2020 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

August 2020

2020 ANNUAL MONITORING REPORT

NIAGARA COUNTY REFUSE DISTRICT SITE
Wheatfield, Niagara County, New York
(NYSDEC Site No. 9-32-026)

Submitted To:

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

and

United States Environmental Protection Agency

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

August 2020

PARSONS

TABLE OF CONTENTS

LIST OF TABLES

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

SECTION 1
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 May 2019 through May 2020.

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 May 2020. These four wells are screened in the shallow overburden materials. As requested by the USEPA, viable piezometers screened within the landfill waste, East-A, East-C, and East-D were also sampled. Groundwater sampling on an annual schedule commenced in 2006. East-A, East-C, and East-D will continue to be sampled for the next three years when the usefulness will be reevaluated.

Each groundwater monitoring well and piezometer was purged prior to sample collection using a dedicated disposable HDPE bailer, except for East-D, where a Wattera brand pump was used. The four wells and piezometer East-A were bailed dry the day prior to sampling. Piezometers East-C and East-D were purged of three well volumes the day before 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. Beginning in 2019, collection of groundwater samples for VOCs, SVOCs, and mercury analysis were eliminated from the sampling requirements. In May 2020, in accordance with this schedule, groundwater samples were collected and analyzed for inorganics in accordance with EPA Method 200.7 and Method SW-6010. Additionally, as per the request of the USEPA, anions (bicarbonate, sulfate, chloride, and nitrate-nitrite) and cations (sodium, potassium, magnesium, calcium, and ammonium) samples were also collected. Cation and anion samples were filtered in the laboratory. Analysis of cations and anions will

be included for the next three years and then evaluated to determine if continuation would be beneficial.

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 2019 and is effective from March 31, 2019 through April 1, 2022. The new permit has a reduced analytical parameter list compared to the original permit, but continues to require a semi-annual sampling frequency. During the current reporting period, discharge samples were collected in October 2019 and April 2020. 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 the current reporting period (May 2019 through May 2020). 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.

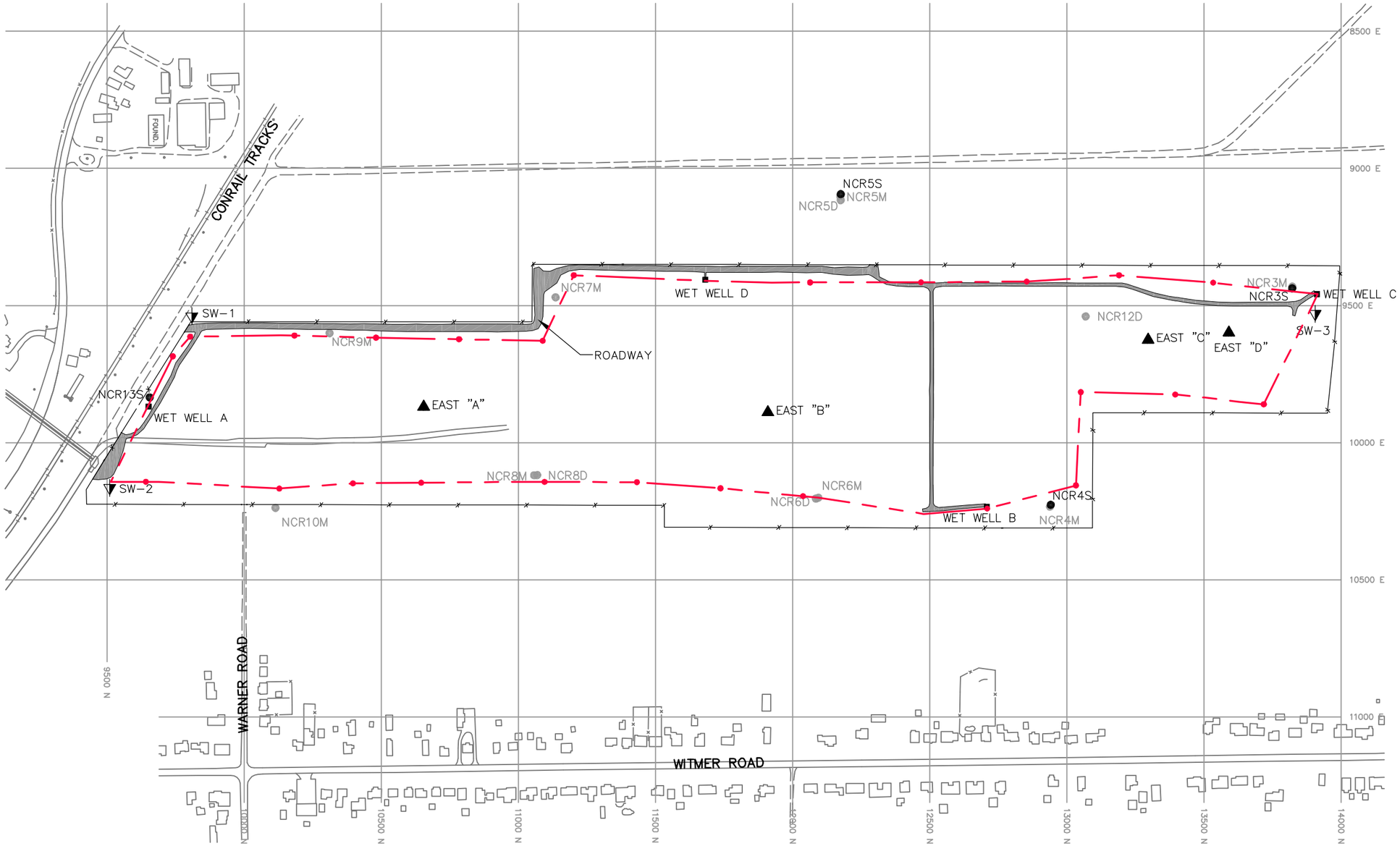
1.2.4 Site Inspections

The Site was inspected by GHD on a monthly basis during the reporting period, 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.

