalene	ND		5.0	0.76	ug/L		04/23/18 14:26	04/26/18 03:54	1
Nitrobenzene	ND		5.0	0.29	ug/L		04/23/18 14:26	04/26/18 03:54	1
Pentachlorophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 03:54	1
Phenanthrene	ND		5.0	0.44	ug/L		04/23/18 14:26	04/26/18 03:54	1
Phenol	ND		5.0	0.39	ug/L		04/23/18 14:26	04/26/18 03:54	1
Pyrene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*95*		*41 - 120*	*04/23/18 14:26*	*04/26/18 03:54*	*1*
2-Fluorobiphenyl	*94*		*48 - 120*	*04/23/18 14:26*	*04/26/18 03:54*	*1*
2-Fluorophenol	*71*		*35 - 120*	*04/23/18 14:26*	*04/26/18 03:54*	*1*
Nitrobenzene-d5	*88*		*46 - 120*	*04/23/18 14:26*	*04/26/18 03:54*	*1*
p-Terphenyl-d14	*91*		*59 - 136*	*04/23/18 14:26*	*04/26/18 03:54*	*1*
Phenol-d5	*51*		*22 - 120*	*04/23/18 14:26*	*04/26/18 03:54*	*1*

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR13S
Date Collected: 04/18/18 09:10
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 15:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 15:10	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 15:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 15:10	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 15:10	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 15:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 15:10	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 15:10	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 15:10	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 15:10	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 15:10	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 15:10	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 15:10	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 15:10	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 15:10	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 15:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 15:10	1
Acetone	**3.5**	**J**	10	3.0	ug/L			04/29/18 15:10	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 15:10	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 15:10	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 15:10	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 15:10	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 15:10	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 15:10	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 15:10	1
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 15:10	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 15:10	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 15:10	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 15:10	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 15:10	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 15:10	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 15:10	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 15:10	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 15:10	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 15:10	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 15:10	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 15:10	1
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 15:10	1
Methylene Chloride	ND		1.0	0.44	ug/L			04/29/18 15:10	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 15:10	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 15:10	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 15:10	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 15:10	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 15:10	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 15:10	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 15:10	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 15:10	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 15:10	1

Client Sample ID: WG-11109668-041818-SG-NCR13S
Date Collected: 04/18/18 09:10
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-5
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*04/29/18 15:10*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/29/18 15:10*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*04/29/18 15:10*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*04/29/18 15:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		04/23/18 14:26	04/26/18 04:23	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,4-Dinitrophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 04:23	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 04:23	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 04:23	1
2-Chlorophenol	ND		5.0	0.53	ug/L		04/23/18 14:26	04/26/18 04:23	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		04/23/18 14:26	04/26/18 04:23	1
2-Methylphenol	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 04:23	1
2-Nitroaniline	ND		10	0.42	ug/L		04/23/18 14:26	04/26/18 04:23	1
2-Nitrophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/26/18 04:23	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 04:23	1
3-Nitroaniline	ND		10	0.48	ug/L		04/23/18 14:26	04/26/18 04:23	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Chloroaniline	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Methylphenol	ND		10	0.36	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Nitroaniline	ND		10	0.25	ug/L		04/23/18 14:26	04/26/18 04:23	1
4-Nitrophenol	ND		10	1.5	ug/L		04/23/18 14:26	04/26/18 04:23	1
Acenaphthene	ND		5.0	0.41	ug/L		04/23/18 14:26	04/26/18 04:23	1
Acenaphthylene	ND		5.0	0.38	ug/L		04/23/18 14:26	04/26/18 04:23	1
Acetophenone	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 04:23	1
Anthracene	ND		5.0	0.28	ug/L		04/23/18 14:26	04/26/18 04:23	1
Atrazine	ND		5.0	0.46	ug/L		04/23/18 14:26	04/26/18 04:23	1
Benzaldehyde	ND		5.0	0.27	ug/L		04/23/18 14:26	04/26/18 04:23	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 04:23	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 04:23	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 04:23	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 04:23	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		04/23/18 14:26	04/26/18 04:23	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		04/23/18 14:26	04/26/18 04:23	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 04:23	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 04:23	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		04/23/18 14:26	04/26/18 04:23	1
Caprolactam	ND		5.0	2.2	ug/L		04/23/18 14:26	04/26/18 04:23	1
Carbazole	ND		5.0	0.30	ug/L		04/23/18 14:26	04/26/18 04:23	1
Chrysene	ND		5.0	0.33	ug/L		04/23/18 14:26	04/26/18 04:23	1

Client Sample ID: WG-11109668-041818-SG-NCR13S — **Lab Sample ID: 480-134493-5**
Date Collected: 04/18/18 09:10 — **Matrix: Water**
Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		04/23/18 14:26	04/26/18 04:23	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 04:23	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		04/23/18 14:26	04/26/18 04:23	1
Dibenzofuran	ND		10	0.51	ug/L		04/23/18 14:26	04/26/18 04:23	1
Diethyl phthalate	ND		5.0	0.22	ug/L		04/23/18 14:26	04/26/18 04:23	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 04:23	1
Fluoranthene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/26/18 04:23	1
Fluorene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/26/18 04:23	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 04:23	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		04/23/18 14:26	04/26/18 04:23	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 04:23	1
Hexachloroethane	ND		5.0	0.59	ug/L		04/23/18 14:26	04/26/18 04:23	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/26/18 04:23	1
Isophorone	ND		5.0	0.43	ug/L		04/23/18 14:26	04/26/18 04:23	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		04/23/18 14:26	04/26/18 04:23	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		04/23/18 14:26	04/26/18 04:23	1
Naphthalene	ND		5.0	0.76	ug/L		04/23/18 14:26	04/26/18 04:23	1
Nitrobenzene	ND		5.0	0.29	ug/L		04/23/18 14:26	04/26/18 04:23	1
Pentachlorophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/26/18 04:23	1
Phenanthrene	ND		5.0	0.44	ug/L		04/23/18 14:26	04/26/18 04:23	1
Phenol	ND		5.0	0.39	ug/L		04/23/18 14:26	04/26/18 04:23	1
Pyrene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/26/18 04:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*97*		*41 - 120*	*04/23/18 14:26*	*04/26/18 04:23*	*1*
2-Fluorobiphenyl	*98*		*48 - 120*	*04/23/18 14:26*	*04/26/18 04:23*	*1*
2-Fluorophenol	*75*		*35 - 120*	*04/23/18 14:26*	*04/26/18 04:23*	*1*
Nitrobenzene-d5	*93*		*46 - 120*	*04/23/18 14:26*	*04/26/18 04:23*	*1*
p-Terphenyl-d14	*97*		*59 - 136*	*04/23/18 14:26*	*04/26/18 04:23*	*1*
Phenol-d5	*54*		*22 - 120*	*04/23/18 14:26*	*04/26/18 04:23*	*1*

Client Sample ID: TB-11109668-041818-SG — **Lab Sample ID: 480-134493-6**
Date Collected: 04/18/18 00:00 — **Matrix: Water**
Date Received: 04/18/18 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 15:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 15:37	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 15:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 15:37	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 15:37	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 15:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 15:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 15:37	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 15:37	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 15:37	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 15:37	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 15:37	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 15:37	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: TB-11109668-041818-SG
Date Collected: 04/18/18 00:00
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 15:37	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 15:37	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 15:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 15:37	1
Acetone	**4.0**	**J**	10	3.0	ug/L			04/29/18 15:37	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 15:37	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 15:37	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 15:37	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 15:37	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 15:37	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 15:37	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 15:37	1
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 15:37	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 15:37	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 15:37	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 15:37	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 15:37	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 15:37	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 15:37	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 15:37	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 15:37	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 15:37	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 15:37	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 15:37	1
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 15:37	1
Methylene Chloride	**2.9**		1.0	0.44	ug/L			04/29/18 15:37	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 15:37	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 15:37	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 15:37	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 15:37	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 15:37	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 15:37	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 15:37	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 15:37	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*04/29/18 15:37*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/29/18 15:37*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*04/29/18 15:37*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*04/29/18 15:37*	*1*

Surrogate Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(80-120)	(73-120)	(75-123)
480-134493-1	WG-11109668-041818-SG-NCR3S	97	104	105	99
480-134493-2	WG-11109668-041818-SG-NCR4S	101	101	104	100
480-134493-3	WG-11109668-041818-SG-NCR5S	98	101	101	98
480-134493-3 MS	WG-11109668-041818-SG-NCR5S	99	101	99	100
480-134493-3 MSD	WG-11109668-041818-SG-NCR5S	95	101	103	94
480-134493-4	WG-11109668-041818-SG-NCR6S	98	100	101	98
480-134493-5	WG-11109668-041818-SG-NCR13S	100	101	103	99
480-134493-6	TB-11109668-041818-SG	99	101	102	102
LCS 480-411509/5	Lab Control Sample	100	102	100	99
MB 480-411509/7	Method Blank	100	101	101	96

Surrogate Legend

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

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(41-120)	(48-120)	(35-120)	(46-120)	(59-136)	(22-120)
480-134493-1	WG-11109668-041818-SG-NCR3S	103	101	78	94	103	55
480-134493-2	WG-11109668-041818-SG-NCR4S	100	101	71	95	87	52
480-134493-3	WG-11109668-041818-SG-NCR5S	90	97	68	92	97	50
480-134493-3 MS	WG-11109668-041818-SG-NCR5S	101	88	68	86	89	53
480-134493-3 MSD	WG-11109668-041818-SG-NCR5S	103	95	74	95	100	57
480-134493-4	WG-11109668-041818-SG-NCR6S	95	94	71	88	91	51
480-134493-5	WG-11109668-041818-SG-NCR13S	97	98	75	93	97	54
LCS 480-410372/2-A	Lab Control Sample	99	90	73	87	97	57
MB 480-410372/1-A	Method Blank	86	90	71	87	103	53

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14
PHL = Phenol-d5

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

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

Lab Sample ID: MB 480-411509/7
Matrix: Water
Analysis Batch: 411509

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			04/29/18 11:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			04/29/18 11:02	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			04/29/18 11:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			04/29/18 11:02	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			04/29/18 11:02	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			04/29/18 11:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			04/29/18 11:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			04/29/18 11:02	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			04/29/18 11:02	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			04/29/18 11:02	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			04/29/18 11:02	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			04/29/18 11:02	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			04/29/18 11:02	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			04/29/18 11:02	1
2-Hexanone	ND		5.0	1.2	ug/L			04/29/18 11:02	1
2-Butanone (MEK)	ND		10	1.3	ug/L			04/29/18 11:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			04/29/18 11:02	1
Acetone	ND		10	3.0	ug/L			04/29/18 11:02	1
Benzene	ND		1.0	0.41	ug/L			04/29/18 11:02	1
Bromodichloromethane	ND		1.0	0.39	ug/L			04/29/18 11:02	1
Bromoform	ND		1.0	0.26	ug/L			04/29/18 11:02	1
Bromomethane	ND		1.0	0.69	ug/L			04/29/18 11:02	1
Carbon disulfide	ND		1.0	0.19	ug/L			04/29/18 11:02	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			04/29/18 11:02	1
Chlorobenzene	ND		1.0	0.75	ug/L			04/29/18 11:02	1
Dibromochloromethane	ND		1.0	0.32	ug/L			04/29/18 11:02	1
Chloroethane	ND		1.0	0.32	ug/L			04/29/18 11:02	1
Chloroform	ND		1.0	0.34	ug/L			04/29/18 11:02	1
Chloromethane	ND		1.0	0.35	ug/L			04/29/18 11:02	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			04/29/18 11:02	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			04/29/18 11:02	1
Cyclohexane	ND		1.0	0.18	ug/L			04/29/18 11:02	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			04/29/18 11:02	1
Ethylbenzene	ND		1.0	0.74	ug/L			04/29/18 11:02	1
Isopropylbenzene	ND		1.0	0.79	ug/L			04/29/18 11:02	1
Methyl acetate	ND		2.5	1.3	ug/L			04/29/18 11:02	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			04/29/18 11:02	1
Methylcyclohexane	ND		1.0	0.16	ug/L			04/29/18 11:02	1
Methylene Chloride	ND		1.0	0.44	ug/L			04/29/18 11:02	1
Styrene	ND		1.0	0.73	ug/L			04/29/18 11:02	1
Tetrachloroethene	ND		1.0	0.36	ug/L			04/29/18 11:02	1
Toluene	ND		1.0	0.51	ug/L			04/29/18 11:02	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			04/29/18 11:02	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			04/29/18 11:02	1
Trichloroethene	ND		1.0	0.46	ug/L			04/29/18 11:02	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			04/29/18 11:02	1
Vinyl chloride	ND		1.0	0.90	ug/L			04/29/18 11:02	1
Xylenes, Total	ND		2.0	0.66	ug/L			04/29/18 11:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		04/29/18 11:02	1
Toluene-d8 (Surr)	101		80 - 120		04/29/18 11:02	1
4-Bromofluorobenzene (Surr)	101		73 - 120		04/29/18 11:02	1
Dibromofluoromethane (Surr)	96		75 - 123		04/29/18 11:02	1

Lab Sample ID: LCS 480-411509/5
Matrix: Water
Analysis Batch: 411509

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	26.5		ug/L		106	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.2		ug/L		105	76 - 120
1,1,2-Trichloroethane	25.0	24.6		ug/L		99	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.3		ug/L		101	61 - 148
1,1-Dichloroethane	25.0	25.6		ug/L		102	77 - 120
1,1-Dichloroethene	25.0	25.0		ug/L		100	66 - 127
1,2,4-Trichlorobenzene	25.0	27.4		ug/L		109	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	26.3		ug/L		105	56 - 134
1,2-Dibromoethane	25.0	26.4		ug/L		106	77 - 120
1,2-Dichlorobenzene	25.0	26.6		ug/L		106	80 - 124
1,2-Dichloroethane	25.0	24.4		ug/L		98	75 - 120
1,2-Dichloropropane	25.0	26.6		ug/L		106	76 - 120
1,3-Dichlorobenzene	25.0	26.5		ug/L		106	77 - 120
1,4-Dichlorobenzene	25.0	25.5		ug/L		102	80 - 120
2-Hexanone	125	125		ug/L		100	65 - 127
2-Butanone (MEK)	125	132		ug/L		105	57 - 140
4-Methyl-2-pentanone (MIBK)	125	128		ug/L		102	71 - 125
Acetone	125	123		ug/L		98	56 - 142
Benzene	25.0	25.9		ug/L		104	71 - 124
Bromodichloromethane	25.0	25.8		ug/L		103	80 - 122
Bromoform	25.0	25.0		ug/L		100	61 - 132
Bromomethane	25.0	21.9		ug/L		87	55 - 144
Carbon disulfide	25.0	25.2		ug/L		101	59 - 134
Carbon tetrachloride	25.0	25.3		ug/L		101	72 - 134
Chlorobenzene	25.0	25.4		ug/L		101	80 - 120
Dibromochloromethane	25.0	26.2		ug/L		105	75 - 125
Chloroethane	25.0	23.5		ug/L		94	69 - 136
Chloroform	25.0	23.9		ug/L		95	73 - 127
Chloromethane	25.0	23.3		ug/L		93	68 - 124
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	74 - 124
cis-1,3-Dichloropropene	25.0	30.2		ug/L		121	74 - 124
Cyclohexane	25.0	26.6		ug/L		106	59 - 135
Dichlorodifluoromethane	25.0	24.6		ug/L		98	59 - 135
Ethylbenzene	25.0	25.2		ug/L		101	77 - 123
Isopropylbenzene	25.0	28.6		ug/L		114	77 - 122
Methyl acetate	50.0	48.3		ug/L		97	74 - 133
Methyl tert-butyl ether	25.0	26.1		ug/L		104	77 - 120
Methylcyclohexane	25.0	27.9		ug/L		112	68 - 134
Methylene Chloride	25.0	24.9		ug/L		100	75 - 124
Styrene	25.0	25.4		ug/L		102	80 - 120
Tetrachloroethene	25.0	25.4		ug/L		102	74 - 122
Toluene	25.0	25.7		ug/L		103	80 - 122
trans-1,2-Dichloroethene	25.0	26.7		ug/L		107	73 - 127

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

Lab Sample ID: LCS 480-411509/5
Matrix: Water
Analysis Batch: 411509

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	25.0	27.3		ug/L		109	80 - 120
Trichloroethene	25.0	26.4		ug/L		106	74 - 123
Trichlorofluoromethane	25.0	24.8		ug/L		99	62 - 150
Vinyl chloride	25.0	25.1		ug/L		100	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 123*

Lab Sample ID: 480-134493-3 MS
Matrix: Water
Analysis Batch: 411509

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		25.0	28.8		ug/L		115	73 - 126
1,1,2,2-Tetrachloroethane	ND		25.0	28.4		ug/L		114	76 - 120
1,1,2-Trichloroethane	ND		25.0	25.8		ug/L		103	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	25.1		ug/L		100	61 - 148
1,1-Dichloroethane	ND		25.0	27.8		ug/L		111	77 - 120
1,1-Dichloroethene	ND		25.0	27.7		ug/L		111	66 - 127
1,2,4-Trichlorobenzene	ND		25.0	27.1		ug/L		108	79 - 122
1,2-Dibromo-3-Chloropropane	ND		25.0	27.7		ug/L		111	56 - 134
1,2-Dibromoethane	ND		25.0	28.5		ug/L		114	77 - 120
1,2-Dichlorobenzene	ND		25.0	27.3		ug/L		109	80 - 124
1,2-Dichloroethane	ND		25.0	26.1		ug/L		104	75 - 120
1,2-Dichloropropane	ND		25.0	28.8		ug/L		115	76 - 120
1,3-Dichlorobenzene	ND		25.0	28.8		ug/L		115	77 - 120
1,4-Dichlorobenzene	ND		25.0	26.7		ug/L		107	78 - 124
2-Hexanone	ND		125	148		ug/L		119	65 - 127
2-Butanone (MEK)	ND		125	164		ug/L		131	57 - 140
4-Methyl-2-pentanone (MIBK)	ND		125	140		ug/L		112	71 - 125
Acetone	ND		125	177		ug/L		142	56 - 142
Benzene	ND		25.0	28.8		ug/L		115	71 - 124
Bromodichloromethane	ND		25.0	28.2		ug/L		113	80 - 122
Bromoform	ND		25.0	25.8		ug/L		103	61 - 132
Bromomethane	ND		25.0	21.0		ug/L		84	55 - 144
Carbon disulfide	ND		25.0	26.8		ug/L		107	59 - 134
Carbon tetrachloride	ND		25.0	28.2		ug/L		113	72 - 134
Chlorobenzene	ND		25.0	26.7		ug/L		107	80 - 120
Dibromochloromethane	ND		25.0	28.4		ug/L		114	75 - 125
Chloroethane	ND		25.0	23.0		ug/L		92	69 - 136
Chloroform	ND		25.0	25.8		ug/L		103	73 - 127
Chloromethane	ND		25.0	20.4		ug/L		81	68 - 124
cis-1,2-Dichloroethene	ND		25.0	27.6		ug/L		110	74 - 124
cis-1,3-Dichloropropene	ND		25.0	29.1		ug/L		116	74 - 124

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

Lab Sample ID: 480-134493-3 MS
Matrix: Water
Analysis Batch: 411509

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	ND		25.0	26.6		ug/L		106	59 - 135
Dichlorodifluoromethane	ND		25.0	16.1		ug/L		64	59 - 135
Ethylbenzene	ND		25.0	26.8		ug/L		107	77 - 123
Isopropylbenzene	ND		25.0	30.6		ug/L		122	77 - 122
Methyl acetate	ND		50.0	50.5		ug/L		101	74 - 133
Methyl tert-butyl ether	ND		25.0	27.7		ug/L		111	77 - 120
Methylcyclohexane	ND		25.0	27.3		ug/L		109	68 - 134
Methylene Chloride	ND		25.0	29.8		ug/L		119	75 - 124
Styrene	ND		25.0	27.4		ug/L		110	80 - 120
Tetrachloroethene	ND		25.0	26.3		ug/L		105	74 - 122
Toluene	ND		25.0	28.4		ug/L		114	80 - 122
trans-1,2-Dichloroethene	ND		25.0	29.2		ug/L		117	73 - 127
trans-1,3-Dichloropropene	ND		25.0	25.6		ug/L		102	80 - 120
Trichloroethene	ND		25.0	28.4		ug/L		113	74 - 123
Trichlorofluoromethane	ND		25.0	23.7		ug/L		95	62 - 150
Vinyl chloride	ND		25.0	22.8		ug/L		91	65 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 123*

Lab Sample ID: 480-134493-3 MSD
Matrix: Water
Analysis Batch: 411509

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		25.0	26.8		ug/L		107	73 - 126	7	15
1,1,2,2-Tetrachloroethane	ND		25.0	28.0		ug/L		112	76 - 120	1	15
1,1,2-Trichloroethane	ND		25.0	26.5		ug/L		106	76 - 122	3	15
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	25.0		ug/L		100	61 - 148	0	20
1,1-Dichloroethane	ND		25.0	26.1		ug/L		105	77 - 120	6	20
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	66 - 127	8	16
1,2,4-Trichlorobenzene	ND		25.0	27.3		ug/L		109	79 - 122	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	27.1		ug/L		108	56 - 134	2	15
1,2-Dibromoethane	ND		25.0	27.6		ug/L		110	77 - 120	3	15
1,2-Dichlorobenzene	ND		25.0	26.8		ug/L		107	80 - 124	2	20
1,2-Dichloroethane	ND		25.0	25.4		ug/L		102	75 - 120	3	20
1,2-Dichloropropane	ND		25.0	26.5		ug/L		106	76 - 120	8	20
1,3-Dichlorobenzene	ND		25.0	28.0		ug/L		112	77 - 120	3	20
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	78 - 124	2	20
2-Hexanone	ND		125	148		ug/L		118	65 - 127	0	15
2-Butanone (MEK)	ND		125	151		ug/L		121	57 - 140	8	20
4-Methyl-2-pentanone (MIBK)	ND		125	140		ug/L		112	71 - 125	0	35
Acetone	ND		125	166		ug/L		133	56 - 142	7	15
Benzene	ND		25.0	27.0		ug/L		108	71 - 124	7	13

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

Lab Sample ID: 480-134493-3 MSD
Matrix: Water
Analysis Batch: 411509

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromodichloromethane	ND		25.0	26.8		ug/L		107	80 - 122	5	15
Bromoform	ND		25.0	26.7		ug/L		107	61 - 132	4	15
Bromomethane	ND		25.0	21.0		ug/L		84	55 - 144	0	15
Carbon disulfide	ND		25.0	24.3		ug/L		97	59 - 134	10	15
Carbon tetrachloride	ND		25.0	25.4		ug/L		102	72 - 134	11	15
Chlorobenzene	ND		25.0	27.5		ug/L		110	80 - 120	3	25
Dibromochloromethane	ND		25.0	28.5		ug/L		114	75 - 125	0	15
Chloroethane	ND		25.0	23.6		ug/L		95	69 - 136	3	15
Chloroform	ND		25.0	25.1		ug/L		101	73 - 127	3	20
Chloromethane	ND		25.0	19.8		ug/L		79	68 - 124	3	15
cis-1,2-Dichloroethene	ND		25.0	26.3		ug/L		105	74 - 124	5	15
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	74 - 124	5	15
Cyclohexane	ND		25.0	25.7		ug/L		103	59 - 135	3	20
Dichlorodifluoromethane	ND		25.0	16.5		ug/L		66	59 - 135	2	20
Ethylbenzene	ND		25.0	27.3		ug/L		109	77 - 123	2	15
Isopropylbenzene	ND		25.0	30.1		ug/L		120	77 - 122	2	20
Methyl acetate	ND		50.0	48.2		ug/L		96	74 - 133	5	20
Methyl tert-butyl ether	ND		25.0	26.0		ug/L		104	77 - 120	6	37
Methylcyclohexane	ND		25.0	26.9		ug/L		108	68 - 134	2	20
Methylene Chloride	ND		25.0	27.2		ug/L		109	75 - 124	9	15
Styrene	ND		25.0	27.7		ug/L		111	80 - 120	1	20
Tetrachloroethene	ND		25.0	27.5		ug/L		110	74 - 122	4	20
Toluene	ND		25.0	28.2		ug/L		113	80 - 122	1	15
trans-1,2-Dichloroethene	ND		25.0	27.2		ug/L		109	73 - 127	7	20
trans-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	80 - 120	6	15
Trichloroethene	ND		25.0	25.9		ug/L		104	74 - 123	9	16
Trichlorofluoromethane	ND		25.0	23.1		ug/L		93	62 - 150	2	20
Vinyl chloride	ND		25.0	21.4		ug/L		86	65 - 133	6	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Dibromofluoromethane (Surr)	*94*		*75 - 123*

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

Lab Sample ID: MB 480-410372/1-A
Matrix: Water
Analysis Batch: 410766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410372

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		04/23/18 14:26	04/25/18 21:36	1
bis (2-chloroisopropyl) ether	ND		5.0	0.52	ug/L		04/23/18 14:26	04/25/18 21:36	1
2,4,5-Trichlorophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/25/18 21:36	1
2,4,6-Trichlorophenol	ND		5.0	0.61	ug/L		04/23/18 14:26	04/25/18 21:36	1
2,4-Dichlorophenol	ND		5.0	0.51	ug/L		04/23/18 14:26	04/25/18 21:36	1
2,4-Dimethylphenol	ND		5.0	0.50	ug/L		04/23/18 14:26	04/25/18 21:36	1

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

Lab Sample ID: MB 480-410372/1-A
Matrix: Water
Analysis Batch: 410766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410372