1.2.5 Well and Piezometer Inspections

Each of the wells and piezometers was inspected by checking the total depth, checking for buildup of silt in the well bottom, checking for bends or kinks in the risers, and documenting

the general condition of the well and lock. This information was recorded on the well purging forms included in Appendix B.



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 October 2019 and April 2020 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, 2019 discharge permit. Effluent analytical results 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 223 to 234, 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 inorganics annually, as approved by the USEPA (see Appendix C). The groundwater samples collected during this reporting period were analyzed for total and dissolved inorganics (see Appendix B) including anions and cations. Additionally, samples were collected from viable piezometers within the landfill perimeter (East-A, East-C, and East-D). Anions and cations as well as the three piezometers from within the landfill, are scheduled to be sampled for the next three years. An evaluation will be completed at that time to determine if continuing to sample the piezometers and analyze for the anions/cations should continue.

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 B, 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 B. 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 B.

April 2020 Event

Monitoring wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S and piezometers East-A, East-C, and East-D were sampled on May 19, 2020. The locations of the monitoring wells are provided in Figure 1.1. The data validation report is presented in Appendix D. Inadequate water volume in piezometer East-A did not allow for the collection of a dissolved inorganics sample.

Thirteen metals were identified in one or more of the groundwater samples from the wells. Two 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. General chemistry analytical results were found to be below the screening criteria for each of the samples from the wells. Key results are summarized below.

- Total iron was identified in each of the samples and exceeded the AWQS and the NYSDOH MCL in NCR-4S and NCR-5S, as well as the duplicate from MW-13S (but not the original sample). Dissolved iron was also identified in each of the samples but only exceeded the AWQS and the NYSDOH MCL in NCR-4S. 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.
- 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.

Nineteen metals were identified in one or more of the groundwater samples from the piezometers. Eight of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs (screening criteria). General chemistry results were also to exceed criteria for three of the analytes. Key results are summarized below.

- Total chromium was detected in each of the samples from the piezometers and exceeded the NYSDEC AWQS and NYSDOH MCL and USEPA MCL in the sample from East-C and exceeded the NYSDEC AWQS in the sample from East-D. Dissolved chromium exceeded all three criteria in East-C and East-D.
- Both total and dissolved iron samples exceeded NYSDEC AWQS and NYDOH MCLs. 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.
- Lead exceeded the three criteria in each of the three total and two dissolved samples collected.
- Magnesium exceeded the NYSDEC guidance value (not a standard) in each of the three total and two dissolved samples collected.
- Manganese was detected in each of the samples collected and exceeded the NYSDEC AWQS and NYSDOH MCLs in the total manganese samples from East-A and East-C and the dissolved sample from East-C.
- Nickel was detected in each of the samples collected and exceeded the NYSDEC AWQS for total nickel in the samples from East-C and East-D and the dissolved sample from East-C and East-D.

- Sodium was detected in each of the samples collected and exceeded all three criteria in both the total sodium samples from East-A, East-C, and East-D and the two dissolved sodium samples from East-C and East-D.
- Zinc was identified in each of the samples from the piezometer and exceeded the NYSDEC AWQS and NYSDOH MCLs in the total and dissolved sample from East-C.
- Chloride exceeded the NYSDEC AWQS and NYSDOH MCLs in the samples from East-C and East-D and was detected in the sample from East-A below screening criteria.
- Nitrogen, ammonia (as nitrogen) exceeded NYSDEC AWQS in each of the three piezometer samples.
- Sulfate (as SO4) was detected in two of the three samples and exceeded each of the screening criteria in the sample from East-C.

Comparison of Total Metals Results Between Wells and Piezometers

The monitoring wells (NCR-3S, NCR-4S, NCR-5S, and NCR-13S) are installed outside the perimeter of the landfill, outside the collection system. The piezometer (East-A, East-C, and East-D) are within the landfill footprint. Comparing the results of the monitoring wells with the piezometers, the analytical results for total metals found several analytes were detected in the piezometers that were not detected in the monitoring wells: arsenic, beryllium, cadmium, selenium, and vanadium. Lead was not detected in the well samples but was above the three screening criteria in each of the piezometer samples. Chromium, manganese, nickel, sodium, and zinc were below criteria in each of the well samples but were found above criteria in one of more of the samples from the piezometers. Other analytes (aluminum, barium, calcium, cobalt, copper, iron, magnesium, and potassium) were typically found at higher concentrations in the samples from the piezometers than the wells.

Comparison of Dissolved Metals Results Between Wells and Piezometers

Comparing the results of the monitoring wells with the piezometers, the analytical results for dissolved metals found several analytes were detected in the piezometers that were not detected in the monitoring wells: arsenic, beryllium, cadmium, selenium, and vanadium. Chromium, lead, manganese, nickel, sodium, and zinc were below criteria in each of the well samples but were found above criteria in one of more of the samples from the piezometers. Other analytes (aluminum, barium, calcium, cobalt, copper, iron, magnesium, and potassium) were typically found at higher concentrations in the samples from the piezometers than the wells.

The general chemistry parameters are typically one to five orders of magnitude higher in the samples from the piezometers. Most notably chloride (as Cl), nitrogen, ammonia (as N), nitrogen, nitrate-nitrite, and sulfate (as SO4). Bicarbonate alkalinity results were comparable between the wells and the piezometers.

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:

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

- Blank contamination – The laboratory preparation blank associated with the project samples contained total manganese and total potassium below the reporting limits at concentrations of 0.00104 and 0.180 mg/L, respectively. Validation qualification was not required for the affected samples.
- Continuing Calibration Verifications - All continuing calibration verifications were analyzed at the appropriate frequency with recoveries within QC limits. All low reference standard verifications were analyzed at the appropriate frequency with recoveries within the 70-130%R QC limit with the exception of the high verification recoveries for dissolved copper (186%R) associated with sample DT-003 and total potassium (138%R) associated with sample DT-004. 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 total iron (130%RPD), total manganese (49%RPD), total potassium (53%RPD), total sodium (68%RPD), dissolved manganese (63%RPD), dissolved potassium (39%RPD), and dissolved sodium (34%RPD) associated with sample DT-002 and its field duplicate sample DT-003. Therefore, results for these analytes were considered estimated and qualified "J" for the affected parent sample and field duplicate.

Although all general chemistry sample results were considered usable following data validation, one minor issue was noted:

- All MS/MSD recoveries were considered acceptable and within QC limits with the exception of the low MS recovery for ammonia (83%R; QC limit 90-110%R) associated with sample DT-007. Therefore, the nondetected ammonia result was considered estimated and qualified "UJ" for the affected sample.

After data validation was completed, the data was electronically submitted to the USEPA Region 2 database.

2.2 SITE INSPECTIONS

Monthly Site inspections were conducted between May 2019 and May 2020. 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 the last week of June 2019.

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 during the reporting period between May 2019 and May 2020. No issues were identified with the wetland vegetation (no dead or dying vegetation) during each of the inspections during the reporting period.

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

Scheduled maintenance during the reporting period included the following:

- On June 19, 2019 the float switches in Wet Well A were replaced.
- On September 10, 2019 the pumps in Wet Well A and Wet Well C were cleaned and discharge hose attachments were tightened.
- On October 8, 2019 the discharge hoses in Wet Well B, Wet Well C, and Wet Well D were replaced with new hoses. A second hose was required at Wet Well B due to leakage of the new hose. The old hose was returned to the vendor and a new hose was installed.

- On May 5, 2020 the pump at Wet Well C was removed for cleaning and reinstalled.
- On May 6, 2020 the pump in Wet Well D was removed for cleaning and reinstalled.

Occasional unscheduled maintenance at the landfill is required. During this reporting period, six unscheduled maintenance items were addressed:

- On June 21, 2019 the lock mechanism in the control building door was replaced by a lock smith.
- On September 5, 2019 the discharge hose in Wet Well C failed and a repair was completed.
- On September 11, 2019 there were local power failures and the site was checked to confirmed that the system returned to normal operation after the power outage.
- On November 6, 2019 a downed tree and limbs were found across the access roadway and were moved off into the woods nearby.
- On January 15, 2020 the flow meter was found to not be operating properly. It was removed, cleaned out, and reinstalled and confirmed to be operating properly.
- On April 17, 2020 Wet Well B was found to be not functioning. The submersible pump was removed and replaced with a new unit.

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 the reporting period, water levels were collected from the monitoring wells on a monthly basis. Water levels varied (rose or fell) between 1.7 and 4.8 feet over the course of the reporting period.

2.5 PERIMETER COLLECTION SYSTEM (PCS)

The PCS encloses the landfill and capped area of the Site. Leachate is passively collected along the perimeter flowing to 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. Historic 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.

- Samples were collected from three piezometers within the landfill (East-A, East-C, and East-D) for comparison to analytical results from the monitoring wells outside the perimeter of the PCS. Additional analytes were collected in 2019 to enhance this comparison. As discussed in Section 2.1.2, elevated levels of analytes were identified in the piezometers compared to the monitoring wells. Eight total metals were greater than screening criteria in the samples from the piezometers compared to the two total metals in the monitoring well samples. Eight dissolved metals were greater than screening criteria in the samples from the piezometers compared to the two total metals in the monitoring well samples. Additionally, three of the general chemistry analytes exceeded criteria in the samples from the piezometers and none of the samples from the monitoring wells exceeded.

2.6 Well and Piezometer Inspections

Each of the wells and piezometers was inspected by checking the total depth, checking for buildup of silt in the well bottom, checking for bends or kinks in the risers, as well as general condition of the well/piezometer and lock. Results of the inspections have been included in Appendix B on the purging forms. Each of the wells and piezometers were found to need the protective casings repainted in the near future. No sediment was identified in any of the wells or piezometers except for East-A which may have a small amount. Each of the pads around the wells and piezometers was found in good condition with the piezometers pads cover by grass growth. Each of the wells and piezometers had J-plugs and locks that were in working order. Piezometer East-B is not usable with a blockage/obstruction found at approximately 14.3 feet below top of casing. Piezometer East-D had a bend or shift in the casing at approximately 8.0 feet below the top of casing.