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/25/18 21:36	1
2,4-Dinitrotoluene	ND		5.0	0.45	ug/L		04/23/18 14:26	04/25/18 21:36	1
2,6-Dinitrotoluene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/25/18 21:36	1
2-Chloronaphthalene	ND		5.0	0.46	ug/L		04/23/18 14:26	04/25/18 21:36	1
2-Chlorophenol	ND		5.0	0.53	ug/L		04/23/18 14:26	04/25/18 21:36	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		04/23/18 14:26	04/25/18 21:36	1
2-Methylphenol	ND		5.0	0.40	ug/L		04/23/18 14:26	04/25/18 21:36	1
2-Nitroaniline	ND		10	0.42	ug/L		04/23/18 14:26	04/25/18 21:36	1
2-Nitrophenol	ND		5.0	0.48	ug/L		04/23/18 14:26	04/25/18 21:36	1
3,3'-Dichlorobenzidine	ND		5.0	0.40	ug/L		04/23/18 14:26	04/25/18 21:36	1
3-Nitroaniline	ND		10	0.48	ug/L		04/23/18 14:26	04/25/18 21:36	1
4,6-Dinitro-2-methylphenol	ND		10	2.2	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Bromophenyl phenyl ether	ND		5.0	0.45	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Chloro-3-methylphenol	ND		5.0	0.45	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Chloroaniline	ND		5.0	0.59	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Chlorophenyl phenyl ether	ND		5.0	0.35	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Methylphenol	ND		10	0.36	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Nitroaniline	ND		10	0.25	ug/L		04/23/18 14:26	04/25/18 21:36	1
4-Nitrophenol	ND		10	1.5	ug/L		04/23/18 14:26	04/25/18 21:36	1
Acenaphthene	ND		5.0	0.41	ug/L		04/23/18 14:26	04/25/18 21:36	1
Acenaphthylene	ND		5.0	0.38	ug/L		04/23/18 14:26	04/25/18 21:36	1
Acetophenone	ND		5.0	0.54	ug/L		04/23/18 14:26	04/25/18 21:36	1
Anthracene	ND		5.0	0.28	ug/L		04/23/18 14:26	04/25/18 21:36	1
Atrazine	ND		5.0	0.46	ug/L		04/23/18 14:26	04/25/18 21:36	1
Benzaldehyde	ND		5.0	0.27	ug/L		04/23/18 14:26	04/25/18 21:36	1
Benzo(a)anthracene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/25/18 21:36	1
Benzo(a)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/25/18 21:36	1
Benzo(b)fluoranthene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/25/18 21:36	1
Benzo(g,h,i)perylene	ND		5.0	0.35	ug/L		04/23/18 14:26	04/25/18 21:36	1
Benzo(k)fluoranthene	ND		5.0	0.73	ug/L		04/23/18 14:26	04/25/18 21:36	1
Bis(2-chloroethoxy)methane	ND		5.0	0.35	ug/L		04/23/18 14:26	04/25/18 21:36	1
Bis(2-chloroethyl)ether	ND		5.0	0.40	ug/L		04/23/18 14:26	04/25/18 21:36	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		04/23/18 14:26	04/25/18 21:36	1
Butyl benzyl phthalate	ND		5.0	1.0	ug/L		04/23/18 14:26	04/25/18 21:36	1
Caprolactam	ND		5.0	2.2	ug/L		04/23/18 14:26	04/25/18 21:36	1
Carbazole	ND		5.0	0.30	ug/L		04/23/18 14:26	04/25/18 21:36	1
Chrysene	ND		5.0	0.33	ug/L		04/23/18 14:26	04/25/18 21:36	1
Di-n-butyl phthalate	ND		5.0	0.31	ug/L		04/23/18 14:26	04/25/18 21:36	1
Di-n-octyl phthalate	ND		5.0	0.47	ug/L		04/23/18 14:26	04/25/18 21:36	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		04/23/18 14:26	04/25/18 21:36	1
Dibenzofuran	ND		10	0.51	ug/L		04/23/18 14:26	04/25/18 21:36	1
Diethyl phthalate	ND		5.0	0.22	ug/L		04/23/18 14:26	04/25/18 21:36	1
Dimethyl phthalate	ND		5.0	0.36	ug/L		04/23/18 14:26	04/25/18 21:36	1
Fluoranthene	ND		5.0	0.40	ug/L		04/23/18 14:26	04/25/18 21:36	1
Fluorene	ND		5.0	0.36	ug/L		04/23/18 14:26	04/25/18 21:36	1
Hexachlorobenzene	ND		5.0	0.51	ug/L		04/23/18 14:26	04/25/18 21:36	1
Hexachlorobutadiene	ND		5.0	0.68	ug/L		04/23/18 14:26	04/25/18 21:36	1
Hexachlorocyclopentadiene	ND		5.0	0.59	ug/L		04/23/18 14:26	04/25/18 21:36	1

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

Lab Sample ID: MB 480-410372/1-A
Matrix: Water
Analysis Batch: 410766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410372

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	ND		5.0	0.59	ug/L		04/23/18 14:26	04/25/18 21:36	1
Indeno(1,2,3-cd)pyrene	ND		5.0	0.47	ug/L		04/23/18 14:26	04/25/18 21:36	1
Isophorone	ND		5.0	0.43	ug/L		04/23/18 14:26	04/25/18 21:36	1
N-Nitrosodi-n-propylamine	ND		5.0	0.54	ug/L		04/23/18 14:26	04/25/18 21:36	1
N-Nitrosodiphenylamine	ND		5.0	0.51	ug/L		04/23/18 14:26	04/25/18 21:36	1
Naphthalene	ND		5.0	0.76	ug/L		04/23/18 14:26	04/25/18 21:36	1
Nitrobenzene	ND		5.0	0.29	ug/L		04/23/18 14:26	04/25/18 21:36	1
Pentachlorophenol	ND		10	2.2	ug/L		04/23/18 14:26	04/25/18 21:36	1
Phenanthrene	ND		5.0	0.44	ug/L		04/23/18 14:26	04/25/18 21:36	1
Phenol	ND		5.0	0.39	ug/L		04/23/18 14:26	04/25/18 21:36	1
Pyrene	ND		5.0	0.34	ug/L		04/23/18 14:26	04/25/18 21:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*86*		*41 - 120*	*04/23/18 14:26*	*04/25/18 21:36*	*1*
2-Fluorobiphenyl	*90*		*48 - 120*	*04/23/18 14:26*	*04/25/18 21:36*	*1*
2-Fluorophenol	*71*		*35 - 120*	*04/23/18 14:26*	*04/25/18 21:36*	*1*
Nitrobenzene-d5	*87*		*46 - 120*	*04/23/18 14:26*	*04/25/18 21:36*	*1*
p-Terphenyl-d14	*103*		*59 - 136*	*04/23/18 14:26*	*04/25/18 21:36*	*1*
Phenol-d5	*53*		*22 - 120*	*04/23/18 14:26*	*04/25/18 21:36*	*1*

Lab Sample ID: LCS 480-410372/2-A
Matrix: Water
Analysis Batch: 410766

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biphenyl	32.0	26.4		ug/L		82	59 - 120
bis (2-chloroisopropyl) ether	32.0	23.4		ug/L		73	21 - 136
2,4,5-Trichlorophenol	32.0	28.1		ug/L		88	65 - 126
2,4,6-Trichlorophenol	32.0	28.5		ug/L		89	64 - 120
2,4-Dichlorophenol	32.0	26.8		ug/L		84	63 - 120
2,4-Dimethylphenol	32.0	26.7		ug/L		83	47 - 120
2,4-Dinitrophenol	64.0	61.7		ug/L		96	31 - 137
2,4-Dinitrotoluene	32.0	29.9		ug/L		93	69 - 120
2,6-Dinitrotoluene	32.0	29.0		ug/L		91	68 - 120
2-Chloronaphthalene	32.0	25.3		ug/L		79	58 - 120
2-Chlorophenol	32.0	24.9		ug/L		78	48 - 120
2-Methylnaphthalene	32.0	24.4		ug/L		76	59 - 120
2-Methylphenol	32.0	24.8		ug/L		78	39 - 120
2-Nitroaniline	32.0	27.1		ug/L		85	54 - 127
2-Nitrophenol	32.0	26.2		ug/L		82	52 - 125
3,3'-Dichlorobenzidine	64.0	56.5		ug/L		88	49 - 135
3-Nitroaniline	32.0	23.3		ug/L		73	51 - 120
4,6-Dinitro-2-methylphenol	64.0	61.2		ug/L		96	46 - 136
4-Bromophenyl phenyl ether	32.0	26.9		ug/L		84	65 - 120
4-Chloro-3-methylphenol	32.0	27.4		ug/L		86	61 - 123
4-Chloroaniline	32.0	18.0		ug/L		56	30 - 120
4-Chlorophenyl phenyl ether	32.0	26.1		ug/L		82	62 - 120
4-Methylphenol	32.0	24.3		ug/L		76	29 - 131

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

Lab Sample ID: LCS 480-410372/2-A
Matrix: Water
Analysis Batch: 410766

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Nitroaniline	32.0	27.3		ug/L		85	65 - 120
4-Nitrophenol	64.0	49.3		ug/L		77	45 - 120
Acenaphthene	32.0	26.1		ug/L		81	60 - 120
Acenaphthylene	32.0	27.2		ug/L		85	63 - 120
Acetophenone	32.0	26.1		ug/L		82	45 - 120
Anthracene	32.0	29.1		ug/L		91	67 - 120
Atrazine	64.0	73.2		ug/L		114	71 - 130
Benzaldehyde	64.0	43.9		ug/L		69	10 - 140
Benzo(a)anthracene	32.0	29.2		ug/L		91	70 - 121
Benzo(a)pyrene	32.0	28.2		ug/L		88	60 - 123
Benzo(b)fluoranthene	32.0	30.2		ug/L		95	66 - 126
Benzo(g,h,i)perylene	32.0	30.1		ug/L		94	66 - 150
Benzo(k)fluoranthene	32.0	29.8		ug/L		93	65 - 124
Bis(2-chloroethoxy)methane	32.0	25.8		ug/L		81	50 - 128
Bis(2-chloroethyl)ether	32.0	24.2		ug/L		76	44 - 120
Bis(2-ethylhexyl) phthalate	32.0	28.8		ug/L		90	63 - 139
Butyl benzyl phthalate	32.0	29.0		ug/L		91	70 - 129
Caprolactam	64.0	27.1		ug/L		42	22 - 120
Carbazole	32.0	29.9		ug/L		93	66 - 123
Chrysene	32.0	28.3		ug/L		88	69 - 120
Di-n-butyl phthalate	32.0	31.8		ug/L		99	69 - 131
Di-n-octyl phthalate	32.0	29.9		ug/L		94	63 - 140
Dibenz(a,h)anthracene	32.0	31.0		ug/L		97	65 - 135
Dibenzofuran	32.0	27.8		ug/L		87	66 - 120
Diethyl phthalate	32.0	29.5		ug/L		92	59 - 127
Dimethyl phthalate	32.0	29.6		ug/L		92	68 - 120
Fluoranthene	32.0	30.6		ug/L		96	69 - 126
Fluorene	32.0	27.3		ug/L		85	66 - 120
Hexachlorobenzene	32.0	27.1		ug/L		85	61 - 120
Hexachlorobutadiene	32.0	16.3		ug/L		51	35 - 120
Hexachlorocyclopentadiene	32.0	11.9		ug/L		37	31 - 120
Hexachloroethane	32.0	16.8		ug/L		52	43 - 120
Indeno(1,2,3-cd)pyrene	32.0	30.5		ug/L		95	69 - 146
Isophorone	32.0	27.3		ug/L		85	55 - 120
N-Nitrosodi-n-propylamine	32.0	25.1		ug/L		78	32 - 140
N-Nitrosodiphenylamine	32.0	27.8		ug/L		87	61 - 120
Naphthalene	32.0	24.9		ug/L		78	57 - 120
Nitrobenzene	32.0	25.6		ug/L		80	53 - 123
Pentachlorophenol	64.0	69.7		ug/L		109	29 - 136
Phenanthrene	32.0	28.9		ug/L		90	68 - 120
Phenol	32.0	17.0		ug/L		53	17 - 120
Pyrene	32.0	28.9		ug/L		90	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*99*		*41 - 120*
2-Fluorobiphenyl	*90*		*48 - 120*
2-Fluorophenol	*73*		*35 - 120*
Nitrobenzene-d5	*87*		*46 - 120*

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

Lab Sample ID: LCS 480-410372/2-A
Matrix: Water
Analysis Batch: 410766

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410372

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl-d14	*97*		*59 - 136*
Phenol-d5	*57*		*22 - 120*

Lab Sample ID: 480-134493-3 MS
Matrix: Water
Analysis Batch: 410780

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA
Prep Batch: 410372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Biphenyl	ND		32.0	25.7		ug/L		80	57 - 120
bis (2-chloroisopropyl) ether	ND		32.0	22.6		ug/L		71	28 - 121
2,4,5-Trichlorophenol	ND		32.0	28.2		ug/L		88	65 - 126
2,4,6-Trichlorophenol	ND		32.0	29.2		ug/L		91	64 - 120
2,4-Dichlorophenol	ND		32.0	26.2		ug/L		82	48 - 132
2,4-Dimethylphenol	ND		32.0	26.0		ug/L		81	39 - 130
2,4-Dinitrophenol	ND		64.0	60.3		ug/L		94	21 - 150
2,4-Dinitrotoluene	ND		32.0	30.0		ug/L		94	54 - 138
2,6-Dinitrotoluene	ND		32.0	28.9		ug/L		90	17 - 150
2-Chloronaphthalene	ND		32.0	24.3		ug/L		76	52 - 124
2-Chlorophenol	ND		32.0	24.1		ug/L		75	48 - 120
2-Methylnaphthalene	ND		32.0	23.8		ug/L		74	34 - 140
2-Methylphenol	ND		32.0	24.1		ug/L		75	46 - 120
2-Nitroaniline	ND		32.0	26.6		ug/L		83	44 - 136
2-Nitrophenol	ND		32.0	26.3		ug/L		82	38 - 141
3,3'-Dichlorobenzidine	ND		64.0	48.0		ug/L		75	10 - 150
3-Nitroaniline	ND		32.0	22.8		ug/L		71	32 - 150
4,6-Dinitro-2-methylphenol	ND		64.0	61.0		ug/L		95	38 - 150
4-Bromophenyl phenyl ether	ND		32.0	26.9		ug/L		84	63 - 126
4-Chloro-3-methylphenol	ND		32.0	27.3		ug/L		85	64 - 127
4-Chloroaniline	ND		32.0	17.7		ug/L		55	16 - 124
4-Chlorophenyl phenyl ether	ND		32.0	25.7		ug/L		80	61 - 120
4-Methylphenol	ND		32.0	23.4		ug/L		73	36 - 120
4-Nitroaniline	ND		32.0	25.3		ug/L		79	32 - 150
4-Nitrophenol	ND		64.0	48.7		ug/L		76	23 - 132
Acenaphthene	ND		32.0	25.6		ug/L		80	48 - 120
Acenaphthylene	ND		32.0	27.2		ug/L		85	63 - 120
Acetophenone	ND		32.0	25.6		ug/L		80	53 - 120
Anthracene	ND		32.0	28.7		ug/L		90	65 - 122
Atrazine	ND		64.0	73.9		ug/L		116	50 - 150
Benzaldehyde	ND		64.0	43.4		ug/L		68	10 - 150
Benzo(a)anthracene	ND		32.0	29.2		ug/L		91	43 - 124
Benzo(a)pyrene	ND		32.0	27.7		ug/L		87	23 - 125
Benzo(b)fluoranthene	ND		32.0	29.9		ug/L		93	27 - 127
Benzo(g,h,i)perylene	ND		32.0	29.1		ug/L		91	16 - 147
Benzo(k)fluoranthene	ND		32.0	29.4		ug/L		92	20 - 124
Bis(2-chloroethoxy)methane	ND		32.0	26.0		ug/L		81	44 - 128
Bis(2-chloroethyl)ether	ND		32.0	24.7		ug/L		77	45 - 120
Bis(2-ethylhexyl) phthalate	ND		32.0	29.0		ug/L		91	16 - 150
Butyl benzyl phthalate	ND		32.0	29.1		ug/L		91	51 - 140

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

Lab Sample ID: 480-134493-3 MS
Matrix: Water
Analysis Batch: 410780

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA
Prep Batch: 410372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Caprolactam	ND		64.0	26.5		ug/L		41	10 - 120
Carbazole	ND		32.0	30.2		ug/L		94	16 - 148
Chrysene	ND		32.0	28.9		ug/L		90	44 - 122
Di-n-butyl phthalate	ND		32.0	32.0		ug/L		100	65 - 129
Di-n-octyl phthalate	ND		32.0	29.5		ug/L		92	16 - 150
Dibenz(a,h)anthracene	ND		32.0	29.8		ug/L		93	16 - 139
Dibenzofuran	ND		32.0	27.5		ug/L		86	60 - 120
Diethyl phthalate	ND		32.0	30.1		ug/L		94	53 - 133
Dimethyl phthalate	ND		32.0	29.5		ug/L		92	59 - 123
Fluoranthene	ND		32.0	30.8		ug/L		96	63 - 129
Fluorene	ND		32.0	27.5		ug/L		86	62 - 120
Hexachlorobenzene	ND		32.0	26.7		ug/L		83	57 - 121
Hexachlorobutadiene	ND		32.0	17.7		ug/L		55	37 - 120
Hexachlorocyclopentadiene	ND		32.0	12.8		ug/L		40	21 - 120
Hexachloroethane	ND		32.0	17.5		ug/L		55	16 - 130
Indeno(1,2,3-cd)pyrene	ND		32.0	30.1		ug/L		94	16 - 140
Isophorone	ND		32.0	27.4		ug/L		85	48 - 133
N-Nitrosodi-n-propylamine	ND		32.0	24.9		ug/L		78	49 - 120
N-Nitrosodiphenylamine	ND		32.0	27.2		ug/L		85	39 - 138
Naphthalene	ND		32.0	24.3		ug/L		76	45 - 120
Nitrobenzene	ND		32.0	25.5		ug/L		80	45 - 123
Pentachlorophenol	ND		64.0	68.8		ug/L		108	23 - 149
Phenanthrene	ND		32.0	29.5		ug/L		92	65 - 122
Phenol	ND		32.0	16.2		ug/L		51	16 - 120
Pyrene	ND		32.0	29.4		ug/L		92	58 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol	*101*		*41 - 120*
2-Fluorobiphenyl	*88*		*48 - 120*
2-Fluorophenol	*68*		*35 - 120*
Nitrobenzene-d5	*86*		*46 - 120*
p-Terphenyl-d14	*89*		*59 - 136*
Phenol-d5	*53*		*22 - 120*

Lab Sample ID: 480-134493-3 MSD
Matrix: Water
Analysis Batch: 410780

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA
Prep Batch: 410372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biphenyl	ND		32.0	28.0		ug/L		88	57 - 120	9	20
bis (2-chloroisopropyl) ether	ND		32.0	24.4		ug/L		76	28 - 121	7	24
2,4,5-Trichlorophenol	ND		32.0	30.4		ug/L		95	65 - 126	7	18
2,4,6-Trichlorophenol	ND		32.0	30.2		ug/L		94	64 - 120	3	19
2,4-Dichlorophenol	ND		32.0	28.3		ug/L		88	48 - 132	8	19
2,4-Dimethylphenol	ND		32.0	27.5		ug/L		86	39 - 130	6	42
2,4-Dinitrophenol	ND		64.0	65.8		ug/L		103	21 - 150	9	22
2,4-Dinitrotoluene	ND		32.0	32.0		ug/L		100	54 - 138	6	20
2,6-Dinitrotoluene	ND		32.0	31.2		ug/L		98	17 - 150	8	15

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

Lab Sample ID: 480-134493-3 MSD | **Client Sample ID: WG-11109668-041818-SG-NCR5S**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 410780 | **Prep Batch: 410372**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chloronaphthalene	ND		32.0	26.8		ug/L		84	52 - 124	10	21
2-Chlorophenol	ND		32.0	25.9		ug/L		81	48 - 120	7	25
2-Methylnaphthalene	ND		32.0	26.3		ug/L		82	34 - 140	10	21
2-Methylphenol	ND		32.0	25.5		ug/L		80	46 - 120	6	27
2-Nitroaniline	ND		32.0	28.6		ug/L		89	44 - 136	7	15
2-Nitrophenol	ND		32.0	28.3		ug/L		88	38 - 141	7	18
3,3'-Dichlorobenzidine	ND		64.0	52.5		ug/L		82	10 - 150	9	25
3-Nitroaniline	ND		32.0	23.5		ug/L		73	32 - 150	3	19
4,6-Dinitro-2-methylphenol	ND		64.0	65.4		ug/L		102	38 - 150	7	15
4-Bromophenyl phenyl ether	ND		32.0	29.3		ug/L		91	63 - 126	8	15
4-Chloro-3-methylphenol	ND		32.0	29.0		ug/L		91	64 - 127	6	27
4-Chloroaniline	ND		32.0	18.8		ug/L		59	16 - 124	6	22
4-Chlorophenyl phenyl ether	ND		32.0	28.4		ug/L		89	61 - 120	10	16
4-Methylphenol	ND		32.0	24.8		ug/L		78	36 - 120	6	24
4-Nitroaniline	ND		32.0	27.0		ug/L		84	32 - 150	7	24
4-Nitrophenol	ND		64.0	50.8		ug/L		79	23 - 132	4	48
Acenaphthene	ND		32.0	27.6		ug/L		86	48 - 120	8	24
Acenaphthylene	ND		32.0	29.1		ug/L		91	63 - 120	7	18
Acetophenone	ND		32.0	27.5		ug/L		86	53 - 120	7	20
Anthracene	ND		32.0	30.6		ug/L		95	65 - 122	6	15
Atrazine	ND		64.0	77.4		ug/L		121	50 - 150	5	20
Benzaldehyde	ND		64.0	46.7		ug/L		73	10 - 150	7	20
Benzo(a)anthracene	ND		32.0	31.5		ug/L		98	43 - 124	8	15
Benzo(a)pyrene	ND		32.0	30.0		ug/L		94	23 - 125	8	15
Benzo(b)fluoranthene	ND		32.0	31.9		ug/L		100	27 - 127	6	15
Benzo(g,h,i)perylene	ND		32.0	32.2		ug/L		101	16 - 147	10	15
Benzo(k)fluoranthene	ND		32.0	32.0		ug/L		100	20 - 124	8	22
Bis(2-chloroethoxy)methane	ND		32.0	27.8		ug/L		87	44 - 128	7	17
Bis(2-chloroethyl)ether	ND		32.0	25.7		ug/L		80	45 - 120	4	21
Bis(2-ethylhexyl) phthalate	ND		32.0	30.7		ug/L		96	16 - 150	6	15
Butyl benzyl phthalate	ND		32.0	31.9		ug/L		100	51 - 140	9	16
Caprolactam	ND		64.0	27.1		ug/L		42	10 - 120	2	20
Carbazole	ND		32.0	32.0		ug/L		100	16 - 148	6	20
Chrysene	ND		32.0	30.7		ug/L		96	44 - 122	6	15
Di-n-butyl phthalate	ND		32.0	33.6		ug/L		105	65 - 129	5	15
Di-n-octyl phthalate	ND		32.0	31.7		ug/L		99	16 - 150	7	16
Dibenz(a,h)anthracene	ND		32.0	32.7		ug/L		102	16 - 139	9	15
Dibenzofuran	ND		32.0	29.7		ug/L		93	60 - 120	8	15
Diethyl phthalate	ND		32.0	31.2		ug/L		98	53 - 133	4	15
Dimethyl phthalate	ND		32.0	31.1		ug/L		97	59 - 123	5	15
Fluoranthene	ND		32.0	32.3		ug/L		101	63 - 129	5	15
Fluorene	ND		32.0	29.4		ug/L		92	62 - 120	7	15
Hexachlorobenzene	ND		32.0	28.9		ug/L		90	57 - 121	8	15
Hexachlorobutadiene	ND		32.0	19.7		ug/L		62	37 - 120	11	44
Hexachlorocyclopentadiene	ND		32.0	13.6		ug/L		42	21 - 120	6	49
Hexachloroethane	ND		32.0	19.8		ug/L		62	16 - 130	12	46
Indeno(1,2,3-cd)pyrene	ND		32.0	32.5		ug/L		101	16 - 140	8	15
Isophorone	ND		32.0	29.1		ug/L		91	48 - 133	6	17

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

Lab Sample ID: 480-134493-3 MSD
Matrix: Water
Analysis Batch: 410780

Client Sample ID: WG-11109668-041818-SG-NCR5S
Prep Type: Total/NA
Prep Batch: 410372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine	ND		32.0	26.6		ug/L		83	49 - 120	7	31
N-Nitrosodiphenylamine	ND		32.0	28.8		ug/L		90	39 - 138	6	15
Naphthalene	ND		32.0	26.3		ug/L		82	45 - 120	8	29
Nitrobenzene	ND		32.0	27.9		ug/L		87	45 - 123	9	24
Pentachlorophenol	ND		64.0	74.5		ug/L		116	23 - 149	8	37
Phenanthrene	ND		32.0	30.3		ug/L		95	65 - 122	3	15
Phenol	ND		32.0	17.3		ug/L		54	16 - 120	7	34
Pyrene	ND		32.0	32.1		ug/L		100	58 - 128	9	19

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*103*		*41 - 120*
2-Fluorobiphenyl	*95*		*48 - 120*
2-Fluorophenol	*74*		*35 - 120*
Nitrobenzene-d5	*95*		*46 - 120*
p-Terphenyl-d14	*100*		*59 - 136*
Phenol-d5	*57*		*22 - 120*