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 June 2020 Detected Compound Summary		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NYS DEC AWQS*	NYS DOH MCL	US EPA MCL	NCR-3S WG-11109668-051920-DT-006 480-170182-6 TALBUFF 4801701821 WATER 5/19/2020 9:30 7/1/2020	NCR-4S WG-11109668-051920-DT-007 480-170182-7 TALBUFF 4801701821 WATER 5/19/2020 9:45 7/1/2020	NCR-5S WG-11109668-051920-DT-001 480-170182-1 TALBUFF 4801701821 WATER 5/19/2020 8:05 7/1/2020	NCR-13S WG-11109668-051920-DT-002 480-170182-2 TALBUFF 4801701821 WATER 5/19/2020 8:25 7/1/2020	Duplicate of NCR-13S NCR-13S WG-11109668-051920-DT-003 480-170182-3 TALBUFF 4801701821 WATER 5/19/2020 8:25 7/1/2020	EAST-A WG-11109668-051920-DT-008 480-170182-8 TALBUFF 4801701821 WATER 5/19/2020 10:05 7/1/2020	EAST-C WG-11109668-051920-DT-004 480-170182-4 TALBUFF 4801701821 WATER 5/19/2020 9:00 7/1/2020	EAST-D WG-11109668-051920-DT-005 480-170182-5 TALBUFF 4801701821 WATER 5/19/2020 9:15 7/1/2020
CAS NO.	COMPOUND	UNITS:											
	METALS												
7429-90-5	ALUMINUM	mg/l	-	-	-	ND	1.1	ND	ND	ND	7.8	7.2	1.2
7440-38-2	ARSENIC	mg/l	25	50	50	ND	ND	ND	ND	ND	0.014	0.079	0.02
7440-39-3	BARIUM	mg/l	1	2	2	0.057	0.059	0.16	0.048	0.042	0.62	0.19	0.65
7440-41-7	BERYLLIUM	mg/l	0.003+	0.004	0.004	ND	ND	ND	ND	ND	0.00045 J	0.0003 J	ND
7440-43-9	CADMIUM	mg/l	5	5	5	ND	ND	ND	ND	ND	0.0055	ND	ND
7440-70-2	CALCIUM	mg/l	-	-	-	126	133	93.7	134	143	226	2780	142
7440-47-3	CHROMIUM, TOTAL	mg/l	0.05	0.10	0.10	0.0014 J	0.0012 J	ND	ND	ND	0.037	**0.18**	0.075
7440-48-4	COBALT	mg/l	-	-	-	ND	ND	0.00088 J	ND	ND	0.013	0.18	0.022
7440-50-8	COPPER	mg/l	0.2	-	-	0.0034 J	0.0027 J	ND	0.0056 J	0.0035 J	0.11	ND	0.016
7439-89-6	IRON	mg/l	0.3>	0.3+	-	0.18	**3.3**	**0.4**	0.07 J	**0.33 J**	**164**	**1540**	**55.9**
7439-92-1	LEAD	mg/l	0.025	0.025	0.015	ND	ND	ND	ND	ND	**0.46**	**0.79**	**0.24**
7439-95-4	MAGNESIUM	mg/l	35+	-	-	65.3	46.2	45.5	55.5	69.8	126	1400	420
7439-96-5	MANGANESE	mg/l	0.3>	0.3+	-	0.16	0.17	0.13	0.029 J	0.048 J	**0.99**	**17.8**	0.11
7440-02-0	NICKEL	mg/l	0.10	-	-	0.0049 J	0.0041 J	0.005 J	0.0045 J	0.0033 J	0.05	1	0.21
7440-09-7	POTASSIUM	mg/l	-	-	-	3	6.8	0.31 J	2.4 J	1.4 J	15	1010 J+	438
7782-49-2	SELENIUM	mg/l	10	50	50	ND	ND	ND	ND	ND	ND	0.022	ND
7440-23-5	SODIUM	mg/l	20	20	20	6.3	20	5.1	7.9 J	16.1 J	**66.1**	**2260**	**1450**
7440-62-2	VANADIUM	mg/l	-	-	-	ND	ND	ND	ND	ND	0.019	0.035	0.0095
7440-66-6	ZINC	mg/l	2.0+	5	-	0.015	0.067	0.0048 J	ND	0.0023 J	0.24	**31.3**	0.37
	DISSOLVED METALS												
7429-90-5	ALUMINUM	mg/l	-	-	-	ND	0.87	ND	ND	ND	-	8.8	1
7440-38-2	ARSENIC	mg/l	25	50	50	ND	ND	ND	ND	ND	-	0.074	0.022
7440-39-3	BARIUM	mg/l	1	2	2	0.054	0.058	0.16	0.049	0.041	-	0.18	0.65
7440-41-7	BERYLLIUM	mg/l	0.003+	0.004	0.004	ND	ND	ND	ND	ND	-	0.00035 J	ND
7440-43-9	CADMIUM	mg/l	5	5	5	ND	ND	ND	ND	ND	-	0.0037 J	ND
7440-70-2	CALCIUM	mg/l	-	-	-	130	132	96.9	137	138	-	2780	140
7440-47-3	CHROMIUM	mg/l	0.05	0.10	0.10	ND	0.0013 J	ND	ND	ND	-	**0.19**	**0.073**
7440-48-4	COBALT	mg/l	-	-	-	ND	ND	0.00074 J	ND	ND	-	0.18	0.021
7440-50-8	COPPER	mg/l	0.2	-	-	0.0027 J	0.0026 J	ND	0.0017 J	0.1 J+	-	ND	0.013
7439-89-6	IRON	mg/l	0.3>	0.3+	-	0.11	**3.2**	0.13	0.1	0.13	-	**1610**	**51**
7439-92-1	LEAD	mg/l	0.025	0.025	0.015	ND	ND	ND	ND	0.0078 J	-	**1.2**	**0.21**
7439-95-4	MAGNESIUM	mg/l	35+	-	-	65.7	45.8	47.4	60.1	65.9	-	1390	419
7439-96-5	MANGANESE	mg/l	0.3>	0.3+	-	0.14	0.16	0.13	0.014 J	0.027 J	-	**19.8**	0.11
7440-02-0	NICKEL	mg/l	0.10	-	-	0.0048 J	0.0036 J	0.0053 J	0.0023 J	0.0024 J	-	1.1	0.21
7440-09-7	POTASSIUM	mg/l	-	-	-	2.1	6.5	0.19 J	0.96 J	0.65 J	-	1060	435
7782-49-2	SELENIUM	mg/l	10	50	50	ND	ND	ND	ND	ND	-	0.014 J	ND
7440-23-5	SODIUM	mg/l	20	20	20	6.3	19.6	5.4	9.9 J	14 J	-	**2320**	**1430**
7440-62-2	VANADIUM	mg/l	-	-	-	ND	ND	ND	ND	ND	-	0.035	0.0083
7440-66-6	ZINC	mg/l	2.0+	5	-	0.014	0.055	0.0021 J	ND	0.059	-	**31.3**	0.29
	OTHER												
ALKB	ALKALINITY, BICARBONATE	mg/l	-	-	-	547	528	447	553	569	672	ND	28.2
16887-00-6	CHLORIDE (AS CL)	mg/l	250	250	-	ND	ND	1.1	2.8	3.6	213	**2590**	**1160**
7664-41-7	NITROGEN, AMMONIA (AS N)	mg/l	2	-	-	0.02 U	0.02 UJ	0.02 U	0.02 U	0.02 U	3.7	1570	655
NO3NO2N	NITROGEN, NITRATE-NITRITE	mg/l	10	10	10	0.089	0.058	0.055	0.092	0.099	0.074	1.1	0.22
14808-79-8	SULFATE (AS SO4)	mg/l	250	250	250+	87.7	66	3.1 J	139	185	9.2 J	**1760**	100 U