GC/MS VOA

Analysis Batch: 411509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134493-1	WG-11109668-041818-SG-NCR3S	Total/NA	Water	8260C	
480-134493-2	WG-11109668-041818-SG-NCR4S	Total/NA	Water	8260C	
480-134493-3	WG-11109668-041818-SG-NCR5S	Total/NA	Water	8260C	
480-134493-4	WG-11109668-041818-SG-NCR6S	Total/NA	Water	8260C	
480-134493-5	WG-11109668-041818-SG-NCR13S	Total/NA	Water	8260C	
480-134493-6	TB-11109668-041818-SG	Total/NA	Water	8260C	
MB 480-411509/7	Method Blank	Total/NA	Water	8260C	
LCS 480-411509/5	Lab Control Sample	Total/NA	Water	8260C	
480-134493-3 MS	WG-11109668-041818-SG-NCR5S	Total/NA	Water	8260C	
480-134493-3 MSD	WG-11109668-041818-SG-NCR5S	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 410372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134493-1	WG-11109668-041818-SG-NCR3S	Total/NA	Water	3510C	
480-134493-2	WG-11109668-041818-SG-NCR4S	Total/NA	Water	3510C	
480-134493-3	WG-11109668-041818-SG-NCR5S	Total/NA	Water	3510C	
480-134493-4	WG-11109668-041818-SG-NCR6S	Total/NA	Water	3510C	
480-134493-5	WG-11109668-041818-SG-NCR13S	Total/NA	Water	3510C	
MB 480-410372/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-410372/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-134493-3 MS	WG-11109668-041818-SG-NCR5S	Total/NA	Water	3510C	
480-134493-3 MSD	WG-11109668-041818-SG-NCR5S	Total/NA	Water	3510C	

Analysis Batch: 410766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-410372/1-A	Method Blank	Total/NA	Water	8270D	410372
LCS 480-410372/2-A	Lab Control Sample	Total/NA	Water	8270D	410372

Analysis Batch: 410780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134493-1	WG-11109668-041818-SG-NCR3S	Total/NA	Water	8270D	410372
480-134493-2	WG-11109668-041818-SG-NCR4S	Total/NA	Water	8270D	410372
480-134493-3	WG-11109668-041818-SG-NCR5S	Total/NA	Water	8270D	410372
480-134493-4	WG-11109668-041818-SG-NCR6S	Total/NA	Water	8270D	410372
480-134493-5	WG-11109668-041818-SG-NCR13S	Total/NA	Water	8270D	410372
480-134493-3 MS	WG-11109668-041818-SG-NCR5S	Total/NA	Water	8270D	410372
480-134493-3 MSD	WG-11109668-041818-SG-NCR5S	Total/NA	Water	8270D	410372

Lab Chronicle

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: WG-11109668-041818-SG-NCR3S — Lab Sample ID: 480-134493-1

Date Collected: 04/18/18 08:30 — **Matrix: Water**
Date Received: 04/18/18 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	411509	04/29/18 13:23	AMM	TAL BUF
Total/NA	Prep	3510C			410372	04/23/18 14:26	ATG	TAL BUF
Total/NA	Analysis	8270D		1	410780	04/26/18 02:57	PJQ	TAL BUF

Client Sample ID: WG-11109668-041818-SG-NCR4S — Lab Sample ID: 480-134493-2

Date Collected: 04/18/18 08:45 — **Matrix: Water**
Date Received: 04/18/18 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	411509	04/29/18 13:50	AMM	TAL BUF
Total/NA	Prep	3510C			410372	04/23/18 14:26	ATG	TAL BUF
Total/NA	Analysis	8270D		1	410780	04/26/18 03:26	PJQ	TAL BUF

Client Sample ID: WG-11109668-041818-SG-NCR5S — Lab Sample ID: 480-134493-3

Date Collected: 04/18/18 08:55 — **Matrix: Water**
Date Received: 04/18/18 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	411509	04/29/18 14:16	AMM	TAL BUF
Total/NA	Prep	3510C			410372	04/23/18 14:26	ATG	TAL BUF
Total/NA	Analysis	8270D		1	410780	04/26/18 02:28	PJQ	TAL BUF

Client Sample ID: WG-11109668-041818-SG-NCR6S — Lab Sample ID: 480-134493-4

Date Collected: 04/18/18 09:10 — **Matrix: Water**
Date Received: 04/18/18 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	411509	04/29/18 14:44	AMM	TAL BUF
Total/NA	Prep	3510C			410372	04/23/18 14:26	ATG	TAL BUF
Total/NA	Analysis	8270D		1	410780	04/26/18 03:54	PJQ	TAL BUF

Client Sample ID: WG-11109668-041818-SG-NCR13S — Lab Sample ID: 480-134493-5

Date Collected: 04/18/18 09:10 — **Matrix: Water**
Date Received: 04/18/18 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	411509	04/29/18 15:10	AMM	TAL BUF
Total/NA	Prep	3510C			410372	04/23/18 14:26	ATG	TAL BUF
Total/NA	Analysis	8270D		1	410780	04/26/18 04:23	PJQ	TAL BUF

Lab Chronicle

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Client Sample ID: TB-11109668-041818-SG
Date Collected: 04/18/18 00:00
Date Received: 04/18/18 11:00

Lab Sample ID: 480-134493-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	411509	04/29/18 15:37	AMM	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134493-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-134493-1	WG-11109668-041818-SG-NCR3S	Water	04/18/18 08:30	04/18/18 11:00
480-134493-2	WG-11109668-041818-SG-NCR4S	Water	04/18/18 08:45	04/18/18 11:00
480-134493-3	WG-11109668-041818-SG-NCR5S	Water	04/18/18 08:55	04/18/18 11:00
480-134493-4	WG-11109668-041818-SG-NCR6S	Water	04/18/18 09:10	04/18/18 11:00
480-134493-5	WG-11109668-041818-SG-NCR13S	Water	04/18/18 09:10	04/18/18 11:00
480-134493-6	TB-11109668-041818-SG	Water	04/18/18 00:00	04/18/18 11:00

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
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480-134493 COC

Client Information	Sampler: D. Tyran S. Gardner	Lab PM:	Carrier Tracking No(s):	COC No: 480-112158-26024.1
Client Contact: Mr. Paul McMahon	Phone: 716-297-6150	E-Mail:		Page: Page 1 of 1
Company: GHD Services Inc.				Job #:
Address: 2055 Niagara Falls Blvd., Suite 3	Due Date Requested:			
City: Niagara Falls	TAT Requested (days): 14			
State, Zip: NY, 14304	PO #:			
Phone: 716-297-6150	WO #:			
Email: paul.mcmahon@ghd.com	Project #: 11109668-01			
Project Name: 1109668, Niagara County Refuse Landfill	SSOW#: #1109668-002			
Site:				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - Site-Specific VOCs	6010C, 7470A	8260C - Site-Specific VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A		
WG-1109668-041818-SG-NCR35	4-18-18	0830	G	Water	N		X	X	X	6	
WG-1109668-041818-SG-NCR45	4-18-18	0845	G	Water	N		X	X	X	6	
WG-1109668-041818-SG-NCR55	4-18-18	0855	G	Water	N	Y	X	X	X	18	MS/MSD
WG-1109668-041818-SG-NCR65	4-18-18	0910	G	Water	N		X	X	X	6	
WG-1109668-041818-SG-NCR135	4-18-18	0910	G	Water	N		X	X	X	6	
TB-1109668-041818-SG	4-18-18	—	G	Water	N				X	1	
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 4-18-18/1100	Company: GHD	Received by:	Date/Time: 4/18/18 1100	Company: TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 3.6

Ver: 08/04/2016

5/1/2018

Login Sample Receipt Checklist

Client: N Tonawanda Water Works

Job Number: 480-134493-1

Login Number: 134493

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wallace, Cameron

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	GHD
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

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ANALYTICAL REPORT

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

TestAmerica Job ID: 480-134747-1
Client Project/Site: City of North Tonawanda - NCRS

For:
N Tonawanda Water Works
830 River Road
North Tonawanda, New York 14120

Attn: Michael W Gibbons

Joseph V. Giacomazza

Authorized for release by:
5/11/2018 11:43:54 AM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

Table of Contents

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

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

Case Narrative

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Job ID: 480-134747-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-134747-1

Receipt
The samples were received on 4/24/2018 2:44 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

Metals
Method(s) 6010C: The laboratory control sample duplicate (LCSD) for preparation batch 480-411142 and analytical batch 480-411609 recovered outside control limits for the following analytes: Total Calcium, Cadmium, Iron, and Zinc. These analytes recovered within control limits in the laboratory control sample (LCS), therefore data for associated sample WG-11109668-042418-SG-NCR4S (480-134747-2), WG-11109668-042418-SG-NCR5S (480-134747-3), WG-11109668-042418-SG-NCR6S (480-134747-4) and WG-11109668-042418-SG-NCR13S (480-134747-5) was accepted.

Method(s) 6010C: The method blank for preparation batch 480-411142 and analytical batch 480-411609 contained Total Manganese above the reporting limit (RL). Associated sample(s) WG-11109668-042418-SG-NCR4S (480-134747-2), WG-11109668-042418-SG-NCR5S (480-134747-3), WG-11109668-042418-SG-NCR6S (480-134747-4) and WG-11109668-042418-SG-NCR13S (480-134747-5) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010C: The recovery of Post Spike, (480-134747-B-3-A PDS), in batch 480-410943 exhibited results outside the quality control limits for Dissolved Calcium. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

Method(s) 6010C: The % recovery of Post Spike, (480-134747-A-1-E PDS), in batch 480-413133 exhibited a result outside the quality control limits for Total Calcium. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

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

Detection Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Client Sample ID: WG-11109668-042418-SG-NCR3S — Lab Sample ID: 480-134747-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.26		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.037		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	99.9		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0030	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Copper	0.0040	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.35		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	49.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0060	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0050	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	2.1		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	5.6		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.021		0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.041		0.0020	0.00070	mg/L	1		6010C	Dissolved
Cadmium	0.00051	J	0.0020	0.00050	mg/L	1		6010C	Dissolved
Calcium	118		0.50	0.10	mg/L	1		6010C	Dissolved
Copper	0.0042	J	0.010	0.0016	mg/L	1		6010C	Dissolved
Iron	0.053		0.050	0.019	mg/L	1		6010C	Dissolved
Magnesium	59.3		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.019	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0054	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	1.7		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	6.9		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.023		0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: WG-11109668-042418-SG-NCR4S — Lab Sample ID: 480-134747-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7.2		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.081		0.0020	0.00070	mg/L	1		6010C	Total/NA
Beryllium	0.00033	J	0.0020	0.00030	mg/L	1		6010C	Total/NA
Calcium	159	*	0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0067		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.00072	J	0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.011		0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	25.5	*	0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.014		0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	50.9		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.53	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0052	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	8.8		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	24.7		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0034	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.37	* B	0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.058		0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	153		0.50	0.10	mg/L	1		6010C	Dissolved
Iron	1.2		0.050	0.019	mg/L	1		6010C	Dissolved
Lead	0.0033	J	0.010	0.0030	mg/L	1		6010C	Dissolved
Magnesium	51.5		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.51	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0018	J	0.010	0.0013	mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: WG-11109668-042418-SG-NCR4S (Continued)

Lab Sample ID: 480-134747-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	8.7		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	26.4		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0084	J	0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: WG-11109668-042418-SG-NCR5S

Lab Sample ID: 480-134747-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	2.9		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.20		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	104	*	0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0098		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.00066	J	0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.0048	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	2.1	*	0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.0069	J	0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	55.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.088	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0082	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.86		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	7.3		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0029	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.014	* B	0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.16		0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	92.4		0.50	0.10	mg/L	1		6010C	Dissolved
Iron	0.019	J	0.050	0.019	mg/L	1		6010C	Dissolved
Magnesium	52.1		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.055	B F1	0.0030	0.00040	mg/L	1		6010C	Dissolved
Potassium	0.28	J	0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	7.0		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0035	J	0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: WG-11109668-042418-SG-NCR6S

Lab Sample ID: 480-134747-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.35		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.056		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	157	*	0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0030	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Copper	0.0020	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.49	*	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	65.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.040	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0026	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.90		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	10.8		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0062	J * B	0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.053		0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	149		0.50	0.10	mg/L	1		6010C	Dissolved
Iron	0.039	J	0.050	0.019	mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: WG-11109668-042418-SG-NCR6S (Continued)

Lab Sample ID: 480-134747-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	62.4		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.031	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0014	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	0.78		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	9.8		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0028	J	0.010	0.0015	mg/L	1		6010C	Dissolved

Client Sample ID: WG-11109668-042418-SG-NCR13S

Lab Sample ID: 480-134747-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.25		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.053		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	158	*	0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0033	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Copper	0.0016	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.54	*	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	67.4		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.053	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0025	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.83		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	12.0		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0031	J * B	0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.043		0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	157		0.50	0.10	mg/L	1		6010C	Dissolved
Iron	0.34		0.050	0.019	mg/L	1		6010C	Dissolved
Lead	0.0047	J	0.010	0.0030	mg/L	1		6010C	Dissolved
Magnesium	77.1		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.11	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0024	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	0.66		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	18.4		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0051	J	0.010	0.0015	mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: WG-11109668-042418-SG-NCR3S
Lab Sample ID: 480-134747-1
Date Collected: 04/24/18 13:00
Matrix: Water
Date Received: 04/24/18 14:44

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.26**		0.20	0.060	mg/L		04/27/18 09:15	04/28/18 02:30	1
Antimony	ND		0.020	0.0068	mg/L		04/27/18 09:15	04/28/18 02:30	1
Barium	**0.037**		0.0020	0.00070	mg/L		04/27/18 09:15	04/28/18 02:30	1
Beryllium	ND		0.0020	0.00030	mg/L		04/27/18 09:15	04/28/18 02:30	1
Cadmium	ND		0.0020	0.00050	mg/L		05/08/18 12:19	05/10/18 13:36	1
Calcium	**99.9**		0.50	0.10	mg/L		05/08/18 12:19	05/09/18 21:40	1
Chromium	**0.0030**	**J**	0.0040	0.0010	mg/L		04/27/18 09:15	04/28/18 02:30	1
Cobalt	ND		0.0040	0.00063	mg/L		04/27/18 09:15	04/28/18 02:30	1
Copper	**0.0040**	**J**	0.010	0.0016	mg/L		04/27/18 09:15	04/28/18 02:30	1
Iron	**0.35**		0.050	0.019	mg/L		05/08/18 12:19	05/09/18 21:40	1
Lead	ND		0.010	0.0030	mg/L		04/27/18 09:15	04/28/18 02:30	1
Magnesium	**49.0**		0.20	0.043	mg/L		04/27/18 09:15	04/28/18 02:30	1
Manganese	**0.0060**	**B**	0.0030	0.00040	mg/L		05/08/18 12:19	05/09/18 21:40	1
Nickel	**0.0050**	**J**	0.010	0.0013	mg/L		04/27/18 09:15	04/28/18 02:30	1
Potassium	**2.1**		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 02:30	1
Selenium	ND		0.025	0.0087	mg/L		04/27/18 09:15	04/28/18 02:30	1
Silver	ND		0.0060	0.0017	mg/L		04/27/18 09:15	04/28/18 02:30	1
Sodium	**5.6**		1.0	0.32	mg/L		04/27/18 09:15	04/28/18 02:30	1
Thallium	ND		0.020	0.010	mg/L		04/27/18 09:15	04/28/18 02:30	1
Vanadium	ND		0.0050	0.0015	mg/L		04/27/18 09:15	04/28/18 02:30	1
Zinc	**0.021**		0.010	0.0015	mg/L		05/08/18 12:19	05/09/18 21:40	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/26/18 08:09	05/01/18 19:39	1
Antimony	ND		0.020	0.0068	mg/L		04/26/18 08:09	05/01/18 19:39	1
Arsenic	ND		0.015	0.0056	mg/L		04/26/18 08:09	05/01/18 19:39	1
Barium	**0.041**		0.0020	0.00070	mg/L		04/26/18 08:09	05/01/18 19:39	1
Beryllium	ND		0.0020	0.00030	mg/L		04/26/18 08:09	05/01/18 19:39	1
Cadmium	**0.00051**	**J**	0.0020	0.00050	mg/L		04/26/18 08:09	05/01/18 19:39	1
Calcium	**118**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:39	1
Chromium	ND		0.0040	0.0010	mg/L		04/26/18 08:09	05/01/18 19:39	1
Cobalt	ND		0.0040	0.00063	mg/L		04/26/18 08:09	05/01/18 19:39	1
Copper	**0.0042**	**J**	0.010	0.0016	mg/L		04/26/18 08:09	05/01/18 19:39	1
Iron	**0.053**		0.050	0.019	mg/L		04/26/18 08:09	05/01/18 19:39	1
Lead	ND		0.010	0.0030	mg/L		04/26/18 08:09	05/01/18 19:39	1
Magnesium	**59.3**		0.20	0.043	mg/L		04/26/18 08:09	05/01/18 19:39	1
Manganese	**0.019**	**B**	0.0030	0.00040	mg/L		04/26/18 08:09	05/01/18 19:39	1
Nickel	**0.0054**	**J**	0.010	0.0013	mg/L		04/26/18 08:09	05/01/18 19:39	1
Potassium	**1.7**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:39	1
Selenium	ND		0.025	0.0087	mg/L		04/26/18 08:09	05/01/18 19:39	1
Silver	ND		0.0060	0.0017	mg/L		04/26/18 08:09	05/01/18 19:39	1
Sodium	**6.9**		1.0	0.32	mg/L		04/26/18 08:09	05/01/18 19:39	1
Thallium	ND		0.020	0.010	mg/L		04/26/18 08:09	05/01/18 19:39	1
Vanadium	ND		0.0050	0.0015	mg/L		04/26/18 08:09	05/01/18 19:39	1
Zinc	**0.023**		0.010	0.0015	mg/L		04/26/18 08:09	05/01/18 19:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/01/18 13:10	05/01/18 16:27	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/07/18 12:50	05/07/18 17:59	1

Client Sample ID: WG-11109668-042418-SG-NCR4S

Lab Sample ID: 480-134747-2

Date Collected: 04/24/18 13:15

Matrix: Water

Date Received: 04/24/18 14:44

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7.2**		0.20	0.060	mg/L		04/27/18 09:15	04/28/18 02:45	1
Antimony	ND		0.020	0.0068	mg/L		04/27/18 09:15	04/28/18 02:45	1
Barium	**0.081**		0.0020	0.00070	mg/L		04/27/18 09:15	04/28/18 02:45	1
Beryllium	**0.00033**	**J**	0.0020	0.00030	mg/L		04/27/18 09:15	04/28/18 02:45	1
Cadmium	ND	*	0.0020	0.00050	mg/L		04/27/18 09:15	04/28/18 02:45	1
Calcium	**159**	*	0.50	0.10	mg/L		04/27/18 09:15	04/28/18 02:45	1
Chromium	**0.0067**		0.0040	0.0010	mg/L		04/27/18 09:15	04/28/18 02:45	1
Cobalt	**0.00072**	**J**	0.0040	0.00063	mg/L		04/27/18 09:15	04/28/18 02:45	1
Copper	**0.011**		0.010	0.0016	mg/L		04/27/18 09:15	04/28/18 02:45	1
Iron	**25.5**	*	0.050	0.019	mg/L		04/27/18 09:15	04/28/18 02:45	1
Lead	**0.014**		0.010	0.0030	mg/L		04/27/18 09:15	04/28/18 02:45	1
Magnesium	**50.9**		0.20	0.043	mg/L		04/27/18 09:15	04/28/18 02:45	1
Manganese	**0.53**	**B**	0.0030	0.00040	mg/L		04/27/18 09:15	04/28/18 02:45	1
Nickel	**0.0052**	**J**	0.010	0.0013	mg/L		04/27/18 09:15	04/28/18 02:45	1
Potassium	**8.8**		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 02:45	1
Selenium	ND		0.025	0.0087	mg/L		04/27/18 09:15	04/28/18 02:45	1
Silver	ND		0.0060	0.0017	mg/L		04/27/18 09:15	04/28/18 02:45	1
Sodium	**24.7**		1.0	0.32	mg/L		04/27/18 09:15	04/28/18 02:45	1
Thallium	ND		0.020	0.010	mg/L		04/27/18 09:15	04/28/18 02:45	1
Vanadium	**0.0034**	**J**	0.0050	0.0015	mg/L		04/27/18 09:15	04/28/18 02:45	1
Zinc	**0.37**	*** B**	0.010	0.0015	mg/L		04/27/18 09:15	04/28/18 02:45	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/26/18 08:09	05/01/18 19:43	1
Antimony	ND		0.020	0.0068	mg/L		04/26/18 08:09	05/01/18 19:43	1
Arsenic	ND		0.015	0.0056	mg/L		04/26/18 08:09	05/01/18 19:43	1
Barium	**0.058**		0.0020	0.00070	mg/L		04/26/18 08:09	05/01/18 19:43	1
Beryllium	ND		0.0020	0.00030	mg/L		04/26/18 08:09	05/01/18 19:43	1
Cadmium	ND		0.0020	0.00050	mg/L		04/26/18 08:09	05/01/18 19:43	1
Calcium	**153**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:43	1
Chromium	ND		0.0040	0.0010	mg/L		04/26/18 08:09	05/01/18 19:43	1
Cobalt	ND		0.0040	0.00063	mg/L		04/26/18 08:09	05/01/18 19:43	1
Copper	ND		0.010	0.0016	mg/L		04/26/18 08:09	05/01/18 19:43	1
Iron	**1.2**		0.050	0.019	mg/L		04/26/18 08:09	05/01/18 19:43	1
Lead	**0.0033**	**J**	0.010	0.0030	mg/L		04/26/18 08:09	05/01/18 19:43	1
Magnesium	**51.5**		0.20	0.043	mg/L		04/26/18 08:09	05/01/18 19:43	1
Manganese	**0.51**	**B**	0.0030	0.00040	mg/L		04/26/18 08:09	05/01/18 19:43	1
Nickel	**0.0018**	**J**	0.010	0.0013	mg/L		04/26/18 08:09	05/01/18 19:43	1
Potassium	**8.7**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:43	1
Selenium	ND		0.025	0.0087	mg/L		04/26/18 08:09	05/01/18 19:43	1
Silver	ND		0.0060	0.0017	mg/L		04/26/18 08:09	05/01/18 19:43	1
Sodium	**26.4**		1.0	0.32	mg/L		04/26/18 08:09	05/01/18 19:43	1
Thallium	ND		0.020	0.010	mg/L		04/26/18 08:09	05/01/18 19:43	1
Vanadium	ND		0.0050	0.0015	mg/L		04/26/18 08:09	05/01/18 19:43	1
Zinc	**0.0084**	**J**	0.010	0.0015	mg/L		04/26/18 08:09	05/01/18 19:43	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/01/18 13:10	05/01/18 16:37	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/07/18 12:50	05/07/18 18:00	1

Client Sample ID: WG-11109668-042418-SG-NCR5S

Lab Sample ID: 480-134747-3

Date Collected: 04/24/18 12:45

Matrix: Water

Date Received: 04/24/18 14:44

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**2.9**		0.20	0.060	mg/L		04/27/18 09:15	04/28/18 02:49	1
Antimony	ND		0.020	0.0068	mg/L		04/27/18 09:15	04/28/18 02:49	1
Barium	**0.20**		0.0020	0.00070	mg/L		04/27/18 09:15	04/28/18 02:49	1
Beryllium	ND		0.0020	0.00030	mg/L		04/27/18 09:15	04/28/18 02:49	1
Cadmium	ND	*	0.0020	0.00050	mg/L		04/27/18 09:15	04/28/18 02:49	1
Calcium	**104**	*	0.50	0.10	mg/L		04/27/18 09:15	04/28/18 02:49	1
Chromium	**0.0098**		0.0040	0.0010	mg/L		04/27/18 09:15	04/28/18 02:49	1
Cobalt	**0.00066**	J	0.0040	0.00063	mg/L		04/27/18 09:15	04/28/18 02:49	1
Copper	**0.0048**	J	0.010	0.0016	mg/L		04/27/18 09:15	04/28/18 02:49	1
Iron	**2.1**	*	0.050	0.019	mg/L		04/27/18 09:15	04/28/18 02:49	1
Lead	**0.0069**	J	0.010	0.0030	mg/L		04/27/18 09:15	04/28/18 02:49	1
Magnesium	**55.7**		0.20	0.043	mg/L		04/27/18 09:15	04/28/18 02:49	1
Manganese	**0.088**	B	0.0030	0.00040	mg/L		04/27/18 09:15	04/28/18 02:49	1
Nickel	**0.0082**	J	0.010	0.0013	mg/L		04/27/18 09:15	04/28/18 02:49	1
Potassium	**0.86**		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 02:49	1
Selenium	ND		0.025	0.0087	mg/L		04/27/18 09:15	04/28/18 02:49	1
Silver	ND		0.0060	0.0017	mg/L		04/27/18 09:15	04/28/18 02:49	1
Sodium	**7.3**		1.0	0.32	mg/L		04/27/18 09:15	04/28/18 02:49	1
Thallium	ND		0.020	0.010	mg/L		04/27/18 09:15	04/28/18 02:49	1
Vanadium	**0.0029**	J	0.0050	0.0015	mg/L		04/27/18 09:15	04/28/18 02:49	1
Zinc	**0.014**	* B	0.010	0.0015	mg/L		04/27/18 09:15	04/28/18 02:49	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/26/18 08:09	05/01/18 19:58	1
Antimony	ND		0.020	0.0068	mg/L		04/26/18 08:09	05/01/18 19:58	1
Arsenic	ND		0.015	0.0056	mg/L		04/26/18 08:09	05/01/18 19:58	1
Barium	**0.16**		0.0020	0.00070	mg/L		04/26/18 08:09	05/01/18 19:58	1
Beryllium	ND		0.0020	0.00030	mg/L		04/26/18 08:09	05/01/18 19:58	1
Cadmium	ND		0.0020	0.00050	mg/L		04/26/18 08:09	05/01/18 19:58	1
Calcium	**92.4**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:58	1
Chromium	ND		0.0040	0.0010	mg/L		04/26/18 08:09	05/01/18 19:58	1
Cobalt	ND		0.0040	0.00063	mg/L		04/26/18 08:09	05/01/18 19:58	1
Copper	ND		0.010	0.0016	mg/L		04/26/18 08:09	05/01/18 19:58	1
Iron	**0.019**	J	0.050	0.019	mg/L		04/26/18 08:09	05/01/18 19:58	1
Lead	ND		0.010	0.0030	mg/L		04/26/18 08:09	05/01/18 19:58	1
Magnesium	**52.1**		0.20	0.043	mg/L		04/26/18 08:09	05/01/18 19:58	1
Manganese	**0.055**	B F1	0.0030	0.00040	mg/L		04/26/18 08:09	05/01/18 19:58	1
Nickel	ND		0.010	0.0013	mg/L		04/26/18 08:09	05/01/18 19:58	1
Potassium	**0.28**	J	0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:58	1
Selenium	ND		0.025	0.0087	mg/L		04/26/18 08:09	05/01/18 19:58	1
Silver	ND		0.0060	0.0017	mg/L		04/26/18 08:09	05/01/18 19:58	1