* = NYSDEC Ambient Water Quality Standards + = Guidance value or secondary standard
> = 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.
Wetlands	X		No issues were observed in the wetlands or their water levels during the monthly inspections.
Perimeter Fence	X		No repairs were required.
Condition of Roads	X		No erosion or other problems other than removal of branches.
Integrity of the Cap	X		No problems were noted.
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.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	12/5/2000		1/8/2001		2/1/2001		3/8/2001		4/4/2001		5/8/2001		6/5/2001		7/2/2001		8/1/2001		9/5/2001		10/4/2001		11/5/2001		12/11/2001	
		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)	Depth to Water (ft)	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		2/4/2002		3/4/2002		4/1/2002		5/3/2002		6/4/2002		7/2/2002		8/7/2002		9/6/2002		10/3/2002		11/7/2002		12/3/2002	
		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	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		2/3/2005		3/9/2005		4/2/2005		6/4/2005		7/6/2005		8/4/2005		9/3/2005		10/7/2005		12/10/2005	
		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	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		2/10/2006		3/3/2006		4/8/2006		5/1/2006		6/7/2006		7/14/2006		8/8/2006		9/18/2006		10/7/2006		11/3/2006		12/1/2006	
		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	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	572.16	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.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/10/2019 Depth to Water (ft)	1/10/2019 Elevation (ft. msl)	2/11/2019 Depth to Water (ft)	2/11/2019 Elevation (ft. msl)	3/7/2019 Depth to Water (ft)	3/7/2019 Elevation (ft. msl)	4/11/2019 Depth to Water (ft)	4/11/2019 Elevation (ft. msl)	5/8/2019 Depth to Water (ft)	5/8/2019 Elevation (ft. msl)	6/19/2019 Depth to Water (ft)	6/19/2019 Elevation (ft. msl)	7/10/2019 Depth to Water (ft)	7/10/2019 Elevation (ft. msl)	8/21/2019 Depth to Water (ft)	8/21/2019 Elevation (ft. msl)	9/23/2019 Depth to Water (ft)	9/23/2019 Elevation (ft. msl)	10/21/2019 Depth to Water (ft)	10/21/2019 Elevation (ft. msl)	11/21/2019 Depth to Water (ft)	11/21/2019 Elevation (ft. msl)	12/17/2019 Depth to Water (ft)	12/17/2019 Elevation (ft. msl)
East "A"	598.93	27.14	571.79	27.14	571.79	27.14	571.79	27.22	571.71	27.25	571.68	27.14	571.79	27.09	571.84	27.04	571.89	27.02	571.91	26.98	571.95	26.88	572.05	27.01	571.92
East "B"	596.23	Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed		Collapsed	
East "C"	598.69	21.56	577.13	21.38	577.31	21.70	576.99	21.74	576.95	21.91	576.78	21.36	577.33	21.64	577.05	21.44	577.25	21.36	577.33	21.60	577.09	21.66	577.03	21.44	577.25
East "D"	593.20	15.79	577.41	16.03	577.17	16.11	577.09	16.2	577.00	16.39	576.81	16.23	576.97	16.38	576.82	16.20	577.00	15.7	577.50	16.11	577.09	16.11	577.09	16.05	577.15
WW A	-	3.00	-	3.33	-	3.50	-	3.08	-	3.08	-	2.08	-	2.08	-	2.83	-	2.50	-	2.50	-	3.08	-	3.00	-
WW B	-	3.25	-	2.50	-	3.17	-	2.17	-	3.25	-	3.17	-	2.50	-	2.17	-	3.17	-	3.17	-	3.17	-	3.33	-
WW C	-	2.08	-	2.58	-	2.75	-	2.50	-	2.67	-	3.17	-	2.33	-	2.50	-	3.00	-	2.83	-	2.17	-	2.83	-
WW D	-	2.50	-	3.08	-	2.58	-	5.17	-	2.92	-	3.00	-	2.50	-	3.00	-	3.17	-	2.42	-	3.08	-	3.50	-
NCR-3S	579.60	4.13	575.47	3.90	575.70	4.83	574.77	3.82	575.78	4.44	575.16	4.88	574.72	6.33	573.27	6.39	573.21	dry	-	dry	-	4.00	575.60	4.17	575.43
NCR-4S	577.88	3.40	574.48	2.95	574.93	3.13	574.75	2.90	574.98	3.18	574.70	3.89	573.99	4.30	573.58	4.84	573.04	dry	-	4.41	573.47	3.20	574.68	3.19	574.69
NCR-5S	579.34	6.16	573.18	6.38	572.96	7.06	572.28	6.40	572.94	6.76	572.58	7.98	571.36	10.12	569.22	dry	-	dry	-	dry	-	10.83	568.51	6.26	573.08
NCR-13S	577.15	4.52	572.63	4.57	572.58	5.89	571.26	4.88	572.27	5.33	571.82	7.20	569.95	7.69	569.46	7.94	569.21	dry	-	dry	-	5.41	571.74	4.53	572.62