Client Sample ID: WG-11109668-042418-SG-NCR5S

Lab Sample ID: 480-134747-3

Date Collected: 04/24/18 12:45

Matrix: Water

Date Received: 04/24/18 14:44

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	**7.0**		1.0	0.32	mg/L		04/26/18 08:09	05/01/18 19:58	1
Thallium	ND		0.020	0.010	mg/L		04/26/18 08:09	05/01/18 19:58	1
Vanadium	ND		0.0050	0.0015	mg/L		04/26/18 08:09	05/01/18 19:58	1
Zinc	**0.0035**	**J**	0.010	0.0015	mg/L		04/26/18 08:09	05/01/18 19:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/01/18 13:10	05/01/18 16:39	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/07/18 12:50	05/07/18 18:02	1

Client Sample ID: WG-11109668-042418-SG-NCR6S

Lab Sample ID: 480-134747-4

Date Collected: 04/24/18 12:30

Matrix: Water

Date Received: 04/24/18 14:44

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.35**		0.20	0.060	mg/L		04/27/18 09:15	04/28/18 03:07	1
Antimony	ND		0.020	0.0068	mg/L		04/27/18 09:15	04/28/18 03:07	1
Barium	**0.056**		0.0020	0.00070	mg/L		04/27/18 09:15	04/28/18 03:07	1
Beryllium	ND		0.0020	0.00030	mg/L		04/27/18 09:15	04/28/18 03:07	1
Cadmium	ND	*	0.0020	0.00050	mg/L		04/27/18 09:15	04/28/18 03:07	1
Calcium	**157**	*	0.50	0.10	mg/L		04/27/18 09:15	04/28/18 03:07	1
Chromium	**0.0030**	**J**	0.0040	0.0010	mg/L		04/27/18 09:15	04/28/18 03:07	1
Cobalt	ND		0.0040	0.00063	mg/L		04/27/18 09:15	04/28/18 03:07	1
Copper	**0.0020**	**J**	0.010	0.0016	mg/L		04/27/18 09:15	04/28/18 03:07	1
Iron	**0.49**	*	0.050	0.019	mg/L		04/27/18 09:15	04/28/18 03:07	1
Lead	ND		0.010	0.0030	mg/L		04/27/18 09:15	04/28/18 03:07	1
Magnesium	**65.3**		0.20	0.043	mg/L		04/27/18 09:15	04/28/18 03:07	1
Manganese	**0.040**	**B**	0.0030	0.00040	mg/L		04/27/18 09:15	04/28/18 03:07	1
Nickel	**0.0026**	**J**	0.010	0.0013	mg/L		04/27/18 09:15	04/28/18 03:07	1
Potassium	**0.90**		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 03:07	1
Selenium	ND		0.025	0.0087	mg/L		04/27/18 09:15	04/28/18 03:07	1
Silver	ND		0.0060	0.0017	mg/L		04/27/18 09:15	04/28/18 03:07	1
Sodium	**10.8**		1.0	0.32	mg/L		04/27/18 09:15	04/28/18 03:07	1
Thallium	ND		0.020	0.010	mg/L		04/27/18 09:15	04/28/18 03:07	1
Vanadium	ND		0.0050	0.0015	mg/L		04/27/18 09:15	04/28/18 03:07	1
Zinc	**0.0062**	**J * B**	0.010	0.0015	mg/L		04/27/18 09:15	04/28/18 03:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/26/18 08:09	05/01/18 20:17	1
Antimony	ND		0.020	0.0068	mg/L		04/26/18 08:09	05/01/18 20:17	1
Arsenic	ND		0.015	0.0056	mg/L		04/26/18 08:09	05/01/18 20:17	1
Barium	**0.053**		0.0020	0.00070	mg/L		04/26/18 08:09	05/01/18 20:17	1
Beryllium	ND		0.0020	0.00030	mg/L		04/26/18 08:09	05/01/18 20:17	1
Cadmium	ND		0.0020	0.00050	mg/L		04/26/18 08:09	05/01/18 20:17	1
Calcium	**149**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 20:17	1

Client Sample ID: WG-11109668-042418-SG-NCR6S

Lab Sample ID: 480-134747-4

Date Collected: 04/24/18 12:30
Matrix: Water
Date Received: 04/24/18 14:44

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0040	0.0010	mg/L		04/26/18 08:09	05/01/18 20:17	1
Cobalt	ND		0.0040	0.00063	mg/L		04/26/18 08:09	05/01/18 20:17	1
Copper	ND		0.010	0.0016	mg/L		04/26/18 08:09	05/01/18 20:17	1
Iron	**0.039**	**J**	0.050	0.019	mg/L		04/26/18 08:09	05/01/18 20:17	1
Lead	ND		0.010	0.0030	mg/L		04/26/18 08:09	05/01/18 20:17	1
Magnesium	**62.4**		0.20	0.043	mg/L		04/26/18 08:09	05/01/18 20:17	1
Manganese	**0.031**	**B**	0.0030	0.00040	mg/L		04/26/18 08:09	05/01/18 20:17	1
Nickel	**0.0014**	**J**	0.010	0.0013	mg/L		04/26/18 08:09	05/01/18 20:17	1
Potassium	**0.78**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 20:17	1
Selenium	ND		0.025	0.0087	mg/L		04/26/18 08:09	05/01/18 20:17	1
Silver	ND		0.0060	0.0017	mg/L		04/26/18 08:09	05/01/18 20:17	1
Sodium	**9.8**		1.0	0.32	mg/L		04/26/18 08:09	05/01/18 20:17	1
Thallium	ND		0.020	0.010	mg/L		04/26/18 08:09	05/01/18 20:17	1
Vanadium	ND		0.0050	0.0015	mg/L		04/26/18 08:09	05/01/18 20:17	1
Zinc	**0.0028**	**J**	0.010	0.0015	mg/L		04/26/18 08:09	05/01/18 20:17	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/01/18 13:10	05/01/18 16:44	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/07/18 12:50	05/07/18 18:10	1

Client Sample ID: WG-11109668-042418-SG-NCR13S

Lab Sample ID: 480-134747-5

Date Collected: 04/24/18 12:30
Matrix: Water
Date Received: 04/24/18 14:44

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.25**		0.20	0.060	mg/L		04/27/18 09:15	04/28/18 03:11	1
Antimony	ND		0.020	0.0068	mg/L		04/27/18 09:15	04/28/18 03:11	1
Barium	**0.053**		0.0020	0.00070	mg/L		04/27/18 09:15	04/28/18 03:11	1
Beryllium	ND		0.0020	0.00030	mg/L		04/27/18 09:15	04/28/18 03:11	1
Cadmium	ND	*	0.0020	0.00050	mg/L		04/27/18 09:15	04/28/18 03:11	1
Calcium	**158**	*	0.50	0.10	mg/L		04/27/18 09:15	04/28/18 03:11	1
Chromium	**0.0033**	**J**	0.0040	0.0010	mg/L		04/27/18 09:15	04/28/18 03:11	1
Cobalt	ND		0.0040	0.00063	mg/L		04/27/18 09:15	04/28/18 03:11	1
Copper	**0.0016**	**J**	0.010	0.0016	mg/L		04/27/18 09:15	04/28/18 03:11	1
Iron	**0.54**	*	0.050	0.019	mg/L		04/27/18 09:15	04/28/18 03:11	1
Lead	ND		0.010	0.0030	mg/L		04/27/18 09:15	04/28/18 03:11	1
Magnesium	**67.4**		0.20	0.043	mg/L		04/27/18 09:15	04/28/18 03:11	1
Manganese	**0.053**	**B**	0.0030	0.00040	mg/L		04/27/18 09:15	04/28/18 03:11	1
Nickel	**0.0025**	**J**	0.010	0.0013	mg/L		04/27/18 09:15	04/28/18 03:11	1
Potassium	**0.83**		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 03:11	1
Selenium	ND		0.025	0.0087	mg/L		04/27/18 09:15	04/28/18 03:11	1
Silver	ND		0.0060	0.0017	mg/L		04/27/18 09:15	04/28/18 03:11	1
Sodium	**12.0**		1.0	0.32	mg/L		04/27/18 09:15	04/28/18 03:11	1
Thallium	ND		0.020	0.010	mg/L		04/27/18 09:15	04/28/18 03:11	1
Vanadium	ND		0.0050	0.0015	mg/L		04/27/18 09:15	04/28/18 03:11	1

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Client Sample ID: WG-11109668-042418-SG-NCR13S — **Lab Sample ID: 480-134747-5**
Date Collected: 04/24/18 12:30 — **Matrix: Water**
Date Received: 04/24/18 14:44

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	**0.0031**	**J * B**	0.010	0.0015	mg/L		04/27/18 09:15	04/28/18 03:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/26/18 08:09	05/01/18 20:20	1
Antimony	ND		0.020	0.0068	mg/L		04/26/18 08:09	05/01/18 20:20	1
Arsenic	ND		0.015	0.0056	mg/L		04/26/18 08:09	05/01/18 20:20	1
Barium	**0.043**		0.0020	0.00070	mg/L		04/26/18 08:09	05/01/18 20:20	1
Beryllium	ND		0.0020	0.00030	mg/L		04/26/18 08:09	05/01/18 20:20	1
Cadmium	ND		0.0020	0.00050	mg/L		04/26/18 08:09	05/01/18 20:20	1
Calcium	**157**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 20:20	1
Chromium	ND		0.0040	0.0010	mg/L		04/26/18 08:09	05/01/18 20:20	1
Cobalt	ND		0.0040	0.00063	mg/L		04/26/18 08:09	05/01/18 20:20	1
Copper	ND		0.010	0.0016	mg/L		04/26/18 08:09	05/01/18 20:20	1
Iron	**0.34**		0.050	0.019	mg/L		04/26/18 08:09	05/01/18 20:20	1
Lead	**0.0047**	**J**	0.010	0.0030	mg/L		04/26/18 08:09	05/01/18 20:20	1
Magnesium	**77.1**		0.20	0.043	mg/L		04/26/18 08:09	05/01/18 20:20	1
Manganese	**0.11**	**B**	0.0030	0.00040	mg/L		04/26/18 08:09	05/01/18 20:20	1
Nickel	**0.0024**	**J**	0.010	0.0013	mg/L		04/26/18 08:09	05/01/18 20:20	1
Potassium	**0.66**		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 20:20	1
Selenium	ND		0.025	0.0087	mg/L		04/26/18 08:09	05/01/18 20:20	1
Silver	ND		0.0060	0.0017	mg/L		04/26/18 08:09	05/01/18 20:20	1
Sodium	**18.4**		1.0	0.32	mg/L		04/26/18 08:09	05/01/18 20:20	1
Thallium	ND		0.020	0.010	mg/L		04/26/18 08:09	05/01/18 20:20	1
Vanadium	ND		0.0050	0.0015	mg/L		04/26/18 08:09	05/01/18 20:20	1
Zinc	**0.0051**	**J**	0.010	0.0015	mg/L		04/26/18 08:09	05/01/18 20:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/01/18 13:10	05/01/18 16:46	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/07/18 12:50	05/07/18 18:12	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-411142/1-A
Matrix: Water
Analysis Batch: 411609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411142

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/27/18 09:15	04/28/18 01:15	1
Antimony	ND		0.020	0.0068	mg/L		04/27/18 09:15	04/28/18 01:15	1
Barium	ND		0.0020	0.00070	mg/L		04/27/18 09:15	04/28/18 01:15	1
Beryllium	ND		0.0020	0.00030	mg/L		04/27/18 09:15	04/28/18 01:15	1
Cadmium	ND		0.0020	0.00050	mg/L		04/27/18 09:15	04/28/18 01:15	1
Calcium	ND		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 01:15	1
Chromium	ND		0.0040	0.0010	mg/L		04/27/18 09:15	04/28/18 01:15	1
Cobalt	ND		0.0040	0.00063	mg/L		04/27/18 09:15	04/28/18 01:15	1
Copper	ND		0.010	0.0016	mg/L		04/27/18 09:15	04/28/18 01:15	1
Iron	ND		0.050	0.019	mg/L		04/27/18 09:15	04/28/18 01:15	1
Lead	ND		0.010	0.0030	mg/L		04/27/18 09:15	04/28/18 01:15	1
Magnesium	ND		0.20	0.043	mg/L		04/27/18 09:15	04/28/18 01:15	1
Manganese	0.00325		0.0030	0.00040	mg/L		04/27/18 09:15	04/28/18 01:15	1
Nickel	ND		0.010	0.0013	mg/L		04/27/18 09:15	04/28/18 01:15	1
Potassium	ND		0.50	0.10	mg/L		04/27/18 09:15	04/28/18 01:15	1
Selenium	ND		0.025	0.0087	mg/L		04/27/18 09:15	04/28/18 01:15	1
Silver	ND		0.0060	0.0017	mg/L		04/27/18 09:15	04/28/18 01:15	1
Sodium	ND		1.0	0.32	mg/L		04/27/18 09:15	04/28/18 01:15	1
Thallium	ND		0.020	0.010	mg/L		04/27/18 09:15	04/28/18 01:15	1
Vanadium	ND		0.0050	0.0015	mg/L		04/27/18 09:15	04/28/18 01:15	1
Zinc	0.00228	J	0.010	0.0015	mg/L		04/27/18 09:15	04/28/18 01:15	1

Lab Sample ID: LCS 480-411142/2-A
Matrix: Water
Analysis Batch: 411609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.79		mg/L		98	80 - 120
Antimony	0.200	0.202		mg/L		101	80 - 120
Barium	0.200	0.202		mg/L		101	80 - 120
Beryllium	0.200	0.204		mg/L		102	80 - 120
Cadmium	0.200	0.213		mg/L		107	80 - 120
Calcium	10.0	10.30		mg/L		103	80 - 120
Chromium	0.200	0.204		mg/L		102	80 - 120
Cobalt	0.200	0.199		mg/L		99	80 - 120
Copper	0.200	0.201		mg/L		101	80 - 120
Iron	10.0	10.74		mg/L		107	80 - 120
Lead	0.200	0.205		mg/L		103	80 - 120
Magnesium	10.0	10.29		mg/L		103	80 - 120
Manganese	0.200	0.208		mg/L		104	80 - 120
Nickel	0.200	0.201		mg/L		100	80 - 120
Potassium	10.0	10.14		mg/L		101	80 - 120
Selenium	0.200	0.205		mg/L		102	80 - 120
Silver	0.0500	0.0509		mg/L		102	80 - 120
Sodium	10.0	10.07		mg/L		101	80 - 120
Thallium	0.200	0.204		mg/L		102	80 - 120
Vanadium	0.200	0.203		mg/L		102	80 - 120
Zinc	0.200	0.215		mg/L		107	80 - 120

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

Lab Sample ID: LCSD 480-411142/25-A
Matrix: Water
Analysis Batch: 411609

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411142

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	10.0	9.93		mg/L		99	80 - 120	1	20
Antimony	0.200	0.235		mg/L		117	80 - 120	15	20
Barium	0.200	0.203		mg/L		102	80 - 120	1	20
Beryllium	0.200	0.236		mg/L		118	80 - 120	15	20
Cadmium	0.200	0.248	*	mg/L		124	80 - 120	15	20
Calcium	10.0	12.06	*	mg/L		121	80 - 120	16	20
Chromium	0.200	0.237		mg/L		118	80 - 120	15	20
Cobalt	0.200	0.230		mg/L		115	80 - 120	15	20
Copper	0.200	0.232		mg/L		116	80 - 120	14	20
Iron	10.0	12.39	*	mg/L		124	80 - 120	14	20
Lead	0.200	0.236		mg/L		118	80 - 120	14	20
Magnesium	10.0	11.96		mg/L		120	80 - 120	15	20
Manganese	0.200	0.241		mg/L		120	80 - 120	15	20
Nickel	0.200	0.232		mg/L		116	80 - 120	14	20
Potassium	10.0	10.23		mg/L		102	80 - 120	1	20
Selenium	0.200	0.239		mg/L		119	80 - 120	15	20
Silver	0.0500	0.0504		mg/L		101	80 - 120	1	20
Sodium	10.0	10.34		mg/L		103	80 - 120	3	20
Thallium	0.200	0.233		mg/L		117	80 - 120	13	20
Vanadium	0.200	0.233		mg/L		116	80 - 120	14	20
Zinc	0.200	0.249	*	mg/L		124	80 - 120	15	20

Lab Sample ID: 480-134747-3 MS
Matrix: Water
Analysis Batch: 411609

Client Sample ID: WG-11109668-042418-SG-NCR5S
Prep Type: Total/NA
Prep Batch: 411142

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	2.9		10.0	14.02		mg/L		112	75 - 125
Antimony	ND		0.200	0.208		mg/L		104	75 - 125
Barium	0.20		0.200	0.397		mg/L		99	75 - 125
Beryllium	ND		0.200	0.207		mg/L		104	75 - 125
Cadmium	ND	*	0.200	0.220		mg/L		110	75 - 125
Calcium	104	*	10.0	112.9	4	mg/L		93	75 - 125
Chromium	0.0098		0.200	0.212		mg/L		101	75 - 125
Cobalt	0.00066	J	0.200	0.205		mg/L		102	75 - 125
Copper	0.0048	J	0.200	0.209		mg/L		102	75 - 125
Iron	2.1	*	10.0	12.32		mg/L		102	75 - 125
Lead	0.0069	J	0.200	0.216		mg/L		104	75 - 125
Magnesium	55.7		10.0	64.39	4	mg/L		87	75 - 125
Manganese	0.088	B	0.200	0.254		mg/L		83	75 - 125
Nickel	0.0082	J	0.200	0.211		mg/L		101	75 - 125
Potassium	0.86		10.0	11.14		mg/L		103	75 - 125
Selenium	ND		0.200	0.205		mg/L		102	75 - 125
Silver	ND		0.0500	0.0525		mg/L		105	75 - 125
Sodium	7.3		10.0	17.39		mg/L		101	75 - 125
Thallium	ND		0.200	0.207		mg/L		103	75 - 125
Vanadium	0.0029	J	0.200	0.207		mg/L		102	75 - 125
Zinc	0.014	* B	0.200	0.221		mg/L		104	75 - 125

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

Lab Sample ID: 480-134747-3 MSD
Matrix: Water
Analysis Batch: 411609

Client Sample ID: WG-11109668-042418-SG-NCR5S
Prep Type: Total/NA
Prep Batch: 411142

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	2.9		10.0	14.83		mg/L		120	75 - 125	6	20
Antimony	ND		0.200	0.205		mg/L		103	75 - 125	1	20
Barium	0.20		0.200	0.397		mg/L		100	75 - 125	0	20
Beryllium	ND		0.200	0.206		mg/L		103	75 - 125	1	20
Cadmium	ND	*	0.200	0.220		mg/L		110	75 - 125	0	20
Calcium	104	*	10.0	111.4	4	mg/L		78	75 - 125	1	20
Chromium	0.0098		0.200	0.212		mg/L		101	75 - 125	0	20
Cobalt	0.00066	J	0.200	0.204		mg/L		102	75 - 125	0	20
Copper	0.0048	J	0.200	0.209		mg/L		102	75 - 125	0	20
Iron	2.1	*	10.0	12.65		mg/L		105	75 - 125	3	20
Lead	0.0069	J	0.200	0.217		mg/L		105	75 - 125	1	20
Magnesium	55.7		10.0	64.59	4	mg/L		89	75 - 125	0	20
Manganese	0.088	B	0.200	0.266		mg/L		89	75 - 125	4	20
Nickel	0.0082	J	0.200	0.211		mg/L		101	75 - 125	0	20
Potassium	0.86		10.0	11.19		mg/L		103	75 - 125	0	20
Selenium	ND		0.200	0.210		mg/L		105	75 - 125	2	20
Silver	ND		0.0500	0.0530		mg/L		106	75 - 125	1	20
Sodium	7.3		10.0	17.33		mg/L		100	75 - 125	0	20
Thallium	ND		0.200	0.205		mg/L		103	75 - 125	0	20
Vanadium	0.0029	J	0.200	0.207		mg/L		102	75 - 125	0	20
Zinc	0.014	* B	0.200	0.231		mg/L		108	75 - 125	4	20

Lab Sample ID: MB 480-413133/1-A
Matrix: Water
Analysis Batch: 413572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413133

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/08/18 12:19	05/09/18 21:18	1
Antimony	ND		0.020	0.0068	mg/L		05/08/18 12:19	05/09/18 21:18	1
Barium	ND		0.0020	0.00070	mg/L		05/08/18 12:19	05/09/18 21:18	1
Beryllium	ND		0.0020	0.00030	mg/L		05/08/18 12:19	05/09/18 21:18	1
Calcium	ND		0.50	0.10	mg/L		05/08/18 12:19	05/09/18 21:18	1
Chromium	ND		0.0040	0.0010	mg/L		05/08/18 12:19	05/09/18 21:18	1
Cobalt	ND		0.0040	0.00063	mg/L		05/08/18 12:19	05/09/18 21:18	1
Copper	ND		0.010	0.0016	mg/L		05/08/18 12:19	05/09/18 21:18	1
Iron	ND		0.050	0.019	mg/L		05/08/18 12:19	05/09/18 21:18	1
Lead	ND		0.010	0.0030	mg/L		05/08/18 12:19	05/09/18 21:18	1
Magnesium	ND		0.20	0.043	mg/L		05/08/18 12:19	05/09/18 21:18	1
Manganese	0.00151	J	0.0030	0.00040	mg/L		05/08/18 12:19	05/09/18 21:18	1
Nickel	ND		0.010	0.0013	mg/L		05/08/18 12:19	05/09/18 21:18	1
Potassium	ND		0.50	0.10	mg/L		05/08/18 12:19	05/09/18 21:18	1
Selenium	ND		0.025	0.0087	mg/L		05/08/18 12:19	05/09/18 21:18	1
Silver	ND		0.0060	0.0017	mg/L		05/08/18 12:19	05/09/18 21:18	1
Sodium	ND		1.0	0.32	mg/L		05/08/18 12:19	05/09/18 21:18	1
Thallium	ND		0.020	0.010	mg/L		05/08/18 12:19	05/09/18 21:18	1
Vanadium	ND		0.0050	0.0015	mg/L		05/08/18 12:19	05/09/18 21:18	1
Zinc	ND		0.010	0.0015	mg/L		05/08/18 12:19	05/09/18 21:18	1

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

Lab Sample ID: MB 480-413133/1-A
Matrix: Water
Analysis Batch: 413685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413133

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020	0.00050	mg/L		05/08/18 12:19	05/10/18 13:25	1

Lab Sample ID: LCS 480-413133/2-A
Matrix: Water
Analysis Batch: 413572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.83		mg/L		98	80 - 120
Antimony	0.200	0.213		mg/L		107	80 - 120
Barium	0.200	0.210		mg/L		105	80 - 120
Beryllium	0.200	0.198		mg/L		99	80 - 120
Calcium	10.0	10.10		mg/L		101	80 - 120
Chromium	0.200	0.202		mg/L		101	80 - 120
Cobalt	0.200	0.201		mg/L		101	80 - 120
Copper	0.200	0.203		mg/L		101	80 - 120
Iron	10.0	9.97		mg/L		100	80 - 120
Lead	0.200	0.199		mg/L		99	80 - 120
Magnesium	10.0	10.24		mg/L		102	80 - 120
Manganese	0.200	0.204		mg/L		102	80 - 120
Nickel	0.200	0.196		mg/L		98	80 - 120
Potassium	10.0	10.27		mg/L		103	80 - 120
Selenium	0.200	0.211		mg/L		105	80 - 120
Silver	0.0500	0.0526		mg/L		105	80 - 120
Sodium	10.0	10.01		mg/L		100	80 - 120
Thallium	0.200	0.196		mg/L		98	80 - 120
Vanadium	0.200	0.202		mg/L		101	80 - 120
Zinc	0.200	0.201		mg/L		101	80 - 120

Lab Sample ID: LCS 480-413133/2-A
Matrix: Water
Analysis Batch: 413685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.200	0.211		mg/L		106	80 - 120

Lab Sample ID: LCSD 480-413133/3-A
Matrix: Water
Analysis Batch: 413572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 413133

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	10.0	9.85		mg/L		98	80 - 120	0	20
Antimony	0.200	0.214		mg/L		107	80 - 120	0	20
Barium	0.200	0.208		mg/L		104	80 - 120	1	20
Beryllium	0.200	0.198		mg/L		99	80 - 120	0	20
Calcium	10.0	10.12		mg/L		101	80 - 120	0	20
Chromium	0.200	0.202		mg/L		101	80 - 120	0	20
Cobalt	0.200	0.201		mg/L		101	80 - 120	0	20
Copper	0.200	0.202		mg/L		101	80 - 120	0	20
Iron	10.0	9.97		mg/L		100	80 - 120	0	20

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

Lab Sample ID: LCSD 480-413133/3-A
Matrix: Water
Analysis Batch: 413572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 413133

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead			0.200	0.199		mg/L		100	80 - 120	0	20
Magnesium			10.0	10.29		mg/L		103	80 - 120	1	20
Manganese			0.200	0.204		mg/L		102	80 - 120	0	20
Nickel			0.200	0.196		mg/L		98	80 - 120	0	20
Potassium			10.0	10.23		mg/L		102	80 - 120	0	20
Selenium			0.200	0.212		mg/L		106	80 - 120	1	20
Silver			0.0500	0.0520		mg/L		104	80 - 120	1	20
Sodium			10.0	9.95		mg/L		99	80 - 120	1	20
Thallium			0.200	0.197		mg/L		98	80 - 120	0	20
Vanadium			0.200	0.201		mg/L		100	80 - 120	0	20
Zinc			0.200	0.204		mg/L		102	80 - 120	1	20

Lab Sample ID: LCSD 480-413133/3-A
Matrix: Water
Analysis Batch: 413685

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 413133

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium			0.200	0.215		mg/L		107	80 - 120	2	20

Lab Sample ID: MB 480-410943/1-A
Matrix: Water
Analysis Batch: 412579

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 410943

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		04/26/18 08:09	05/01/18 19:13	1
Antimony	ND		0.020	0.0068	mg/L		04/26/18 08:09	05/01/18 19:13	1
Arsenic	ND		0.015	0.0056	mg/L		04/26/18 08:09	05/01/18 19:13	1
Barium	ND		0.0020	0.00070	mg/L		04/26/18 08:09	05/01/18 19:13	1
Beryllium	ND		0.0020	0.00030	mg/L		04/26/18 08:09	05/01/18 19:13	1
Cadmium	ND		0.0020	0.00050	mg/L		04/26/18 08:09	05/01/18 19:13	1
Calcium	ND		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:13	1
Chromium	ND		0.0040	0.0010	mg/L		04/26/18 08:09	05/01/18 19:13	1
Cobalt	ND		0.0040	0.00063	mg/L		04/26/18 08:09	05/01/18 19:13	1
Copper	ND		0.010	0.0016	mg/L		04/26/18 08:09	05/01/18 19:13	1
Iron	ND		0.050	0.019	mg/L		04/26/18 08:09	05/01/18 19:13	1
Lead	ND		0.010	0.0030	mg/L		04/26/18 08:09	05/01/18 19:13	1
Magnesium	ND		0.20	0.043	mg/L		04/26/18 08:09	05/01/18 19:13	1
Manganese	0.00264	J	0.0030	0.00040	mg/L		04/26/18 08:09	05/01/18 19:13	1
Nickel	ND		0.010	0.0013	mg/L		04/26/18 08:09	05/01/18 19:13	1
Potassium	ND		0.50	0.10	mg/L		04/26/18 08:09	05/01/18 19:13	1
Selenium	ND		0.025	0.0087	mg/L		04/26/18 08:09	05/01/18 19:13	1
Silver	ND		0.0060	0.0017	mg/L		04/26/18 08:09	05/01/18 19:13	1
Sodium	ND		1.0	0.32	mg/L		04/26/18 08:09	05/01/18 19:13	1
Thallium	ND		0.020	0.010	mg/L		04/26/18 08:09	05/01/18 19:13	1
Vanadium	ND		0.0050	0.0015	mg/L		04/26/18 08:09	05/01/18 19:13	1
Zinc	ND		0.010	0.0015	mg/L		04/26/18 08:09	05/01/18 19:13	1

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

Lab Sample ID: LCS 480-410943/2-A
Matrix: Water
Analysis Batch: 412579

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 410943

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.57		mg/L		96	80 - 120
Antimony	0.200	0.202		mg/L		101	80 - 120
Arsenic	0.200	0.204		mg/L		102	80 - 120
Barium	0.200	0.206		mg/L		103	80 - 120
Beryllium	0.200	0.197		mg/L		99	80 - 120
Cadmium	0.200	0.209		mg/L		105	80 - 120
Calcium	10.0	9.86		mg/L		99	80 - 120
Chromium	0.200	0.203		mg/L		101	80 - 120
Cobalt	0.200	0.196		mg/L		98	80 - 120
Copper	0.200	0.202		mg/L		101	80 - 120
Iron	10.0	9.97		mg/L		100	80 - 120
Lead	0.200	0.208		mg/L		104	80 - 120
Magnesium	10.0	10.16		mg/L		102	80 - 120
Manganese	0.200	0.206		mg/L		103	80 - 120
Nickel	0.200	0.200		mg/L		100	80 - 120
Potassium	10.0	10.14		mg/L		101	80 - 120
Selenium	0.200	0.204		mg/L		102	80 - 120
Silver	0.0500	0.0510		mg/L		102	80 - 120
Sodium	10.0	10.32		mg/L		103	80 - 120
Thallium	0.200	0.202		mg/L		101	80 - 120
Vanadium	0.200	0.201		mg/L		101	80 - 120
Zinc	0.200	0.207		mg/L		104	80 - 120

Lab Sample ID: 480-134747-3 MS
Matrix: Water
Analysis Batch: 412579

Client Sample ID: WG-11109668-042418-SG-NCR5S
Prep Type: Dissolved
Prep Batch: 410943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		10.0	9.63		mg/L		96	75 - 125
Antimony	ND		0.200	0.204		mg/L		102	75 - 125
Arsenic	ND		0.200	0.211		mg/L		106	75 - 125
Barium	0.16		0.200	0.352		mg/L		97	75 - 125
Beryllium	ND		0.200	0.198		mg/L		99	75 - 125
Cadmium	ND		0.200	0.214		mg/L		107	75 - 125
Calcium	92.4		10.0	104.7	4	mg/L		123	75 - 125
Chromium	ND		0.200	0.198		mg/L		99	75 - 125
Cobalt	ND		0.200	0.198		mg/L		99	75 - 125
Copper	ND		0.200	0.203		mg/L		101	75 - 125
Iron	0.019	J	10.0	9.84		mg/L		98	75 - 125
Lead	ND		0.200	0.210		mg/L		105	75 - 125
Magnesium	52.1		10.0	66.54	4	mg/L		145	75 - 125
Manganese	0.055	B F1	0.200	0.351	F1	mg/L		148	75 - 125
Nickel	ND		0.200	0.204		mg/L		102	75 - 125
Potassium	0.28	J	10.0	10.77		mg/L		105	75 - 125
Selenium	ND		0.200	0.204		mg/L		102	75 - 125
Silver	ND		0.0500	0.0516		mg/L		103	75 - 125
Sodium	7.0		10.0	18.75		mg/L		117	75 - 125
Thallium	ND		0.200	0.201		mg/L		100	75 - 125

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

Lab Sample ID: 480-134747-3 MS — **Client Sample ID: WG-11109668-042418-SG-NCR5S**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 412579 — **Prep Batch: 410943**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	ND		0.200	0.203		mg/L		102	75 - 125
Zinc	0.0035	J	0.200	0.204		mg/L		100	75 - 125

Lab Sample ID: 480-134747-3 MSD — **Client Sample ID: WG-11109668-042418-SG-NCR5S**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 412579 — **Prep Batch: 410943**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		10.0	9.75		mg/L		97	75 - 125	1	20
Antimony	ND		0.200	0.204		mg/L		102	75 - 125	0	20
Arsenic	ND		0.200	0.208		mg/L		104	75 - 125	2	20
Barium	0.16		0.200	0.362		mg/L		102	75 - 125	3	20
Beryllium	ND		0.200	0.198		mg/L		99	75 - 125	0	20
Cadmium	ND		0.200	0.212		mg/L		106	75 - 125	1	20
Calcium	92.4		10.0	106.1	4	mg/L		137	75 - 125	1	20
Chromium	ND		0.200	0.201		mg/L		101	75 - 125	1	20
Cobalt	ND		0.200	0.197		mg/L		98	75 - 125	1	20
Copper	ND		0.200	0.203		mg/L		102	75 - 125	0	20
Iron	0.019	J	10.0	9.80		mg/L		98	75 - 125	0	20
Lead	ND		0.200	0.210		mg/L		105	75 - 125	0	20
Magnesium	52.1		10.0	65.31	4	mg/L		133	75 - 125	2	20
Manganese	0.055	B F1	0.200	0.288		mg/L		117	75 - 125	20	20
Nickel	ND		0.200	0.202		mg/L		101	75 - 125	1	20
Potassium	0.28	J	10.0	10.65		mg/L		104	75 - 125	1	20
Selenium	ND		0.200	0.207		mg/L		104	75 - 125	2	20
Silver	ND		0.0500	0.0510		mg/L		102	75 - 125	1	20
Sodium	7.0		10.0	18.11		mg/L		111	75 - 125	3	20
Thallium	ND		0.200	0.203		mg/L		101	75 - 125	1	20
Vanadium	ND		0.200	0.202		mg/L		101	75 - 125	1	20
Zinc	0.0035	J	0.200	0.205		mg/L		101	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-411847/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411974 — **Prep Batch: 411847**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/01/18 13:10	05/01/18 16:14	1

Lab Sample ID: LCS 480-411847/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411974 — **Prep Batch: 411847**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00622		mg/L		93	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 480-134747-1 MS — **Client Sample ID: WG-11109668-042418-SG-NCR3S**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411974 — **Prep Batch: 411847**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00667	0.00627		mg/L		94	80 - 120

Lab Sample ID: 480-134747-1 MSD — **Client Sample ID: WG-11109668-042418-SG-NCR3S**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411974 — **Prep Batch: 411847**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00667	0.00623		mg/L		93	80 - 120	1	20

Lab Sample ID: 480-134747-3 MS — **Client Sample ID: WG-11109668-042418-SG-NCR5S**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411974 — **Prep Batch: 411847**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00667	0.00632		mg/L		95	80 - 120

Lab Sample ID: 480-134747-3 MSD — **Client Sample ID: WG-11109668-042418-SG-NCR5S**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411974 — **Prep Batch: 411847**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00667	0.00638		mg/L		96	80 - 120	1	20

Lab Sample ID: MB 480-412935/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 413018 — **Prep Batch: 412935**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		05/07/18 12:50	05/07/18 17:56	1

Lab Sample ID: LCS 480-412935/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 413018 — **Prep Batch: 412935**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00590		mg/L		88	80 - 120

Lab Sample ID: 480-134747-3 MS — **Client Sample ID: WG-11109668-042418-SG-NCR5S**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 413018 — **Prep Batch: 412935**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00667	0.00602		mg/L		90	80 - 120

Lab Sample ID: 480-134747-3 MSD — **Client Sample ID: WG-11109668-042418-SG-NCR5S**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 413018 — **Prep Batch: 412935**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00667	0.00587		mg/L		88	80 - 120	3	20

Metals

Prep Batch: 410943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Dissolved	Water	3005A	
480-134747-2	WG-11109668-042418-SG-NCR4S	Dissolved	Water	3005A	
480-134747-3	WG-11109668-042418-SG-NCR5S	Dissolved	Water	3005A	
480-134747-4	WG-11109668-042418-SG-NCR6S	Dissolved	Water	3005A	
480-134747-5	WG-11109668-042418-SG-NCR13S	Dissolved	Water	3005A	
MB 480-410943/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 480-410943/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Dissolved	Water	3005A	
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Dissolved	Water	3005A	

Prep Batch: 411142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	3005A	
480-134747-2	WG-11109668-042418-SG-NCR4S	Total/NA	Water	3005A	
480-134747-3	WG-11109668-042418-SG-NCR5S	Total/NA	Water	3005A	
480-134747-4	WG-11109668-042418-SG-NCR6S	Total/NA	Water	3005A	
480-134747-5	WG-11109668-042418-SG-NCR13S	Total/NA	Water	3005A	
MB 480-411142/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-411142/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-411142/25-A	Lab Control Sample Dup	Total/NA	Water	3005A	
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Total/NA	Water	3005A	
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Total/NA	Water	3005A	

Analysis Batch: 411609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	6010C	411142
480-134747-2	WG-11109668-042418-SG-NCR4S	Total/NA	Water	6010C	411142
480-134747-3	WG-11109668-042418-SG-NCR5S	Total/NA	Water	6010C	411142
480-134747-4	WG-11109668-042418-SG-NCR6S	Total/NA	Water	6010C	411142
480-134747-5	WG-11109668-042418-SG-NCR13S	Total/NA	Water	6010C	411142
MB 480-411142/1-A	Method Blank	Total/NA	Water	6010C	411142
LCS 480-411142/2-A	Lab Control Sample	Total/NA	Water	6010C	411142
LCSD 480-411142/25-A	Lab Control Sample Dup	Total/NA	Water	6010C	411142
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Total/NA	Water	6010C	411142
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Total/NA	Water	6010C	411142

Prep Batch: 411847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	7470A	
480-134747-2	WG-11109668-042418-SG-NCR4S	Total/NA	Water	7470A	
480-134747-3	WG-11109668-042418-SG-NCR5S	Total/NA	Water	7470A	
480-134747-4	WG-11109668-042418-SG-NCR6S	Total/NA	Water	7470A	
480-134747-5	WG-11109668-042418-SG-NCR13S	Total/NA	Water	7470A	
MB 480-411847/1-A	Method Blank	Total/NA	Water	7470A	
LCS 480-411847/2-A	Lab Control Sample	Total/NA	Water	7470A	
480-134747-1 MS	WG-11109668-042418-SG-NCR3S	Total/NA	Water	7470A	
480-134747-1 MSD	WG-11109668-042418-SG-NCR3S	Total/NA	Water	7470A	
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Total/NA	Water	7470A	
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Total/NA	Water	7470A	

Metals (Continued)

Analysis Batch: 411974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	7470A	411847
480-134747-2	WG-11109668-042418-SG-NCR4S	Total/NA	Water	7470A	411847
480-134747-3	WG-11109668-042418-SG-NCR5S	Total/NA	Water	7470A	411847
480-134747-4	WG-11109668-042418-SG-NCR6S	Total/NA	Water	7470A	411847
480-134747-5	WG-11109668-042418-SG-NCR13S	Total/NA	Water	7470A	411847
MB 480-411847/1-A	Method Blank	Total/NA	Water	7470A	411847
LCS 480-411847/2-A	Lab Control Sample	Total/NA	Water	7470A	411847
480-134747-1 MS	WG-11109668-042418-SG-NCR3S	Total/NA	Water	7470A	411847
480-134747-1 MSD	WG-11109668-042418-SG-NCR3S	Total/NA	Water	7470A	411847
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Total/NA	Water	7470A	411847
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Total/NA	Water	7470A	411847

Analysis Batch: 412579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Dissolved	Water	6010C	410943
480-134747-2	WG-11109668-042418-SG-NCR4S	Dissolved	Water	6010C	410943
480-134747-3	WG-11109668-042418-SG-NCR5S	Dissolved	Water	6010C	410943
480-134747-4	WG-11109668-042418-SG-NCR6S	Dissolved	Water	6010C	410943
480-134747-5	WG-11109668-042418-SG-NCR13S	Dissolved	Water	6010C	410943
MB 480-410943/1-A	Method Blank	Total Recoverable	Water	6010C	410943
LCS 480-410943/2-A	Lab Control Sample	Total Recoverable	Water	6010C	410943
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Dissolved	Water	6010C	410943
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Dissolved	Water	6010C	410943

Prep Batch: 412935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Dissolved	Water	7470A	
480-134747-2	WG-11109668-042418-SG-NCR4S	Dissolved	Water	7470A	
480-134747-3	WG-11109668-042418-SG-NCR5S	Dissolved	Water	7470A	
480-134747-4	WG-11109668-042418-SG-NCR6S	Dissolved	Water	7470A	
480-134747-5	WG-11109668-042418-SG-NCR13S	Dissolved	Water	7470A	
MB 480-412935/1-A	Method Blank	Total/NA	Water	7470A	
LCS 480-412935/2-A	Lab Control Sample	Total/NA	Water	7470A	
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Dissolved	Water	7470A	
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Dissolved	Water	7470A	

Analysis Batch: 413018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Dissolved	Water	7470A	412935
480-134747-2	WG-11109668-042418-SG-NCR4S	Dissolved	Water	7470A	412935
480-134747-3	WG-11109668-042418-SG-NCR5S	Dissolved	Water	7470A	412935
480-134747-4	WG-11109668-042418-SG-NCR6S	Dissolved	Water	7470A	412935
480-134747-5	WG-11109668-042418-SG-NCR13S	Dissolved	Water	7470A	412935
MB 480-412935/1-A	Method Blank	Total/NA	Water	7470A	412935
LCS 480-412935/2-A	Lab Control Sample	Total/NA	Water	7470A	412935
480-134747-3 MS	WG-11109668-042418-SG-NCR5S	Dissolved	Water	7470A	412935
480-134747-3 MSD	WG-11109668-042418-SG-NCR5S	Dissolved	Water	7470A	412935

Prep Batch: 413133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	3005A	

Metals (Continued)

Prep Batch: 413133 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-413133/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-413133/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-413133/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 413572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	6010C	413133
MB 480-413133/1-A	Method Blank	Total/NA	Water	6010C	413133
LCS 480-413133/2-A	Lab Control Sample	Total/NA	Water	6010C	413133
LCSD 480-413133/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	413133

Analysis Batch: 413685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-134747-1	WG-11109668-042418-SG-NCR3S	Total/NA	Water	6010C	413133
MB 480-413133/1-A	Method Blank	Total/NA	Water	6010C	413133
LCS 480-413133/2-A	Lab Control Sample	Total/NA	Water	6010C	413133
LCSD 480-413133/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	413133

Lab Chronicle

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Client Sample ID: WG-11109668-042418-SG-NCR3S

Lab Sample ID: 480-134747-1

Date Collected: 04/24/18 13:00

Matrix: Water

Date Received: 04/24/18 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			410943	04/26/18 08:09	EMB	TAL BUF
Dissolved	Analysis	6010C		1	412579	05/01/18 19:39	AMH	TAL BUF
Total/NA	Prep	3005A			411142	04/27/18 09:15	EMB	TAL BUF
Total/NA	Analysis	6010C		1	411609	04/28/18 02:30	AMH	TAL BUF
Total/NA	Prep	3005A			413133	05/08/18 12:19	KMP	TAL BUF
Total/NA	Analysis	6010C		1	413572	05/09/18 21:40	LMH	TAL BUF
Total/NA	Prep	3005A			413133	05/08/18 12:19	KMP	TAL BUF
Total/NA	Analysis	6010C		1	413685	05/10/18 13:36	LMH	TAL BUF
Dissolved	Prep	7470A			412935	05/07/18 12:50	BMB	TAL BUF
Dissolved	Analysis	7470A		1	413018	05/07/18 17:59	BMB	TAL BUF
Total/NA	Prep	7470A			411847	05/01/18 13:10	EMB	TAL BUF
Total/NA	Analysis	7470A		1	411974	05/01/18 16:27	BMB	TAL BUF

Client Sample ID: WG-11109668-042418-SG-NCR4S

Lab Sample ID: 480-134747-2

Date Collected: 04/24/18 13:15

Matrix: Water

Date Received: 04/24/18 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			410943	04/26/18 08:09	EMB	TAL BUF
Dissolved	Analysis	6010C		1	412579	05/01/18 19:43	AMH	TAL BUF
Total/NA	Prep	3005A			411142	04/27/18 09:15	EMB	TAL BUF
Total/NA	Analysis	6010C		1	411609	04/28/18 02:45	AMH	TAL BUF
Dissolved	Prep	7470A			412935	05/07/18 12:50	BMB	TAL BUF
Dissolved	Analysis	7470A		1	413018	05/07/18 18:00	BMB	TAL BUF
Total/NA	Prep	7470A			411847	05/01/18 13:10	EMB	TAL BUF
Total/NA	Analysis	7470A		1	411974	05/01/18 16:37	BMB	TAL BUF

Client Sample ID: WG-11109668-042418-SG-NCR5S

Lab Sample ID: 480-134747-3

Date Collected: 04/24/18 12:45

Matrix: Water

Date Received: 04/24/18 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			410943	04/26/18 08:09	EMB	TAL BUF
Dissolved	Analysis	6010C		1	412579	05/01/18 19:58	AMH	TAL BUF
Total/NA	Prep	3005A			411142	04/27/18 09:15	EMB	TAL BUF
Total/NA	Analysis	6010C		1	411609	04/28/18 02:49	AMH	TAL BUF
Dissolved	Prep	7470A			412935	05/07/18 12:50	BMB	TAL BUF
Dissolved	Analysis	7470A		1	413018	05/07/18 18:02	BMB	TAL BUF
Total/NA	Prep	7470A			411847	05/01/18 13:10	EMB	TAL BUF
Total/NA	Analysis	7470A		1	411974	05/01/18 16:39	BMB	TAL BUF

Lab Chronicle

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Client Sample ID: WG-11109668-042418-SG-NCR6S

Lab Sample ID: 480-134747-4

Date Collected: 04/24/18 12:30

Matrix: Water

Date Received: 04/24/18 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			410943	04/26/18 08:09	EMB	TAL BUF
Dissolved	Analysis	6010C		1	412579	05/01/18 20:17	AMH	TAL BUF
Total/NA	Prep	3005A			411142	04/27/18 09:15	EMB	TAL BUF
Total/NA	Analysis	6010C		1	411609	04/28/18 03:07	AMH	TAL BUF
Dissolved	Prep	7470A			412935	05/07/18 12:50	BMB	TAL BUF
Dissolved	Analysis	7470A		1	413018	05/07/18 18:10	BMB	TAL BUF
Total/NA	Prep	7470A			411847	05/01/18 13:10	EMB	TAL BUF
Total/NA	Analysis	7470A		1	411974	05/01/18 16:44	BMB	TAL BUF

Client Sample ID: WG-11109668-042418-SG-NCR13S

Lab Sample ID: 480-134747-5

Date Collected: 04/24/18 12:30

Matrix: Water

Date Received: 04/24/18 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			410943	04/26/18 08:09	EMB	TAL BUF
Dissolved	Analysis	6010C		1	412579	05/01/18 20:20	AMH	TAL BUF
Total/NA	Prep	3005A			411142	04/27/18 09:15	EMB	TAL BUF
Total/NA	Analysis	6010C		1	411609	04/28/18 03:11	AMH	TAL BUF
Dissolved	Prep	7470A			412935	05/07/18 12:50	BMB	TAL BUF
Dissolved	Analysis	7470A		1	413018	05/07/18 18:12	BMB	TAL BUF
Total/NA	Prep	7470A			411847	05/01/18 13:10	EMB	TAL BUF
Total/NA	Analysis	7470A		1	411974	05/01/18 16:46	BMB	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL BUF
7470A	Mercury (CVAA)	SW846	TAL BUF
3005A	Preparation, Total Metals	SW846	TAL BUF
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL BUF
7470A	Preparation, Mercury	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 = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: N Tonawanda Water Works
Project/Site: City of North Tonawanda - NCRS

TestAmerica Job ID: 480-134747-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-134747-1	WG-11109668-042418-SG-NCR3S	Water	04/24/18 13:00	04/24/18 14:44
480-134747-2	WG-11109668-042418-SG-NCR4S	Water	04/24/18 13:15	04/24/18 14:44
480-134747-3	WG-11109668-042418-SG-NCR5S	Water	04/24/18 12:45	04/24/18 14:44
480-134747-4	WG-11109668-042418-SG-NCR6S	Water	04/24/18 12:30	04/24/18 14:44
480-134747-5	WG-11109668-042418-SG-NCR13S	Water	04/24/18 12:30	04/24/18 14:44

CHAIN OF CUSTODY RECORD

COC NO.: 55217

GHD

Address: 2055 Niagara Falls Blvd NF NF 14304 PAGE 1 OF 1

Phone: 716-297-6150 Fax:

Project No/ Phase/Task Code: 11109668-01	Laboratory Name: Test America Amherst	Lab Location:	SSOW ID:
Project Name: NCR Annual GW (Resample)	Lab Contact: Melissa Deyo	Amherst NY	Cooler No:
Project Location: Witmer Rd. N. Tonawanda			Carrier: Hand Delivered
GHD Chemistry Contact: Paul McMahon			Airbill No:
Sampler(s): S. Gardner D. Tyran			Total # of Containers:

ANALYSIS REQUESTED (See Back of COC for Definitions)

SAMPLE TYPE

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)	TAL Metals	Hg	Diss. TAL Metal	Diss Hg	Total Containers/sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						HN	HN	HN	HN			
1	WG-11109668-042418-SG-NCR3S	4-24-18	1300	WG	G	Y	X	X	X	X	2		
2	WG-11109668-042418-SG-NCR4S	4-24-18	1315	WG	G	Y	X	X	X	X	2		
3	WG-11109668-042418-SG-NCR5S	4-24-18	1245	WG	G	Y	X	X	X	X	6		
4	WG-11109668-042418-SG-NCR6S	4-24-18	1230	WG	G	Y	X	X	X	X	2		
5	WG-11109668-042418-SG-NCR13S	4-24-18	1230	WG	G	Y	X	X	X	X	2		
6													
7													
8													
9													
10													
11													
12													

480-134747 COC

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

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

Notes/ Special Requirements: Temp 2.2 #1 ICE

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	Dave Tyran	GHD	4/24/18	1444	1.	TAB	4/24/18	1444
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

GHD Form: COC-10B (20110804)

Page 31 of 32

5/11/2018

Login Sample Receipt Checklist

Client: N Tonawanda Water Works

Job Number: 480-134747-1

Login Number: 134747

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

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	GHD
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

NCR

Annual GW Sampling

April 17, 2018

Project # 11109668.01
Field File

DAILY LOG

4/17/18 YSI PRO SERIES # NF08275 CALABRATION USING
PH 4.00 AUTO CAL LOT# C800085 EXP. 9/18
PH 4.00 BEFORE 4.03 AFTER 4.00
COND 4.49 BEFORE 4.87 AFTER 4.50
0828 ONSITE SG/DJT WEATHER - CLOUDY 33°F WINDS W 15-20MPH
0834 SET UP ON WELL NCR-13S PURGE WELL DRY
0854 SET UP ON WELL NCR-5S PURGE WELL DRY
0921 SET UP ON WELL NCR-3S PURGE WELL DRY
0939 SET UP ON WELL NCR-4S PURGE WELL DRY
1007 OFFSITE

4/17/18

1110966 8-01

Shawn Hardman

PROJECT # 111096668-01

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 1 7 1 8 (MM DD YY)

CREW MEMBERS: S GARDNER, D TYRAN

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-5S

ONE WELL VOLUME: 0.98 gallons SOUNDED DEPTH - 11.27

FIVE WELL VOLUMES: gallons W/L - 5.13

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

WELL DRY @ 2.3 GAL

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.98	1.96				2.3
pH	6.84	7.08				6.96
TEMPERATURE	5.3	5.3				5.3
CONDUCTIVITY	0.81	0.82				0.81
TURBIDITY	243	147				195
COLOR	CLOUDY LT BROWN	SAME				CLOUDY LT BROWN
ODOR	NONE	NONE				NONE
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/17/18 SHAWN GARDNER Shawn Gardner