Observation Point	Elevation Top of Casing (ft. msl)	1/21/2020 Depth to Water (ft)	1/21/2020 Elevation (ft. msl)	2/19/2020 Depth to Water (ft)	2/19/2020 Elevation (ft. msl)	3/17/2020 Depth to Water (ft)	3/17/2020 Elevation (ft. msl)	4/22/2020 Depth to Water (ft)	4/22/2020 Elevation (ft. msl)	5/21/2020 Depth to Water (ft)	5/21/2020 Elevation (ft. msl)
East "A"	598.93	26.96	571.97	27.21	571.72	27.27	571.66	27.11	571.82	28.60	570.33
East "B"	596.23	Collapsed		Collapsed		Collapsed		Collapsed		Collapsed	
East "C"	598.69	21.52	577.17	21.89	576.80	21.35	577.34	21.36	577.33	21.90	576.79
East "D"	593.20	16.07	577.13	16.22	576.98	16.11	577.09	16.24	576.96	17.32	575.88
WW A	-	3.08	-	2.58	-	3.33	-	2.92	-	2.50	-
WW B	-	2.83	-	3.17	-	2.25	-	2.67	-	2.92	-
WW C	-	3.25	-	3.00	-	2.17	-	3.08	-	2.67	-
WW D	-	3.58	-	2.92	-	3.00	-	3.33	-	2.75	-
NCR-3S	579.60	4.22	575.38	4.03	575.57	4.35	575.25	4.53	575.07	4.73	574.87
NCR-4S	577.88	3.17	574.71	3.10	574.78	3.47	574.41	3.35	574.53	3.49	574.39
NCR-5S	579.34	7.11	572.23	6.00	573.34	6.55	572.79	6.99	572.35	7.51	571.83
NCR-13S	577.15	4.96	572.19	4.33	572.82	4.86	572.29	5.44	571.71	6.16	570.99

Notes:

- = measurment not collected.

dry = no water in well.

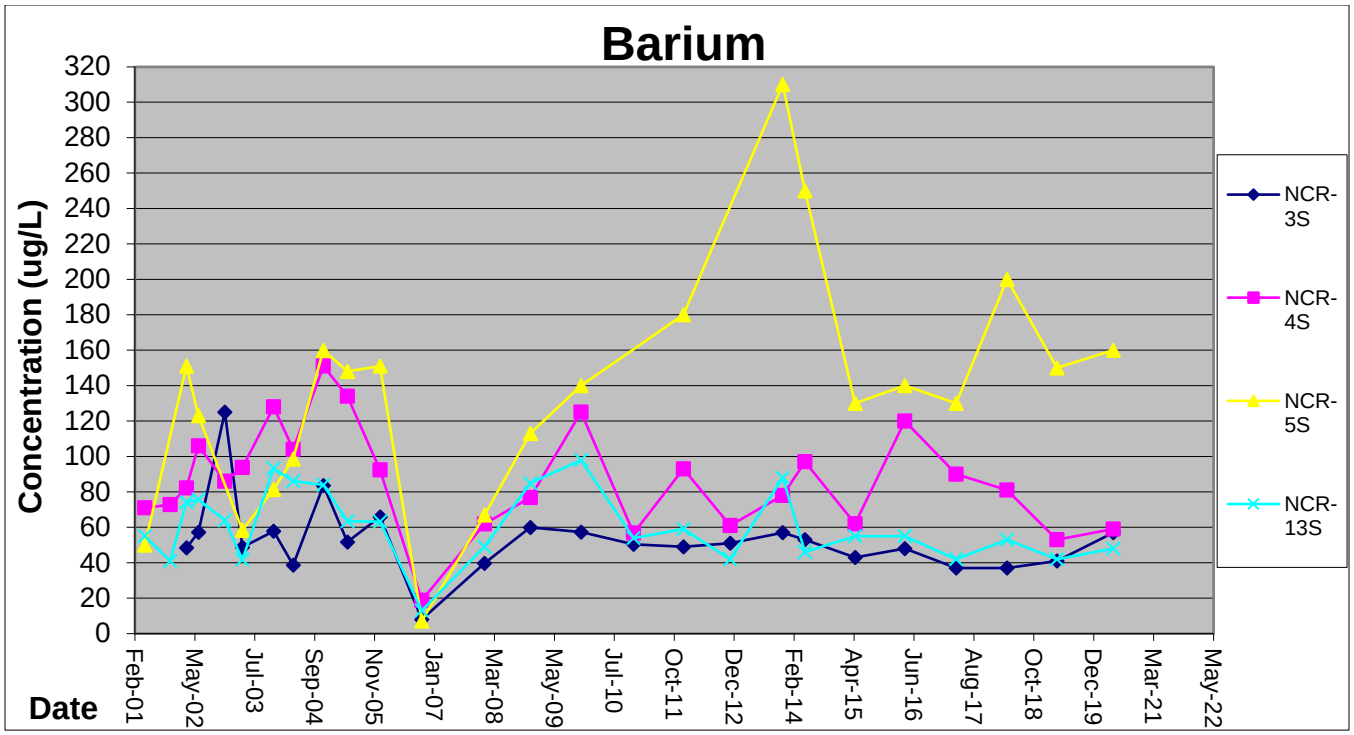


Figure 2.1A: Plot of Historical Total Barium Concentration

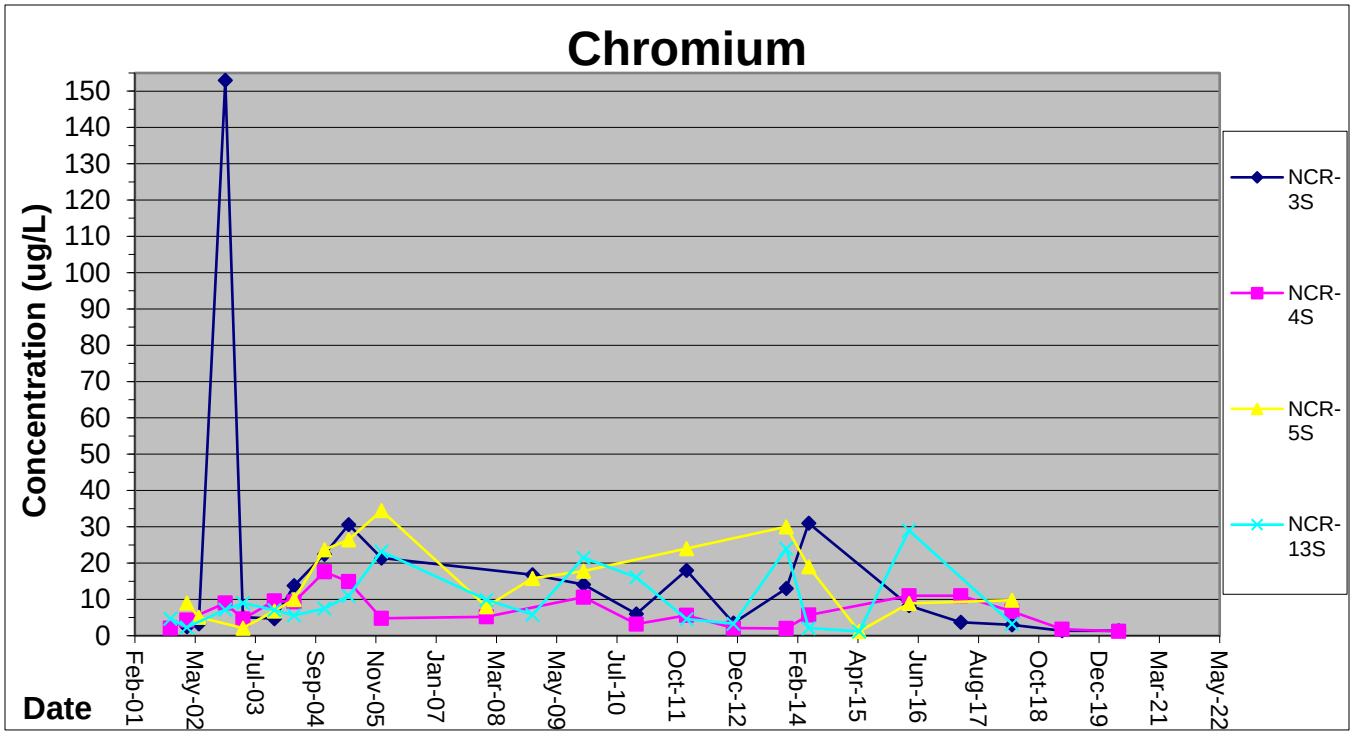


Figure 2.1B: Plot of Historical Total Chromium Concentration

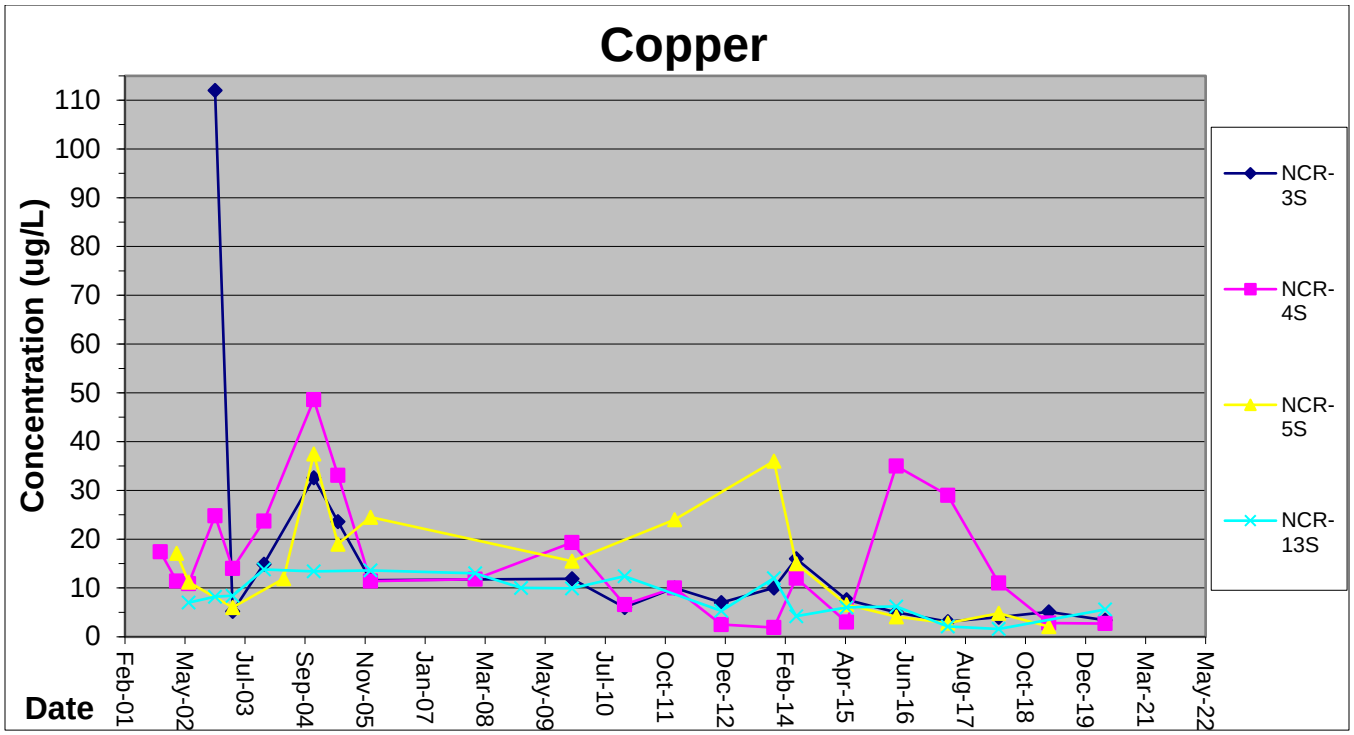


Figure 2.1C: Plot of Historical Total Copper Concentration

SECTION 3
SUMMARY AND CONCLUSIONS

The following summary and conclusions were developed based on the data collected during this reporting period (May 2019 through May 2020):

- Groundwater samples were collected for inorganic analysis in 2020. The analytical results were consistent with historical results. The annual groundwater samples scheduled for collection in April 2021 will continue to be analyzed for inorganics only.
- Thirteen metals were identified in one or more of the groundwater samples from the monitoring wells. Two of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs, which is consistent with previous sampling events. One 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.
- The three usable piezometers were also sampled in 2019. Piezometer sampling is scheduled to continue for the next three years and will be evaluated to determine if needed past that time. Nineteen metals were identified in one or more of the samples from the three piezometers. Eight of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs. Concentrations of analytes were generally higher in the piezometer samples compared to the samples collected from the monitoring wells.