DATE PRINT NAME SIGNATURE

FP-4C 11.27 - 5.13 = 6.14 x .16 = 0.98 GAL

PROJECT# 11109668.01

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 6/7/18 (MM DD YY)

CREW MEMBERS: S GARDNER, D TYRAN

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-33

ONE WELL VOLUME: 0.44 gallons SOUNDED DEPTH - 6.06

FIVE WELL VOLUMES: gallons W/L - 3.28

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

WELL DRY @ 0.70 GAL

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.44					0.70
pH	7.87					7.87
TEMPERATURE	4.8					4.8
CONDUCTIVITY	0.91					0.91
TURBIDITY	74.1					74.1
COLOR	SL CLOUDY LT BROWN					SL CLOUDY LT BROWN
ODOR	NONE					NONE
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/17/18 SHAWN GARDNER Shawn Gardner

DATE PRINT NAME SIGNATURE

FP-4C 6.06 - 3.28 = 2.78 x .16 = 0.44 GAL

PROJECT #: 111096688-01

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 1 7 1 8 (MM DD YY)

CREW MEMBERS: S GARDNER, D TYRAN

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-4S

ONE WELL VOLUME: 0.43 gallons SOUNDED DEPTH - 5.19

FIVE WELL VOLUMES: _____ gallons W/L - 2.47

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

WELL DRY @ 1 VOL

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.43					0.43
pH	7.23					7.23
TEMPERATURE	4.3					4.3
CONDUCTIVITY	0.88					0.88
TURBIDITY	766					766
COLOR	CLOUDY BROWN					CLOUDY BROWN
ODOR	NONE					NONE
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/17/18 SHAWN GARDNER Shawn Gardner

DATE PRINT NAME SIGNATURE

FP-4C 5.19 - 2.47 = 2.72 x .16 = 0.43 GAL

PROJECT # 111096028-01

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 1 7 1 8 (MM DD YY)

CREW MEMBERS: S GARDNER, D TYRAN

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-13S

ONE WELL VOLUME: 0.75 gallons SOUNDED DEPTH - 7.93

FIVE WELL VOLUMES: gallons W/L - 3.24

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

WELL DRY @ 1.8 GAL

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.75	1.5				1.8
pH	6.40	6.78				6.59
TEMPERATURE	4.7	4.5				4.6
CONDUCTIVITY	1.19	1.28				1.23
TURBIDITY	30.2	45.9				38.0
COLOR	CLEAR COLORLESS	SAME				SAME
ODOR	NONE	NONE				NONE
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/17/18 SHAWN GARDNER Shawn Gardner

DATE PRINT NAME SIGNATURE

FP-4C 7.93 - 3.24 = 4.69 x .16 = 0.75 GAL

Groundwater Sampling Equipment and Supply Checklist
(Form SP-05)

Date: 4/18/18 (mm/dd/yyyy) Reference No. 11109668-01

Equipment

- [x] Required sampling equipment (as per work plan or QAPP)

Instruments

- [x] Water level indicator
- Thermometer *
- [ ] pH meter *
- [ ] Conductivity probe *
- [x] Turbidity meter
- [ ] HNu/OVA/Microtip
- [ ] Air monitoring equipment

Supplies

- [ ] Gasoline can/gas
- [x] Polypropylene rope
- [ ] Aluminum foil
- [x] Paper towels
- [x] pH buffer solution(s)
- [x] Conductivity standard solution(s)
- [x] Decontamination fluids (as per work plan and QAPP)
- [x] Sample jars (extra)
- [x] Sample jar labels (GHD) materials
- [x] Cooler(s)/ice packs/packing materials
- [x] Trash bags
- [ ] Sample preservatives
- [x] Plastic spray bottles
- [ ] Plastic basin or pan
- [ ] Sample filter (on line or external filter)
- [ ] Polyethylene sheeting
- [x] First aid kit
- [x] Personal protective equipment (as per HASP)

Documentation

- [x] Chain of custody forms
- [ ] Well logs
- [x] Notebook/Field book
- [ ] Photolog
- [ ] Site pass/badge
- [ ] Federal Express manifests
- [x] Previous well logs/previous historical well data
- [ ] Site map
- [x] Blank well data forms

Miscellaneous

- [x] Well cap keys
- [ ] Bolt cutters
- [ ] Camera/film
- [x] Knife
- [x] Spare batteries for instruments
- [ ] Lock deicer (winter)
- [ ] Reinforced packing tape
- [x] Pen/pencil/indelible marking pen
- [x] Tool box
- [x] Spare locks/keys
- [ ] On site transportation (all-terrain vehicle/snowmobiles)

Completed By: SHAWN GARDNER (please print) Date: 4/18/18 (mm/dd/yyyy)

Project Planning Completion and Follow-Up Checklist
(Form SP-02)

Date: 4/18/18 (mm/dd/yyyy) Reference No. 11109668-01

Prior Planning and Coordination

- [x] Confirm well numbers, location and accessibility
- [x] Review of project documents, Health and Safety Plan (HASP), sampling Quality Assurance/Quality Control (QA/QC) and site-specific sampling requirements
- [x] Historical well data; depth, pH, performance and disposition of purge water
- [x] Site access notification and coordination
- [x] Coordination with laboratory through GHD chemistry group
- [x] Procurement, inventory and inspection of all equipment and supplies
- [x] Prior equipment preparation, calibration or maintenance
- [ ] All utilities located and approved

Filed Procedure

- [x] Instruments calibrated daily
- [x] Sampling equipment decontaminated in accordance with the QAPP
- [x] Field measurements and sampling details logged in appropriate field books or an appropriate field form
- [x] Well volume calculated and specified volumes removed
- [x] Specified samples, and QA/QC samples taken per Quality Assurance Project Plan (QAPP)
- [x] Samples properly labeled, preserved and packed
- [x] Sampling locations secured or completed according to work plan
- [x] Sample date times, locations and sample numbers have all been recorded in applicable log(s)
- [x] Samples have been properly stored if not shipped/delivered to lab same day
- [x] Samples were shipped with complete and accurate chain of custody record

Follow-Up Activities

- [x] Questionable measurements field verified
- [x] Confirm all samples collected
- [x] All equipment has been maintained and returned
- [x] Sampling information reduced and required sample keys and field data distributed
- [x] Chain of custody records filed
- [x] Expendable stock supplies replaced
- [x] GHD and client-controlled items returned (i.e., keys)
- [x] Arrange disposal of investigation generated wastes with client
- [x] Confirm all samples collected

Completed By: SHAWN GARDNER (please print) Date: 4/18/18 (mm/dd/yyyy)

Field Data Record Form
Meter, Turbidity (Portable) Hach 2100P and 2100Q
(QSF-421D)

Control number: NF 08278
Date (mm/dd/yyyy): 04/17/2018
User (print name): S. Gardner

Project number: 11109668-01
Project name: NCR Annual GW Sampling
Location: River Rd N. Tonawanda

Additional equipment control numbers and descriptions:

10 NTU Lot # A7195 exp 10/2018
100 NTU Lot # A6363 exp 4/2018
800 NTU Lot # A7207 exp 11/2018

Field procedure before use:

Do not calibrate in the field.

	Check when completed
Check kit contents; • Meter • STABLCAL standards (2100Q) • Low 0-10, medium 0-100, high standards (2100P) • Extra AA batteries • Sample vials	☒ ☒ ☒ ☒ ☒
Test and record standards:	☒

Gelex (2100P)/STABLCAL (2100Q) Standard	*Meter Reading*
10	9.89
100	98.2
800	756

Note: Condensation on outside of sample bottles affects meter readings.

Filing: Field file

Signature: [signature]

Field Data Record Form
Meter, Water Level
(QSF-251D)

Control number: NFOL117
Date (mm/dd/yyyy): 4/17/18
User (print name): DJT

Project number: 11109668-01
Project name: NCR ANNUAL GW SAMPLING

Location: N TONAWANDA NY

Additional equipment control numbers and descriptions:

Field procedure before use:

	Check when completed
• Check for broken or missing parts.	
• Check battery	☒
• Check operation of buzzer.	☒
• Check operation of signal light.	☒
• Test probe in water to ensure unit operates, both visually and audibly.	☒
• Check cable.	☒

Filing: Field file

Signature: Shawn Haudrich

NCR

Annual GW Sampling

April 18, 2018

Project # 11109668-01
Field File

DAILY LOG

4/18/18 YSI PRO SERIES # NFO8275 CALABRATION USING
PH 4.00 AUTO CAL LOT# C800085 EXP. 9/18
PH 4.00 BEFORE 4.10 AFTER 4.00
COND 4.49 BEFORE 4.46 AFTER 4.49
0915 ONSITE SG/DJT WEATHER - MOSTLY CLOUDY 36° F
WINDS W 15-20 MPH, TAILGATE SAMETY MEETING
BEGIN SAMPLING ~~SG~~ WELLS DRIED OUT DAY BEFORE
(SEE SAMPLE COLLECTION DATA SHEET FOR DATA AND TIMES)
1030 OFFSITE

SG
4/18/18

1110966 8-01

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: S GARDNER, D TYRAN

DATE OF SAMPLE COLLECTION: 04/18/18 (MM D D Y Y)

Sample I.D. Number	Well Number	Well Volume (Gallons)	Volume Purged (Gallons)	Sample Time	Sample Description	Analysis Required	Chain-of-Custody Number	Shipping Manifest Number
*	- NCR 3S	0.44	0.70	0830	CLEAR COLORLESS		480-112158-26024.1	
*	- NCR 4S	0.43	0.43	0845	SL CLOUDY LT BROWN		480-112158-26024.1	
*	- NCR 5S	0.98	2.3	0855	CLEAR COLORLESS		480-112158-26024.1	
*	- NCR 13S	0.75	1.8	0910	CLEAR COLORLESS		480-112158-26024.1	
*	(MS/MSD) * NCR-5S	0.98	2.3	0855	CLEAR COLORLESS		480-112158-26024.1	
	(Duplicate) * NCR13S	0.75	1.8	~~0855~~ 0910	CLEAR COLORLESS		480-112158-26024.1	
	(Rinse Blank) *							

Note: * QA/QC sample (see QAPP for explanation of how to collect and label these samples). Collect MS/MSD and duplicate from one of the four monitoring wells listed above. Create a unique sample ID for the blind duplicate using NCR 6S for the well number. Write the name of the well where the MS/MSD and duplicate were actually collected in the well number boxes under "MS/MSD" and "Duplicate" above.

Additional Comments: *-WG-111096068-041818-SG-

NCR13S - BLIND DUPLICATE WG-111096068-041818-SG-NCR6S TIME ~~0855~~ 0910

FP-5A

CRA 5723 (17)

Shawn Gardner

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: D. Tyrrell S. Gardner	Lab PM:	Carrier Tracking No(s):
Client Contact: Mr. Paul McMahon	Phone: 716-297-6150	E-Mail:	
Company: GHD Services Inc.			
Address: 2055 Niagara Falls Blvd., Suite 3	Due Date Requested:		
City: Niagara Falls	TAT Requested (days): 14		
State, Zip: NY, 14304	PO #:		
Phone: 716-297-6150	WO #:		
Email: paul.mcmahon@ghd.com	Project #: 11109668-01		
Project Name: 1109668, Niagara County Refuse Landfill	SSOW#: 11109668-002		
Site:			

COC No: 480-112158-26024.1
Page: Page 1 of 1
Job #:

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - Site-Specific VOCs	8010C, 7470A	8260C - Site-Specific VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A		
WG-11109668-041818-SG-NCR3S	4-18-18	0830	G	Water	N		X	X	X	6	
WG-11109668-041818-SG-NCR4S	4-18-18	0845	G	Water	N		X	X	X	6	
WG-11109668-041818-SG-NCR5S	4-18-18	0855	G	Water	N	Y	X	X	X	18	MS/MSD
WG-11109668-041818-SG-NCR6S	4-18-18	0910	G	Water	N		X	X	X	6	
WG-11109668-041818-SG-NCR13S	4-18-18	0910	G	Water	N		X	X	X	6	
TB-11109668-041818-SG	4-18-18	—	G	Water	N				X	1	
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Dave Tyrrell	Date/Time: 4-18-18/1100	Company: GHD	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 08/04/2016

Tailgate Safety Meeting Form
Small Group Format - Multiple Days

Date:	4/17/18	Time:	0727	Project No.:	11109668-01
Presenter:	D. Tyran			Project Name:	NCR Annual GW Sampling

Safety topics/items discussed:

Site is snow & ice covered very muddy & Slippery. Use 4x4 in trucks and stay on marked roadways. Watch your footing while moving between the truck and wells
Practice STAR

Emergency preparedness:

First Aid Provider(s):	D. Tyran	Muster Point:	Front gate
		Method of Communication:	Cell Phone
AED Responder:	911	Fire Extinguisher Location:	GHD TRUCKS
First Aid Kit Location:	GHD Trucks	Eye Wash Location:	GHD Trucks

Print Name	Signature	Company
David Tyran	David Tyran	GHD
Shawn Gardner	Shawn Gardner	GHD

Date:	4/18/18	Time:	0709	Project No.:	11109668-01
Presenter:	D. Tyran			Project Name:	Annual NCR GW Sampling

Safety topics/items discussed:

Cold & windy again rain showers likely. Dress warmly
Stay hydrated

Emergency preparedness:

First Aid Provider(s):	D. Tyran	Muster Point:	Front gate.
		Emergency Communication:	Cell phone
AED Responder:	911	Fire Extinguisher Location:	GHD Trucks
First Aid Kit Location:	GHD Trucks	Eye Wash Location:	GHD Trucks

Print Name	Signature	Company
David Tyran	David Tyran	GHD
Shawn Gardner	Shawn Gardner	GHD

NCR

Annual GW Sampling

April 23, 2018

Project # 1109668-01

Field File

NCR ANNUAL GW

DAILY LOG

4/23/18 YSI PRO SERIES # NFO8275 CALABRATION USING
PH 4.00 AUTO CAL LOT# 17502171 EXP. 1/19
PH 4.00 BEFORE 3.91 AFTER 4.00
COND 4.49 BEFORE 4.49 AFTER 4.49
DO% BAR 755.8 94.6% READING 8.71
YSI PRO SERIES # GSH06214 CALABRATION USING SAME AS
ABOVE CAL SOLUTION
PH 4.00 BEFORE 4.01 AFTER 4.00
COND 4.49 BEFORE 4.51 AFTER 4.50
DO% BAR 755.3 102.5 % READING 8.60
0839 ONSITE SG/DJT WEATHER - SUNNY 46°F WINDS E 5MPH
PURGE WELL NCR-13S DRY
0900 PURGE WELL NCR-5S DRY
0913 PURGE WELL NCR-3S DRY
0926 PURGE WELL NCR-4S DRY
0940 OFFSITE

86

4/23/18

11109668-01

Sharon Kaufman

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 2 3 1 8 (MM DD YY)

CREW MEMBERS: SG/DJT

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-4S

ONE WELL VOLUME: _____ gallons W/L - 2.85

FIVE WELL VOLUMES: _____ gallons

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)						0.30
pH	7.13					
TEMPERATURE	5.2					
CONDUCTIVITY	1.05					
TURBIDITY	204					
COLOR	CLOUDY LT BROWN					
ODOR	NONE					
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/23/18 SHAWN GARDNER Shawn Gardner

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 2 3 1 8 (MM DD YY)

CREW MEMBERS: SG | DJT

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-3S

ONE WELL VOLUME: _____ gallons W/L - 3.63

FIVE WELL VOLUMES: _____ gallons

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)						0.75
pH	6.97					
TEMPERATURE	6.8					
CONDUCTIVITY	0.724					
TURBIDITY	11.2					
COLOR	CLEAR COLORLESS					
ODOR	NONE					
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/23/18	SHAWN GARDNER	Shawn Gardner
DATE	PRINT NAME	SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 2 3 1 8 (MM DD YY)

CREW MEMBERS: SG/DJT

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-SS

ONE WELL VOLUME: _____ gallons W/L - 6.69

FIVE WELL VOLUMES: _____ gallons

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)						1.5 GA
pH	7.32					
TEMPERATURE	8.2					
CONDUCTIVITY	0.78					
TURBIDITY	32.0					
COLOR	CLEAR COLORLESS					
ODOR	NONE					
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/23/18	SHAWN GARDNER	Shawn Gardner
DATE	PRINT NAME	SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 4 2 3 1 8 (MM DD YY)

CREW MEMBERS: SG / DJT

PURGING METHOD: VOLUMES

WELL NUMBER: NCR-13S

ONE WELL VOLUME: _____ gallons W/L - 4.82

FIVE WELL VOLUMES: _____ gallons SOUNDED DEPTH -

(See Sction 4.2.4.1 of the OM&M Manual and Table FP-4.1 to calculate well volumes based on current water levels).

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)						1.5 GAL
pH	6.14					
TEMPERATURE	6.5					
CONDUCTIVITY	1.08					
TURBIDITY	17.7					
COLOR	CLEAR COLORLESS					
ODOR	NONE					
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

4/23/18 SHAWN GARDNER Shawn Gardner

DATE PRINT NAME SIGNATURE

FP-4C

Field Data Record Form
Meter, Turbidity (Portable) Hach 2100P and 2100Q
(QSF-421D)

Control number: NF08278
Date (mm/dd/yyyy): 04/23/2018
User (print name): S. Gardner

Project number: 11109668-01
Project name: NCR Resample

Location: Witmer Rd
N. Tonawanda

Additional equipment control numbers and descriptions:
10 NTU A7195 exp 10/2018
100 NTU Lot# A6363 exp 4/2018
800 NTU Lot # A7207 exp 11/2018

Field procedure before use:

Do not calibrate in the field.

	Check when completed
Check kit contents; • Meter • STABLCAL standards (2100Q) • Low 0-10, medium 0-100, high standards (2100P) • Extra AA batteries • Sample vials	☒ ☒ ☒ ☒ ☒
Test and record standards:	☒

Gelex (2100P)/STABLCAL (2100Q) Standard	*Meter Reading*
10	9.79
100	97.5
800	753

Note: Condensation on outside of sample bottles affects meter readings.

Filing: Field file

Signature: David J Tyron

NCR

Annual GW Sampling

April 24, 2018

Project # 11109668-01

Field File

NCR ANNUAL GW RESAMPLE

DAILY LOG

4/24/18 1132 ONSITE SG/DJT WEATHER - CLOUDY 62°F
WINDS S 15MPH
SAMPLE WELLS DRIED OUT DAY BEFORE
(SEE SAMPLING DATA SHEET FOR DATA)
1329 OFFSITE
RESAMPLED WELLS FOR METALS TAL, MERCURY TAL, DIS METALS, DIS MERCURY

SG
4/24/18

1110968-01

Sharon Gardner

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: S GARDNER, D TYRAN

DATE OF SAMPLE COLLECTION: 04/24/18
(M M D D Y Y)

Sample I.D. Number	Well Number	Well Volume (Gallons)	Volume Purged (Gallons)	Sample Time	Sample Description	Analysis Required	Chain-of-Custody Number	Shipping Manifest Number
*	NCR 3S			1300	CLEAR COLORLESS		55217	
*	NCR 4S			1315	CLOUDY LT BROWN		55217	
*	NCR 5S			1245	CLEAR COLORLESS		55217	
*	NCR 13S			1230	CLEAR COLORLESS		55217	
*	(MS/MSD) * NCR-5S			1245	CLEAR COLORLESS		55217	
	(Duplicate) * NCR-13S			1230	CLEAR COLORLESS		55217	
	(Rinse Blank) *							

Note: * QA/QC sample (see QAPP for explanation of how to collect and label these samples). Collect MS/MSD and duplicate from one of the four monitoring wells listed above. Create a unique sample ID for the blind duplicate using NCR 6S for the well number. Write the name of the well where the MS/MSD and duplicate were actually collected in the well number boxes under "MS/MSD" and "Duplicate" above.

Additional Comments: * WG-1110961608-042418-SG-
NCR-13S - BLIND DUPLICATE WG-1110961608-042418-SG-NCR16S TIME 1230

FP-5A

CRA 5723 (17)

Sharon Gardner

CHAIN OF CUSTODY RECORD

COC NO.: 55217

Address: 2055 Niagara Falls Blvd NF NF 14304 PAGE 1 OF 1

Phone: 716-297-6150 **Fax:**

Project No/ Phase/Task Code: 11109668-01	**Laboratory Name:** Test America Amherst	**Lab Location:** Amherst NY	**SSOW ID:**
Project Name: NCR Annual GW (Resample)	**Lab Contact:** Melissa Deyo		**Cooler No:**
Project Location: Witmer Rd. N. Tonawanda			**Carrier:** Hand Delivered
GHD Chemistry Contact: Paul McMahon			**Airbill No:**
Sampler(s): S. Gardner D. Tyran			**Total # of Containers:**

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)	TAL Metals	Hg	Diss. TAL Metal	Diss Hg									Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)						HN	HN	HN	HN											
1	WG-11109668-042418-SG-NCR35	4-29-18	1300	WG	G	Y	X	X	X	X									2		
2	WG-11109668-042418-SG-NCR45	4-24-18	1315	WG	G	Y	X	X	X	X									2		
3	WG-11109668-042418-SG-NCR55	4-29-18	1245	WG	G	Y	X	X	X	X									6		
4	WG-11109668-042418-SG-NCR65	4-24-18	1230	WG	G	Y	X	X	X	X									2		
5	WG-11109668-042418-SG-NCR135	4-24-18	1230	WG	G	Y	X	X	X	X									2		
6																					
7																					
8																					
9																					
10																					
11																					
12																					

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

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. D. Tyran	GHD	4/24/18	1444	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

GHD Form: COC-10B (20110804)

Tailgate Safety Meeting Form
Small Group Format - Multiple Days

Date:	4/23/2018	Time:	0703	Project No.:	11109668-01
Presenter:	D-Tyran			Project Name:	NCR Resample

Safety topics/items discussed:

Weather is turning warmer and ticks may be present. Tuck pants into socks, wear repellant. Perform tick checks often

Emergency preparedness:

First Aid Provider(s):	D. Tyran	Muster Point:	Front Gate
		Method of Communication:	Cell Phone
AED Responder:	911	Fire Extinguisher Location:	GHD Truck
First Aid Kit Location:	GHD Truck	Eye Wash Location:	GHD Truck

Print Name	Signature	Company
David Tyran	David Tyran	GHD
Shawn Gardner	Shawn Gardner	GHD

Date:	4/24/2018	Time:	0737	Project No.:	11109668-01
Presenter:	D. Tyran			Project Name:	NCR Resample

Safety topics/items discussed:

Another unseasonably warm day. Not acclimated to this weather yet. Stay hydrated, wear sunscreen

Practice STAR

Emergency preparedness:

First Aid Provider(s):	D. Tyran	Muster Point:	Front Gate
		Emergency Communication:	Cell Phone
AED Responder:	911	Fire Extinguisher Location:	GHD Trucks
First Aid Kit Location:	GHD Trucks	Eye Wash Location:	GHD Trucks

Print Name	Signature	Company
David Tyran	David Tyran	GHD
Shawn Gardner	Shawn Gardner	GHD

APPENDIX D
DATA VALIDATION REPORT

DATA USABILITY SUMMARY REPORT
FOR
NIAGARA COUNTY REFUSE SITE

Prepared By:

PARSONS

301 Plainfield Road, Suite 350
Syracuse, NY 13212
Phone: (315) 451-9560
Fax: (315) 451-9570

JULY 2018

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SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected from the Niagara County Refuse site in North Tonawanda, New York on April 18, 2018 and April 24, 2018. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- USEPA SW-846 analytical methodologies,
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Test America Laboratory (TAL) in Buffalo, New York. This laboratory is certified to conduct project analyses through the National Environmental Laboratory Accreditation Program (NELAP).

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 13-17 days for the groundwater samples.

The data packages received from TAL were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report in Section 2.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

Groundwater samples were collected, properly preserved, shipped under a COC record, and received at TAL within one day of sampling. All samples were received intact and in good condition at TAL.

1.3 LABORATORY ANALYTICAL METHODS

Groundwater samples were collected from the site and analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and total and dissolved metals. Summaries of issues concerning this laboratory analysis are presented in Subsections 1.3.1 through 1.3.3. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) are discussed in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"J+" - estimated biased high at the value given,

"J-" - estimated biased low at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

1.3.1 Volatile Organic Analysis

Groundwater samples collected from the site were analyzed for target compound list (TCL) VOCs using the USEPA SW-846 8260C analytical method. Certain reported results for the TCL VOC samples were qualified as nondetect based upon trip blank contamination. The reported TCL VOC analytical results were 100% complete (i.e., usable) for the groundwater data presented by TAL. PARCCS requirements were met.

1.3.2 Semivolatile Organic Analysis

Groundwater samples collected from the site were analyzed for TCL SVOCs using the USEPA SW-846 8270D analytical method. Certain TCL SVOC sample results were considered estimated based upon instrument calibrations. The reported TCL SVOC analytical results were 100% complete (i.e., usable) for the groundwater data presented by TAL. PARCCS requirements were met.

1.3.3 Metals Analysis

Groundwater samples collected from the site were analyzed for total and dissolved metals using the USEPA SW-846 6010C/7470A analytical methods. Certain metals results were considered estimated based upon laboratory control sample recoveries, matrix spike recoveries, field duplicate precision, and significantly higher dissolved metals results in comparison with total metals. All of the metals data were considered usable and 100% complete for the groundwater data presented by TAL. PARCCS requirements were met.

SECTION 2

DATA VALIDATION REPORT

2.1 GROUNDWATER DATA

Data review has been completed for data packages generated by TAL containing groundwater samples collected from the Niagara County Refuse site. The specific samples contained in these data packages, the analyses performed, and a usability summary are presented in Table 2.1-1. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The samples were contained within sample delivery groups (SDGs) 480-134493-1 and 480-134747-1. The validated laboratory data are presented in Attachment A.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.1.1 TCL Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and equipment/trip blank contamination
- Instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination as discussed below.

Blank Contamination

The field QC trip blank TB associated with the project samples contained acetone and methylene chloride at concentrations of 4 and 2.9 µg/L, respectively. Therefore, sample results for these compounds less than validation action concentrations were considered not detected and qualified "U" for the affected samples.

Usability

All TCL volatile sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The TCL volatile data presented by TAL were 100% complete (i.e., usable) for groundwater. The validated TCL volatile laboratory data are tabulated and presented in Attachment A.

2.1.2 TCL Semivolatiles

The following items were reviewed for compliance in the semivolatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank and equipment blank contamination
- Instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of initial calibrations as discussed below.

Initial Calibrations

All initial calibration compounds were considered acceptable with average relative response factors (RRFs) greater than 0.05 and percent relative standard deviations (%RSDs) less than 20%

with the exception of pentachlorophenol (23.6%RSD) in the initial calibration associated with the project samples. Therefore, sample results for this compound which were nondetects were considered estimated and qualified "UJ" for the affected samples.

Usability

All semivolatile sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The semivolatile data presented by TAL were 100% complete (i.e., usable). The validated semivolatile laboratory data are tabulated and presented in Attachment A.

2.1.3 Total and Dissolved Metals

The following items were reviewed for compliancy in the metals analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration and laboratory preparation blank, and equipment blank contamination
- Inductively coupled plasma (ICP) interference check sample (ICS)
- MS/MSD recoveries
- Laboratory duplicate precision
- Laboratory control sample (LCS) recoveries
- ICP serial dilution
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination, matrix spike recoveries, LCS recoveries, and field duplicate precision as discussed below.

Blank Contamination

The laboratory preparation blank associated with the project samples contained total manganese, total zinc, and dissolved manganese at concentrations of 0.00325, 0.00228, and 0.00264 mg/L, respectively. Validation qualification of the sample results was not required since samples were not affected by the contamination in this blank.

Matrix Spike Recoveries

All MS/MSD recoveries were considered acceptable and within QC limits with the exception of dissolved manganese (148%R) associated with sample NCR-5S. Therefore, the positive dissolved manganese result was considered estimated and qualified "J" for this sample.

LCS Recoveries

All LCS recoveries were considered acceptable and within the 80-120%R QC limit with the exception of total cadmium (124%R), total calcium (121%R), total iron (124%R), and total zinc (124%R) associated with samples NCR-4S, NCR-5S, NCR-6S, and NCR-13S. Therefore, positive results for these analytes were considered estimated, possibly biased high, and qualified "J+" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of the precision for dissolved iron (159%RPD), dissolved manganese (112%RPD), and dissolved sodium (61%RPD) associated with sample NCR-13S and its field duplicate sample NCR-6S. Therefore, results for these analytes were considered estimated and qualified "J" for these samples.

Usability

All metals sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The metals data presented by TAL were 100% complete with all metals data considered valid and usable. The validated metals laboratory data are tabulated and presented in Attachment A.

It was noted that dissolved results were significantly higher than total results for manganese in samples NCR-3S (104%D) and NCR-13S (70%D). Therefore, results for total and dissolved manganese were considered estimated and qualified "J" for the affected samples.

TABLE 2.1-1

SUMMARY OF SAMPLE ANALYSES AND USABILITY

NIAGARA COUNTY REFUSE SITE

SAMPLE ID	MATRIX	SAMPLE DATE	VOCs	SVOCs	METALS
NCR-3S	Water	4/18/18, 4/24/18	OK	OK	OK
NCR-4S	Water	4/18/18, 4/24/18	OK	OK	OK
NCR-5S	Water	4/18/18, 4/24/18	OK	OK	OK
NCR-6S	Water	4/18/18, 4/24/18	OK	OK	OK
NCR-13S	Water	4/18/18, 4/24/18	OK	OK	OK
TB	Water	4/18/18	OK		
			6	5	5

NOTES: OK - Sample analysis considered valid and usable.

ATTACHMENT A

VALIDATED LABORATORY DATA

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR3S WG-11109668-041818/042418-SG-NCR3S 480-134493-1/480-134747-1 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018	NCR4S WG-11109668-041818/042418-SG-NCR4S 480-134493-2/480-134747-2 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:		
	VOLATILES			
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	1 U	1 U
79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/l	1 U	1 U
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	1 U	1 U
79-00-5	1,1,2-TRICHLOROETHANE	ug/l	1 U	1 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	1 U	1 U
120-82-1	1,2,4-TRICHLOROBENZENE	ug/l	1 U	1 U
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	ug/l	1 U	1 U
106-93-4	1,2-DIBROMOETHANE	ug/l	1 U	1 U
95-50-1	1,2-DICHLOROBENZENE	ug/l	1 U	1 U
107-06-2	1,2-DICHLOROETHANE	ug/l	1 U	1 U
78-87-5	1,2-DICHLOROPROPANE	ug/l	1 U	1 U
541-73-1	1,3-DICHLOROBENZENE	ug/l	1 U	1 U
106-46-7	1,4-DICHLOROBENZENE	ug/l	1 U	1 U
591-78-6	2-HEXANONE	ug/l	5 U	5 U
67-64-1	ACETONE	ug/l	10 U	10 U
71-43-2	BENZENE	ug/l	1 U	1 U
75-27-4	BROMODICHLOROMETHANE	ug/l	1 U	1 U
75-25-2	BROMOFORM	ug/l	1 U	1 U
74-83-9	BROMOMETHANE	ug/l	1 U	1 U
75-15-0	CARBON DISULFIDE	ug/l	1 U	1 U
56-23-5	CARBON TETRACHLORIDE	ug/l	1 U	1 U
108-90-7	CHLOROBENZENE	ug/l	1 U	1 U
75-00-3	CHLOROETHANE	ug/l	1 U	1 U
67-66-3	CHLOROFORM	ug/l	1 U	1 U
74-87-3	CHLOROMETHANE	ug/l	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	1 U	1 U
10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/l	1 U	1 U
110-82-7	CYCLOHEXANE	ug/l	1 U	1 U
124-48-1	DIBROMOCHLOROMETHANE	ug/l	1 U	1 U
75-71-8	DICHLORODIFLUOROMETHANE	ug/l	1 U	1 U
100-41-4	ETHYLBENZENE	ug/l	1 U	1 U
98-82-8	ISOPROPYLBENZENE (CUMENE)	ug/l	1 U	1 U
79-20-9	METHYL ACETATE	ug/l	2.5 U	2.5 U
78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	ug/l	10 U	10 U
108-10-1	METHYL ISOBUTYL KETONE	ug/l	5 U	5 U
108-87-2	METHYLCYCLOHEXANE	ug/l	1 U	1 U
75-09-2	METHYLENE CHLORIDE	ug/l	1 U	1 U
100-42-5	STYRENE	ug/l	1 U	1 U
1634-04-4	TERT-BUTYL METHYL ETHER	ug/l	1 U	1 U
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	1 U	1 U
108-88-3	TOLUENE	ug/l	1 U	1 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	1 U	1 U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/l	1 U	1 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	1 U
75-69-4	TRICHLOROFLUOROMETHANE	ug/l	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	1 U	1 U

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR3S WG-11109668-041818/042418-SG-NCR3S 480-134493-1/480-134747-1 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018	NCR4S WG-11109668-041818/042418-SG-NCR4S 480-134493-2/480-134747-2 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:		
	SEMIVOLATILES			
95-95-4	2,4,5-TRICHLOROPHENOL	ug/l	5 U	5 U
88-06-2	2,4,6-TRICHLOROPHENOL	ug/l	5 U	5 U
120-83-2	2,4-DICHLOROPHENOL	ug/l	5 U	5 U
105-67-9	2,4-DIMETHYLPHENOL	ug/l	5 U	5 U
51-28-5	2,4-DINITROPHENOL	ug/l	10 U	10 U
121-14-2	2,4-DINITROTOLUENE	ug/l	5 U	5 U
606-20-2	2,6-DINITROTOLUENE	ug/l	5 U	5 U
91-58-7	2-CHLORONAPHTHALENE	ug/l	5 U	5 U
95-57-8	2-CHLOROPHENOL	ug/l	5 U	5 U
91-57-6	2-METHYLNAPHTHALENE	ug/l	5 U	5 U
95-48-7	2-METHYLPHENOL (O-CRESOL)	ug/l	5 U	5 U
88-74-4	2-NITROANILINE	ug/l	10 U	10 U
88-75-5	2-NITROPHENOL	ug/l	5 U	5 U
91-94-1	3,3'-DICHLOROBENZIDINE	ug/l	5 U	5 U
99-09-2	3-NITROANILINE	ug/l	10 U	10 U
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ug/l	10 U	10 U
101-55-3	4-BROMOPHENYL PHENYL ETHER	ug/l	5 U	5 U
59-50-7	4-CHLORO-3-METHYLPHENOL	ug/l	5 U	5 U
106-47-8	4-CHLOROANILINE	ug/l	5 U	5 U
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ug/l	5 U	5 U
106-44-5	4-METHYLPHENOL (P-CRESOL)	ug/l	10 U	10 U
100-01-6	4-NITROANILINE	ug/l	10 U	10 U
100-02-7	4-NITROPHENOL	ug/l	10 U	10 U
83-32-9	ACENAPHTHENE	ug/l	5 U	5 U
208-96-8	ACENAPHTHYLENE	ug/l	5 U	5 U
98-86-2	ACETOPHENONE	ug/l	5 U	5 U
120-12-7	ANTHRACENE	ug/l	5 U	5 U
1912-24-9	ATRAZINE	ug/l	5 U	5 U
100-52-7	BENZALDEHYDE	ug/l	5 U	5 U
56-55-3	BENZO(A)ANTHRACENE	ug/l	5 U	5 U
50-32-8	BENZO(A)PYRENE	ug/l	5 U	5 U
205-99-2	BENZO(B)FLUORANTHENE	ug/l	5 U	5 U
191-24-2	BENZO(G,H,I)PERYLENE	ug/l	5 U	5 U
207-08-9	BENZO(K)FLUORANTHENE	ug/l	5 U	5 U
85-68-7	BENZYL BUTYL PHTHALATE	ug/l	5 U	5 U
92-52-4	BIPHENYL (DIPHENYL)	ug/l	5 U	5 U
111-91-1	BIS(2-CHLOROETHOXY) METHANE	ug/l	5 U	5 U
111-44-4	BIS(2-CHLOROETHYL) ETHER	ug/l	5 U	5 U
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	ug/l	5 U	5 U
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	ug/l	5 U	5 U
105-60-2	CAPROLACTAM	ug/l	5 U	5 U
86-74-8	CARBAZOLE	ug/l	5 U	5 U
218-01-9	CHRYSENE	ug/l	5 U	5 U
53-70-3	DIBENZ(A,H)ANTHRACENE	ug/l	5 U	5 U
132-64-9	DIBENZOFURAN	ug/l	10 U	10 U
84-66-2	DIETHYL PHTHALATE	ug/l	5 U	5 U
131-11-3	DIMETHYL PHTHALATE	ug/l	5 U	5 U
84-74-2	DI-N-BUTYL PHTHALATE	ug/l	5 U	5 U
117-84-0	DI-N-OCTYLPHTHALATE	ug/l	5 U	5 U
206-44-0	FLUORANTHENE	ug/l	5 U	5 U
86-73-7	FLUORENE	ug/l	5 U	5 U
118-74-1	HEXACHLOROBENZENE	ug/l	5 U	5 U
87-68-3	HEXACHLOROBUTADIENE	ug/l	5 U	5 U
77-47-4	HEXACHLOROCYCLOPENTADIENE	ug/l	5 U	5 U
67-72-1	HEXACHLOROETHANE	ug/l	5 U	5 U
193-39-5	INDENO(1,2,3-C,D)PYRENE	ug/l	5 U	5 U
78-59-1	ISOPHORONE	ug/l	5 U	5 U
91-20-3	NAPHTHALENE	ug/l	5 U	5 U
98-95-3	NITROBENZENE	ug/l	5 U	5 U
621-64-7	N-NITROSODI-N-PROPYLAMINE	ug/l	5 U	5 U
86-30-6	N-NITROSODIPHENYLAMINE	ug/l	5 U	5 U
87-86-5	PENTACHLOROPHENOL	ug/l	10 UJ	10 UJ
85-01-8	PHENANTHRENE	ug/l	5 U	5 U
108-95-2	PHENOL	ug/l	5 U	5 U
129-00-0	PYRENE	ug/l	5 U	5 U

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR3S WG-11109668-041818/042418-SG-NCR3S 480-134493-1/480-134747-1 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018	NCR4S WG-11109668-041818/042418-SG-NCR4S 480-134493-2/480-134747-2 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:		
	METALS			
7429-90-5	ALUMINUM	ug/l	260	7200
7440-36-0	ANTIMONY	ug/l	20 U	20 U
7440-39-3	BARIUM	ug/l	37	81
7440-41-7	BERYLLIUM	ug/l	2 U	0.33 J
7440-43-9	CADMIUM	ug/l	2 U	2 U
7440-70-2	CALCIUM	ug/l	99900	159000 J+
7440-47-3	CHROMIUM, TOTAL	ug/l	3 J	6.7
7440-48-4	COBALT	ug/l	4 U	0.72 J
7440-50-8	COPPER	ug/l	4 J	11
7439-89-6	IRON	ug/l	350	25500 J+
7439-92-1	LEAD	ug/l	10 U	14
7439-95-4	MAGNESIUM	ug/l	49000	50900
7439-96-5	MANGANESE	ug/l	6 J	530
7439-97-6	MERCURY	ug/l	0.2 U	0.2 U
7440-02-0	NICKEL	ug/l	5 J	5.2 J
7440-09-7	POTASSIUM	ug/l	2100	8800
7782-49-2	SELENIUM	ug/l	25 U	25 U
7440-22-4	SILVER	ug/l	6 U	6 U
7440-23-5	SODIUM	ug/l	5600	24700
7440-28-0	THALLIUM	ug/l	20 U	20 U
7440-62-2	VANADIUM	ug/l	5 U	3.4 J
7440-66-6	ZINC	ug/l	21	370 J+
	DISSOLVED METALS			
7429-90-5	ALUMINUM	ug/l	200 U	200 U
7440-36-0	ANTIMONY	ug/l	20 U	20 U
7440-38-2	ARSENIC	ug/l	15 U	15 U
7440-39-3	BARIUM	ug/l	41	58
7440-41-7	BERYLLIUM	ug/l	2 U	2 U
7440-43-9	CADMIUM	ug/l	0.51 J	2 U
7440-70-2	CALCIUM	ug/l	118000	153000
7440-47-3	CHROMIUM, TOTAL	ug/l	4 U	4 U
7440-48-4	COBALT	ug/l	4 U	4 U
7440-50-8	COPPER	ug/l	4.2 J	10 U
7439-89-6	IRON	ug/l	53	1200
7439-92-1	LEAD	ug/l	10 U	3.3 J
7439-95-4	MAGNESIUM	ug/l	59300	51500
7439-96-5	MANGANESE	ug/l	19 J	510
7439-97-6	MERCURY	ug/l	0.2 U	0.2 U
7440-02-0	NICKEL	ug/l	5.4 J	1.8 J
7440-09-7	POTASSIUM	ug/l	1700	8700
7782-49-2	SELENIUM	ug/l	25 U	25 U
7440-22-4	SILVER	ug/l	6 U	6 U
7440-23-5	SODIUM	ug/l	6900	26400
7440-28-0	THALLIUM	ug/l	20 U	20 U
7440-62-2	VANADIUM	ug/l	5 U	5 U
7440-66-6	ZINC	ug/l	23	8.4 J

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR5S WG-11109668-041818/042418-SG-NCR5S 480-134493-3/480-134747-3 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018	NCR13S WG-11109668-041818/042418-SG-NCR13S 480-134493-5/480-134747-5 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:		
	VOLATILES			
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	1 U	1 U
79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/l	1 U	1 U
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	1 U	1 U
79-00-5	1,1,2-TRICHLOROETHANE	ug/l	1 U	1 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	1 U	1 U
120-82-1	1,2,4-TRICHLOROBENZENE	ug/l	1 U	1 U
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	ug/l	1 U	1 U
106-93-4	1,2-DIBROMOETHANE	ug/l	1 U	1 U
95-50-1	1,2-DICHLOROBENZENE	ug/l	1 U	1 U
107-06-2	1,2-DICHLOROETHANE	ug/l	1 U	1 U
78-87-5	1,2-DICHLOROPROPANE	ug/l	1 U	1 U
541-73-1	1,3-DICHLOROBENZENE	ug/l	1 U	1 U
106-46-7	1,4-DICHLOROBENZENE	ug/l	1 U	1 U
591-78-6	2-HEXANONE	ug/l	5 U	5 U
67-64-1	ACETONE	ug/l	10 U	10 U
71-43-2	BENZENE	ug/l	1 U	1 U
75-27-4	BROMODICHLOROMETHANE	ug/l	1 U	1 U
75-25-2	BROMOFORM	ug/l	1 U	1 U
74-83-9	BROMOMETHANE	ug/l	1 U	1 U
75-15-0	CARBON DISULFIDE	ug/l	1 U	1 U
56-23-5	CARBON TETRACHLORIDE	ug/l	1 U	1 U
108-90-7	CHLOROBENZENE	ug/l	1 U	1 U
75-00-3	CHLOROETHANE	ug/l	1 U	1 U
67-66-3	CHLOROFORM	ug/l	1 U	1 U
74-87-3	CHLOROMETHANE	ug/l	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	1 U	1 U
10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/l	1 U	1 U
110-82-7	CYCLOHEXANE	ug/l	1 U	1 U
124-48-1	DIBROMOCHLOROMETHANE	ug/l	1 U	1 U
75-71-8	DICHLORODIFLUOROMETHANE	ug/l	1 U	1 U
100-41-4	ETHYLBENZENE	ug/l	1 U	1 U
98-82-8	ISOPROPYLBENZENE (CUMENE)	ug/l	1 U	1 U
79-20-9	METHYL ACETATE	ug/l	2.5 U	2.5 U
78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	ug/l	10 U	10 U
108-10-1	METHYL ISOBUTYL KETONE	ug/l	5 U	5 U
108-87-2	METHYLCYCLOHEXANE	ug/l	1 U	1 U
75-09-2	METHYLENE CHLORIDE	ug/l	1 U	1 U
100-42-5	STYRENE	ug/l	1 U	1 U
1634-04-4	TERT-BUTYL METHYL ETHER	ug/l	1 U	1 U
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	1 U	1 U
108-88-3	TOLUENE	ug/l	1 U	1 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	1 U	1 U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/l	1 U	1 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	1 U
75-69-4	TRICHLOROFLUOROMETHANE	ug/l	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	1 U	1 U

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR5S WG-11109668-041818/042418-SG-NCR5S 480-134493-3/480-134747-3 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018	NCR13S WG-11109668-041818/042418-SG-NCR13S 480-134493-5/480-134747-5 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:		
	SEMIVOLATILES			
95-95-4	2,4,5-TRICHLOROPHENOL	ug/l	5 U	5 U
88-06-2	2,4,6-TRICHLOROPHENOL	ug/l	5 U	5 U
120-83-2	2,4-DICHLOROPHENOL	ug/l	5 U	5 U
105-67-9	2,4-DIMETHYLPHENOL	ug/l	5 U	5 U
51-28-5	2,4-DINITROPHENOL	ug/l	10 U	10 U
121-14-2	2,4-DINITROTOLUENE	ug/l	5 U	5 U
606-20-2	2,6-DINITROTOLUENE	ug/l	5 U	5 U
91-58-7	2-CHLORONAPHTHALENE	ug/l	5 U	5 U
95-57-8	2-CHLOROPHENOL	ug/l	5 U	5 U
91-57-6	2-METHYLNAPHTHALENE	ug/l	5 U	5 U
95-48-7	2-METHYLPHENOL (O-CRESOL)	ug/l	5 U	5 U
88-74-4	2-NITROANILINE	ug/l	10 U	10 U
88-75-5	2-NITROPHENOL	ug/l	5 U	5 U
91-94-1	3,3'-DICHLOROBENZIDINE	ug/l	5 U	5 U
99-09-2	3-NITROANILINE	ug/l	10 U	10 U
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ug/l	10 U	10 U
101-55-3	4-BROMOPHENYL PHENYL ETHER	ug/l	5 U	5 U
59-50-7	4-CHLORO-3-METHYLPHENOL	ug/l	5 U	5 U
106-47-8	4-CHLOROANILINE	ug/l	5 U	5 U
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ug/l	5 U	5 U
106-44-5	4-METHYLPHENOL (P-CRESOL)	ug/l	10 U	10 U
100-01-6	4-NITROANILINE	ug/l	10 U	10 U
100-02-7	4-NITROPHENOL	ug/l	10 U	10 U
83-32-9	ACENAPHTHENE	ug/l	5 U	5 U
208-96-8	ACENAPHTHYLENE	ug/l	5 U	5 U
98-86-2	ACETOPHENONE	ug/l	5 U	5 U
120-12-7	ANTHRACENE	ug/l	5 U	5 U
1912-24-9	ATRAZINE	ug/l	5 U	5 U
100-52-7	BENZALDEHYDE	ug/l	5 U	5 U
56-55-3	BENZO(A)ANTHRACENE	ug/l	5 U	5 U
50-32-8	BENZO(A)PYRENE	ug/l	5 U	5 U
205-99-2	BENZO(B)FLUORANTHENE	ug/l	5 U	5 U
191-24-2	BENZO(G,H,I)PERYLENE	ug/l	5 U	5 U
207-08-9	BENZO(K)FLUORANTHENE	ug/l	5 U	5 U
85-68-7	BENZYL BUTYL PHTHALATE	ug/l	5 U	5 U
92-52-4	BIPHENYL (DIPHENYL)	ug/l	5 U	5 U
111-91-1	BIS(2-CHLOROETHOXY) METHANE	ug/l	5 U	5 U
111-44-4	BIS(2-CHLOROETHYL) ETHER	ug/l	5 U	5 U
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	ug/l	5 U	5 U
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	ug/l	5 U	5 U
105-60-2	CAPROLACTAM	ug/l	5 U	5 U
86-74-8	CARBAZOLE	ug/l	5 U	5 U
218-01-9	CHRYSENE	ug/l	5 U	5 U
53-70-3	DIBENZ(A,H)ANTHRACENE	ug/l	5 U	5 U
132-64-9	DIBENZOFURAN	ug/l	10 U	10 U
84-66-2	DIETHYL PHTHALATE	ug/l	5 U	5 U
131-11-3	DIMETHYL PHTHALATE	ug/l	5 U	5 U
84-74-2	DI-N-BUTYL PHTHALATE	ug/l	5 U	5 U
117-84-0	DI-N-OCTYLPHTHALATE	ug/l	5 U	5 U
206-44-0	FLUORANTHENE	ug/l	5 U	5 U
86-73-7	FLUORENE	ug/l	5 U	5 U
118-74-1	HEXACHLOROBENZENE	ug/l	5 U	5 U
87-68-3	HEXACHLOROBUTADIENE	ug/l	5 U	5 U
77-47-4	HEXACHLOROCYCLOPENTADIENE	ug/l	5 U	5 U
67-72-1	HEXACHLOROETHANE	ug/l	5 U	5 U
193-39-5	INDENO(1,2,3-C,D)PYRENE	ug/l	5 U	5 U
78-59-1	ISOPHORONE	ug/l	5 U	5 U
91-20-3	NAPHTHALENE	ug/l	5 U	5 U
98-95-3	NITROBENZENE	ug/l	5 U	5 U
621-64-7	N-NITROSODI-N-PROPYLAMINE	ug/l	5 U	5 U
86-30-6	N-NITROSODIPHENYLAMINE	ug/l	5 U	5 U
87-86-5	PENTACHLOROPHENOL	ug/l	10 UJ	10 UJ
85-01-8	PHENANTHRENE	ug/l	5 U	5 U
108-95-2	PHENOL	ug/l	5 U	5 U
129-00-0	PYRENE	ug/l	5 U	5 U

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR5S WG-11109668-041818/042418-SG-NCR5S 480-134493-3/480-134747-3 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018	NCR13S WG-11109668-041818/042418-SG-NCR13S 480-134493-5/480-134747-5 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:		
	METALS			
7429-90-5	ALUMINUM	ug/l	2900	250
7440-36-0	ANTIMONY	ug/l	20 U	20 U
7440-39-3	BARIUM	ug/l	200	53
7440-41-7	BERYLLIUM	ug/l	2 U	2 U
7440-43-9	CADMIUM	ug/l	2 U	2 U
7440-70-2	CALCIUM	ug/l	104000 J+	158000 J+
7440-47-3	CHROMIUM, TOTAL	ug/l	9.8	3.3 J
7440-48-4	COBALT	ug/l	0.66 J	4 U
7440-50-8	COPPER	ug/l	4.8 J	1.6 J
7439-89-6	IRON	ug/l	2100 J+	540 J+
7439-92-1	LEAD	ug/l	6.9 J	10 U
7439-95-4	MAGNESIUM	ug/l	55700	67400
7439-96-5	MANGANESE	ug/l	88	53 J
7439-97-6	MERCURY	ug/l	0.2 U	0.2 U
7440-02-0	NICKEL	ug/l	8.2 J	2.5 J
7440-09-7	POTASSIUM	ug/l	860	830
7782-49-2	SELENIUM	ug/l	25 U	25 U
7440-22-4	SILVER	ug/l	6 U	6 U
7440-23-5	SODIUM	ug/l	7300	12000
7440-28-0	THALLIUM	ug/l	20 U	20 U
7440-62-2	VANADIUM	ug/l	2.9 J	5 U
7440-66-6	ZINC	ug/l	14 J+	3.1 J
	DISSOLVED METALS			
7429-90-5	ALUMINUM	ug/l	200 U	200 U
7440-36-0	ANTIMONY	ug/l	20 U	20 U
7440-38-2	ARSENIC	ug/l	15 U	15 U
7440-39-3	BARIUM	ug/l	160	43
7440-41-7	BERYLLIUM	ug/l	2 U	2 U
7440-43-9	CADMIUM	ug/l	2 U	2 U
7440-70-2	CALCIUM	ug/l	92400	157000
7440-47-3	CHROMIUM, TOTAL	ug/l	4 U	4 U
7440-48-4	COBALT	ug/l	4 U	4 U
7440-50-8	COPPER	ug/l	10 U	10 U
7439-89-6	IRON	ug/l	19 J	340 J
7439-92-1	LEAD	ug/l	10 U	4.7 J
7439-95-4	MAGNESIUM	ug/l	52100	77100
7439-96-5	MANGANESE	ug/l	55 J	110 J
7439-97-6	MERCURY	ug/l	0.2 U	0.2 U
7440-02-0	NICKEL	ug/l	10 U	2.4 J
7440-09-7	POTASSIUM	ug/l	280 J	660
7782-49-2	SELENIUM	ug/l	25 U	25 U
7440-22-4	SILVER	ug/l	6 U	6 U
7440-23-5	SODIUM	ug/l	7000	18400 J
7440-28-0	THALLIUM	ug/l	20 U	20 U
7440-62-2	VANADIUM	ug/l	5 U	5 U
7440-66-6	ZINC	ug/l	3.5 J	5.1 J

			Duplicate of NCR13S
City of North Tonawanda NY1A8791		Location ID:	NCR13S
216 Payne Ave		Sample ID:	
North Tonawanda, NY			
C/O Niagara County Refuse Site			WG-11109668-041818/042418-SG-NCR6S
Validated Groundwater Sampling Event		Lab Sample Id:	480-134493-4/480-134747-4
April 2018		Source:	TALBUFF
		SDG:	480134493/480134747
		Matrix:	WATER
		Sampled:	4/18/18 & 4/24/18
		Validated:	5/16/2018
CAS NO.	COMPOUND	UNITS:	
	VOLATILES		
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	1 U
79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/l	1 U
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	1 U
79-00-5	1,1,2-TRICHLOROETHANE	ug/l	1 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	1 U
120-82-1	1,2,4-TRICHLOROBENZENE	ug/l	1 U
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	ug/l	1 U
106-93-4	1,2-DIBROMOETHANE	ug/l	1 U
95-50-1	1,2-DICHLOROBENZENE	ug/l	1 U
107-06-2	1,2-DICHLOROETHANE	ug/l	1 U
78-87-5	1,2-DICHLOROPROPANE	ug/l	1 U
541-73-1	1,3-DICHLOROBENZENE	ug/l	1 U
106-46-7	1,4-DICHLOROBENZENE	ug/l	1 U
591-78-6	2-HEXANONE	ug/l	5 U
67-64-1	ACETONE	ug/l	10 U
71-43-2	BENZENE	ug/l	1 U
75-27-4	BROMODICHLOROMETHANE	ug/l	1 U
75-25-2	BROMOFORM	ug/l	1 U
74-83-9	BROMOMETHANE	ug/l	1 U
75-15-0	CARBON DISULFIDE	ug/l	1 U
56-23-5	CARBON TETRACHLORIDE	ug/l	1 U
108-90-7	CHLOROBENZENE	ug/l	1 U
75-00-3	CHLOROETHANE	ug/l	1 U
67-66-3	CHLOROFORM	ug/l	1 U
74-87-3	CHLOROMETHANE	ug/l	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	1 U
10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/l	1 U
110-82-7	CYCLOHEXANE	ug/l	1 U
124-48-1	DIBROMOCHLOROMETHANE	ug/l	1 U
75-71-8	DICHLORODIFLUOROMETHANE	ug/l	1 U
100-41-4	ETHYLBENZENE	ug/l	1 U
98-82-8	ISOPROPYLBENZENE (CUMENE)	ug/l	1 U
79-20-9	METHYL ACETATE	ug/l	2.5 U
78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	ug/l	10 U
108-10-1	METHYL ISOBUTYL KETONE	ug/l	5 U
108-87-2	METHYLCYCLOHEXANE	ug/l	1 U
75-09-2	METHYLENE CHLORIDE	ug/l	1 U
100-42-5	STYRENE	ug/l	1 U
1634-04-4	TERT-BUTYL METHYL ETHER	ug/l	1 U
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	1 U
108-88-3	TOLUENE	ug/l	1 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	1 U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/l	1 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U
75-69-4	TRICHLOROFLUOROMETHANE	ug/l	1 U
75-01-4	VINYL CHLORIDE	ug/l	1 U

			Duplicate of NCR13S
City of North Tonawanda NY1A8791		Location ID:	NCR13S
216 Payne Ave		Sample ID:	
North Tonawanda, NY			
C/O Niagara County Refuse Site			WG-11109668-041818/042418-SG-NCR6S
Validated Groundwater Sampling Event		Lab Sample Id:	480-134493-4/480-134747-4
April 2018		Source:	TALBUFF
		SDG:	480134493/480134747
		Matrix:	WATER
		Sampled:	4/18/18 & 4/24/18
		Validated:	5/16/2018
CAS NO.	COMPOUND	UNITS:	
	SEMIVOLATILES		
95-95-4	2,4,5-TRICHLOROPHENOL	ug/l	5 U
88-06-2	2,4,6-TRICHLOROPHENOL	ug/l	5 U
120-83-2	2,4-DICHLOROPHENOL	ug/l	5 U
105-67-9	2,4-DIMETHYLPHENOL	ug/l	5 U
51-28-5	2,4-DINITROPHENOL	ug/l	10 U
121-14-2	2,4-DINITROTOLUENE	ug/l	5 U
606-20-2	2,6-DINITROTOLUENE	ug/l	5 U
91-58-7	2-CHLORONAPHTHALENE	ug/l	5 U
95-57-8	2-CHLOROPHENOL	ug/l	5 U
91-57-6	2-METHYLNAPHTHALENE	ug/l	5 U
95-48-7	2-METHYLPHENOL (O-CRESOL)	ug/l	5 U
88-74-4	2-NITROANILINE	ug/l	10 U
88-75-5	2-NITROPHENOL	ug/l	5 U
91-94-1	3,3'-DICHLOROBENZIDINE	ug/l	5 U
99-09-2	3-NITROANILINE	ug/l	10 U
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ug/l	10 U
101-55-3	4-BROMOPHENYL PHENYL ETHER	ug/l	5 U
59-50-7	4-CHLORO-3-METHYLPHENOL	ug/l	5 U
106-47-8	4-CHLOROANILINE	ug/l	5 U
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ug/l	5 U
106-44-5	4-METHYLPHENOL (P-CRESOL)	ug/l	10 U
100-01-6	4-NITROANILINE	ug/l	10 U
100-02-7	4-NITROPHENOL	ug/l	10 U
83-32-9	ACENAPHTHENE	ug/l	5 U
208-96-8	ACENAPHTHYLENE	ug/l	5 U
98-86-2	ACETOPHENONE	ug/l	5 U
120-12-7	ANTHRACENE	ug/l	5 U
1912-24-9	ATRAZINE	ug/l	5 U
100-52-7	BENZALDEHYDE	ug/l	5 U
56-55-3	BENZO(A)ANTHRACENE	ug/l	5 U
50-32-8	BENZO(A)PYRENE	ug/l	5 U
205-99-2	BENZO(B)FLUORANTHENE	ug/l	5 U
191-24-2	BENZO(G,H,I)PERYLENE	ug/l	5 U
207-08-9	BENZO(K)FLUORANTHENE	ug/l	5 U
85-68-7	BENZYL BUTYL PHTHALATE	ug/l	5 U
92-52-4	BIPHENYL (DIPHENYL)	ug/l	5 U
111-91-1	BIS(2-CHLOROETHOXY) METHANE	ug/l	5 U
111-44-4	BIS(2-CHLOROETHYL) ETHER	ug/l	5 U
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	ug/l	5 U
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	ug/l	5 U
105-60-2	CAPROLACTAM	ug/l	5 U
86-74-8	CARBAZOLE	ug/l	5 U
218-01-9	CHRYSENE	ug/l	5 U
53-70-3	DIBENZ(A,H)ANTHRACENE	ug/l	5 U
132-64-9	DIBENZOFURAN	ug/l	10 U
84-66-2	DIETHYL PHTHALATE	ug/l	5 U
131-11-3	DIMETHYL PHTHALATE	ug/l	5 U
84-74-2	DI-N-BUTYL PHTHALATE	ug/l	5 U
117-84-0	DI-N-OCTYLPHTHALATE	ug/l	5 U
206-44-0	FLUORANTHENE	ug/l	5 U
86-73-7	FLUORENE	ug/l	5 U
118-74-1	HEXACHLOROBENZENE	ug/l	5 U
87-68-3	HEXACHLOROBUTADIENE	ug/l	5 U
77-47-4	HEXACHLOROCYCLOPENTADIENE	ug/l	5 U
67-72-1	HEXACHLOROETHANE	ug/l	5 U
193-39-5	INDENO(1,2,3-C,D)PYRENE	ug/l	5 U
78-59-1	ISOPHORONE	ug/l	5 U
91-20-3	NAPHTHALENE	ug/l	5 U
98-95-3	NITROBENZENE	ug/l	5 U
621-64-7	N-NITROSODI-N-PROPYLAMINE	ug/l	5 U
86-30-6	N-NITROSODIPHENYLAMINE	ug/l	5 U
87-86-5	PENTACHLOROPHENOL	ug/l	10 UJ
85-01-8	PHENANTHRENE	ug/l	5 U
108-95-2	PHENOL	ug/l	5 U
129-00-0	PYRENE	ug/l	5 U

			Duplicate of NCR13S
City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event April 2018		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR13S WG-11109668-041818/042418-SG-NCR6S 480-134493-4/480-134747-4 TALBUFF 480134493/480134747 WATER 4/18/18 & 4/24/18 5/16/2018
CAS NO.	COMPOUND	UNITS:	
	METALS		
7429-90-5	ALUMINUM	ug/l	350
7440-36-0	ANTIMONY	ug/l	20 U
7440-39-3	BARIUM	ug/l	56
7440-41-7	BERYLLIUM	ug/l	2 U
7440-43-9	CADMIUM	ug/l	2 U
7440-70-2	CALCIUM	ug/l	157000 J+
7440-47-3	CHROMIUM, TOTAL	ug/l	3 J
7440-48-4	COBALT	ug/l	4 U
7440-50-8	COPPER	ug/l	2 J
7439-89-6	IRON	ug/l	490 J+
7439-92-1	LEAD	ug/l	10 U
7439-95-4	MAGNESIUM	ug/l	65300
7439-96-5	MANGANESE	ug/l	40
7439-97-6	MERCURY	ug/l	0.2 U
7440-02-0	NICKEL	ug/l	2.6 J
7440-09-7	POTASSIUM	ug/l	900
7782-49-2	SELENIUM	ug/l	25 U
7440-22-4	SILVER	ug/l	6 U
7440-23-5	SODIUM	ug/l	10800
7440-28-0	THALLIUM	ug/l	20 U
7440-62-2	VANADIUM	ug/l	5 U
7440-66-6	ZINC	ug/l	6.2 J
	DISSOLVED METALS		
7429-90-5	ALUMINUM	ug/l	200 U
7440-36-0	ANTIMONY	ug/l	20 U
7440-38-2	ARSENIC	ug/l	15 U
7440-39-3	BARIUM	ug/l	53
7440-41-7	BERYLLIUM	ug/l	2 U
7440-43-9	CADMIUM	ug/l	2 U
7440-70-2	CALCIUM	ug/l	149000
7440-47-3	CHROMIUM, TOTAL	ug/l	4 U
7440-48-4	COBALT	ug/l	4 U
7440-50-8	COPPER	ug/l	10 U
7439-89-6	IRON	ug/l	39 J
7439-92-1	LEAD	ug/l	10 U
7439-95-4	MAGNESIUM	ug/l	62400
7439-96-5	MANGANESE	ug/l	31 J
7439-97-6	MERCURY	ug/l	0.2 U
7440-02-0	NICKEL	ug/l	1.4 J
7440-09-7	POTASSIUM	ug/l	780
7782-49-2	SELENIUM	ug/l	25 U
7440-22-4	SILVER	ug/l	6 U
7440-23-5	SODIUM	ug/l	9800 J
7440-28-0	THALLIUM	ug/l	20 U
7440-62-2	VANADIUM	ug/l	5 U
7440-66-6	ZINC	ug/l	2.8 J

APPENDIX E
MONTHLY INSPECTION LOGS

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 01/16/18
(MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
✓ Manholes	- cover on securely	None	None
✓	- condition of cover	None	None
✓	- condition of inside of manhole	None	None
✓	- flow conditions	None	None
✓ Wet Wells	- cover on securely	None	None
✓	- condition of cover	None	None
✓	- condition of inside of wet well	None	None
2 Landfill Cap			
✓ Vegetated Soil Cover	- erosion	None	None
✓	- bare areas	None	None
✓	- washouts	None	none
✓	- leachate seeps	None	None
✓	- length of vegetation	None	None
✓	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 01/16/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 01/16/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
	- dead/dying vegetation	None	None
	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 02/13/18
(MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 02/13/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 02/13/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/	- sediment buildup	None	None
☑ Swale Outlets	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑	- dead/dying vegetation	None	None
☑	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
☑	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 03/19/18
(MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 03/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 03/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
	- dead/dying vegetation	None	None
	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 04/16/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/	- sediment buildup	None	None
☑ Swale Outlets	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑	- dead/dying vegetation	None	None
☑	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
☑	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 04/16/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 04/16/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 05/14/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 05/14/18
(MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 05/14/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
✓ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
✓	- erosion	None	None
✓	- condition of erosion protection	None	None
✓	- flow obstructions	None	None
✓	- dead/dying vegetation	None	None
✓	- cable concrete/gabion mats and riprap	None	None
✓ Culverts	- sediment build-up	None	None
✓	- erosion	None	None
✓	- condition of erosion protection	None	None
✓	- flow obstructions	None	None
✓ Gas Vents	- intact/damage	None	None
✓ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 06/20/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 06/20/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 06/20/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
	- dead/dying vegetation	None	None
	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 07/25/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 07/25/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 07/25/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/	- sediment buildup	None	None
☑ Swale Outlets	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑	- dead/dying vegetation	None	None
☑	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
☑	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 08/23/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
	- condition of cover	None	None
	- condition of inside of manhole	None	None
	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
	- condition of cover	None	None
	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
	- bare areas	None	None
	- washouts	None	none
	- leachate seeps	None	None
	- length of vegetation	None	None
	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 08/23/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 08/23/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/	- sediment buildup	None	None
☑ Swale Outlets	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑	- dead/dying vegetation	None	None
☑	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
☑	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 09/19/18
(MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
	- condition of cover	None	None
	- condition of inside of manhole	None	None
	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
	- condition of cover	None	None
	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
	- bare areas	None	None
	- washouts	None	none
	- leachate seeps	None	None
	- length of vegetation	None	None
	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 09/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 09/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
	- dead/dying vegetation	None	None
	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/24/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/24/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/24/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
	- dead/dying vegetation	None	None
	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/27/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/27/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/27/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/ Swale Outlets	- sediment buildup	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
	- dead/dying vegetation	None	None
	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
	- erosion	None	None
	- condition of erosion protection	None	None
	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
☑ Manholes	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of manhole	None	None
☑	- flow conditions	None	None
☑ Wet Wells	- cover on securely	None	None
☑	- condition of cover	None	None
☑	- condition of inside of wet well	None	None
2 Landfill Cap			
☑ Vegetated Soil Cover	- erosion	None	None
☑	- bare areas	None	None
☑	- washouts	None	none
☑	- leachate seeps	None	None
☑	- length of vegetation	None	None
☑	- dead/dying vegetation	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☑ Access Roads	- bare areas, dead/dying veg.	None	None
☑	- erosion	None	None
☑	- potholes or puddles	None	None
☑	- obstruction	None	None
3 Wetlands (Area "F")			
☑	- dead/dying vegetation	None	None
☑	- change in water budget	None	None
☑	- general conditions of wetlands	None	None
4 Other Site Systems			
☑ Perimeter Fence	- integrity of fence	None	None
☑	- integrity of gates	None	None
☑	- integrity of locks	None	None
☑	- placement and condition of signs	None	None

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/19/18 (MM DD YY)

INSPECTOR(S): Tony Manns

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☑ Drainage Ditches/	- sediment buildup	None	None
☑ Swale Outlets	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑	- dead/dying vegetation	None	None
☑	- cable concrete/gabion mats and riprap	None	None
☑ Culverts	- sediment build-up	None	None
☑	- erosion	None	None
☑	- condition of erosion protection	None	None
☑	- flow obstructions	None	None
☑ Gas Vents	- intact/damage	None	None
☑ Wells	- locks secure	None	None

FORM 1

Looking south along western edge of site.

Looking north along the western edge of site.

Top of landfill showing well established vegetation.

East side of landfill looking north.

APPENDIX F
MAINTENANCE RECORD LOGS

MAINTENANCE RECORD LOG

PROJECT NAME: *Niagara County Refuse Site* LOCATION: Wheatfield, New York

CREW MEMBERS: Tony Manns

1. Date 6/12/2018

   Time 0900

   Scheduled/Unscheduled: Scheduled

   Type of Maintenance Performed: Pump maintenance on wet well C & D

2. Company Performing Maintenance GHD

   Name: Tony Manns

   Address: 2055 Niagara Falls blvd

   Niagara Falls, NY 14304

   Contact Name: (716) 818-6241

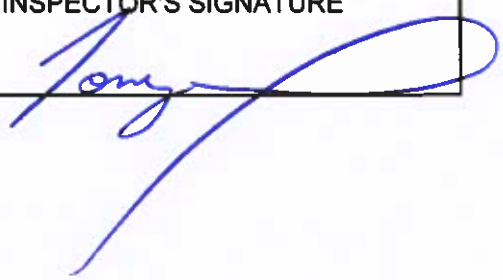
3. Methods Used: Removed pump, Checked and clean pump, replace pump back in well

Description of Material Removed: None

Problems/Comments: Pump running well.

DATE 6/12/2018 INSPECTOR INSPECTOR'S SIGNATURE

FORM 2 Tony Manns



MAINTENANCE RECORD LOG

PROJECT NAME: *Niagara County Refuse Site* LOCATION: Wheatfield, New York

CREW MEMBERS: Tony Manns & Britt Gebhardt

1. Date 7/31/2018

   Time 1330

   Scheduled/Unscheduled: Unscheduled

   Type of Maintenance Performed: Replaced broken discharge hose on WWA

2. Company Performing Maintenance GHD

   Name: Tony Manns

   Address: 2055 Niagara Falls blvd

   Niagara Falls, NY 14304

   Contact Name: (716) 818-6241

3. Methods Used: Removed pump, Repaired Broken discharge hose.

   Checked and cleaned pump, replace pump back in well.

   Description of Material Removed: 2" of discharge hose.

   Problems/Comments: Pump running well.

DATE 7/31/2018 INSPECTOR INSPECTOR'S SIGNATURE

FORM 2 Tony Manns

APPENDIX G

WATER LEVEL RECORDS

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 01/10/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1548	598.93	26.45	572.48
EAST "B"	1547	596.23	Dry	596.23
EAST "C"	1527	598.69	21.02	577.67
EAST "D"	1551	593.20	15.41	577.79
NCR-3S	1520	579.60	4.69	574.91
NCR-4S	1532	577.88	3.52	574.36
NCR-5S	1510	579.34	7.11	572.23
NCR-13S	1450	577.15	5.27	571.88

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1440		2' 6"
WW B	1544		3' 1"
WW C	1518		3' 4"
WW D	1504		2' 11"

Total System Flow	Time of Measurement
000311	1445

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 02/13/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1109	598.93	26.48	572.45
EAST "B"	1112	596.23	Dry	596.23
EAST "C"	1055	598.69	19.87	578.82
EAST "D"	1125	593.20	14.41	578.79
NCR-3S	1129	579.60	4.43	575.17
NCR-4S	1101	577.88	3.19	574.69
NCR-5S	1025	579.34	7.18	572.16
NCR-13S	1041	577.15	5.32	571.83

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1031		3' 1"
WW B	1104		2' 6"
WW C	1051		3' 4"
WW D	1045		2' 11"

Total System Flow	Time of Measurement
001045	1035

Water Level Meter: NF08335

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 03/06/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	0908	598.93	271.13	327.80
EAST "B"	0914	596.23	Dry	596.23
EAST "C"	0934	598.69	21.24	577.45
EAST "D"	0940	593.20	15.93	577.27
NCR-3S	0946	579.60	4.42	575.18
NCR-4S	0929	577.88	3.13	574.75
NCR-5S	0900	579.34	6.76	572.58
NCR-13S	0843	577.15	5.04	572.11

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0840		3' 5"
WW B	0918		2' 11"
WW C	0950		3' 1"
WW D	0849		3' 3"

Total System Flow	Time of Measurement
001695	0839

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 04/16/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1123	598.93	27.24	571.69
EAST "B"	1114	596.23	Dry	596.23
EAST "C"	1100	598.69	20.99	577.70
EAST "D"	1104	593.20	15.76	577.44
NCR-3S	1053	579.60	3.06	576.54
NCR-4S	1109	577.88	3.75	574.13
NCR-5S	1033	579.34	4.97	574.37
NCR-13S	1042	577.15	3.04	574.11

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1037		3' 1"
WW B	1112		2' 7"
WW C	1055		5' 9"
WW D	1047		5' 10"

Total System Flow	Time of Measurement
002692	1038

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 05/14/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	0935	598.93	28.20	570.73
EAST "B"	0931	596.23	Dry	596.23
EAST "C"	0921	598.69	22.26	576.43
EAST "D"	0918	593.20	17.01	576.19
NCR-3S	0738	579.60	4.65	574.95
NCR-4S	0926	577.88	4.29	573.59
NCR-5S	0722	579.34	7.49	571.85
NCR-13S	0731	577.15	5.94	571.21

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0729		2' 6"
WW B	0740		2' 2"
WW C	0928		2' 4"
WW D	0734		2' 6"

Total System Flow	Time of Measurement
003285	0729

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 06/07/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1022	598.93	27.12	571.81
EAST "B"	1017	596.23	Dry	596.23
EAST "C"	0956	598.69	21.54	577.15
EAST "D"	0952	593.20	16.02	577.18
NCR-3S	0948	579.60	Dry	579.60
NCR-4S	1001	577.88	3.70	574.18
NCR-5S	1031	579.34	9.35	569.99
NCR-13S	0938	577.15	7.42	569.73

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0934		2' 2"
WW B	1010		2' 9"
WW C	0950		3' 1"
WW D	0942		2' 10"

Total System Flow	Time of Measurement
003366	0935

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 07/17/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1037	598.93	28.18	570.75
EAST "B"	1032	596.23	Dry	596.23
EAST "C"	0958	598.69	22.25	576.44
EAST "D"	0955	593.20	16.99	576.21
NCR-3S	1017	579.60	Dry	579.60
NCR-4S	1010	577.88	Dry	577.88
NCR-5S	0914	579.34	Dry	579.34
NCR-13S	0934	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0927		3' 1"
WW B	1014		2' 11"
WW C	0950		3' 2"
WW D	0944		2' 11"

Total System Flow	Time of Measurement
003410	0929

Water Level Meter: NF07567

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 08/09/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1054	598.93	27.04	571.89
EAST "B"	1044	596.23	Dry	596.23
EAST "C"	1041	598.69	21.14	577.55
EAST "D"	1035	593.20	15.77	577.43
NCR-3S	1125	579.60	Dry	579.60
NCR-4S	1047	577.88	Dry	577.88
NCR-5S	1013	579.34	Dry	579.34
NCR-13S	1006	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1002		2' 4"
WW B	1049		2' 6"
WW C	1028		2' 11"
WW D	1009		3' 1"

Total System Flow	Time of Measurement
003427	1003

Water Level Meter: NF07567

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 09/12/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1036	598.93	27.09	571.84
EAST "B"	1021	596.23	Dry	596.23
EAST "C"	1004	598.69	21.68	577.01
EAST "D"	1000	593.20	16.14	577.06
NCR-3S	0951	579.60	Dry	579.60
NCR-4S	1012	577.88	Dry	577.88
NCR-5S	1045	579.34	Dry	579.34
NCR-13S	0927	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0924		3' 1"
WW B	1015		3' 3"
WW C	0955		2' 10"
WW D	0945		3' 3"

Total System Flow	Time of Measurement
003447	0922

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 10/09/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1034	598.93	27.09	571.84
EAST "B"	1029	596.23	Dry	596.23
EAST "C"	1018	598.69	21.60	577.09
EAST "D"	1014	593.20	16.19	577.01
NCR-3S	1009	579.60	Dry	579.60
NCR-4S	1021	577.88	Dry	577.88
NCR-5S	0943	579.34	Dry	579.34
NCR-13S	1000	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0954		2' 11"
WW B	1024		2' 10"
WW C	1012		3' 2"
WW D	1005		3' 0"

Total System Flow	Time of Measurement
003460	0955

Water Level Meter: NF08334

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 11/14/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet		feet
EAST "A"	0938	598.93	27.17	571.76
EAST "B"	0933	596.23	Dry	596.23
EAST "C"	0918	598.69	21.90	576.79
EAST "D"	0915	593.20	15.99	577.21
NCR-3S	0908	579.60	4.47	575.13
NCR-4S	0924	577.88	3.87	574.01
NCR-5S	0945	579.34	Dry	579.34
NCR-13S	0859	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0855		2' 10"
WW B	0927		3' 1"
WW C	0912		3' 1"
WW D	0904		3' 4"

Total System Flow	Time of Measurement
003477	0853

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 12/05/18 (MM DD YY)

CREW MEMBERS: Tony Manns

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet		feet
EAST "A"	0951	598.93	27.09	571.84
EAST "B"	0954	596.23	Dry	596.23
EAST "C"	0935	598.69	21.16	577.53
EAST "D"	0933	593.20	16.01	577.19
NCR-3S	0926	579.60	4.16	575.44
NCR-4S	0938	577.88	3.34	574.54
NCR-5S	0900	579.34	Dry	579.34
NCR-13S	0915	577.15	5.22	571.93

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0910		3' 4"
WW B	0943		2' 6"
WW C	0930		2' 3"
WW D	0919		3' 8"

Total System Flow	Time of Measurement
003477	0909

x 1000 Gallons

Water Level Meter: NF07567

FP-3D

APPENDIX H
COMPACT DISC CONTAINING REPORT