- General chemistry (bicarbonate alkalinity, chloride, ammonia nitrogen, nitrate-nitrite, and sulfate) samples were collected from the four wells and three piezometers in 2019. Collection of general chemistry samples is scheduled to continue for the next three years and will be evaluated to determine if needed past that time. None of general chemistry analytes exceeded screening criteria in the wells while three of the five analytes exceeded screening criteria in the piezometers.
- Two effluent samples were collected during the reporting period. The analytical results were found to be compliant with the discharge permit. Compliance with the discharge permit was maintained during the reporting period.
- 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. During the reporting period, 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 during the reporting period. Water levels generally varied between 1.7 and 4.8 feet over the course of the reporting period.
- 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 during the reporting period.

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, 2019 Annual Monitoring Report, Niagara County Refuse District Site; Parsons, June 2019.

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 the 31st day of March, 2019

To expire the 1st day of April, 2022

William M. Davignon

William M. Davignon, Water Works Superintendent

Signed this 1st day of April, 2019

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.

Analytical Results: NIAGARA COUNTY REFUSE SITE 2019

PARAMETER	RESULT mg/l	RESULT mg/l	COMPLIANCE
pH (COMP.)	7.42	7.44	YES
COD	< 50	70	YES
SUSPENDED SOLIDS	15	14	YES
BOD	8.01	5.00	YES
PO4	0.18	<0.10	YES
METALS			
ALUMINUM	< 0.20	< 0.20	YES
LEAD	ND	ND	YES
IRON	2.20	2.20	YES
MAGNESIUM	72.4	117.0	YES
MANGANESE	0.12	< 0.0030	YES
SODIUM	31.6	166.0	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)	**24,000**	**3,000**	
SAMPLE DATE	**4/10/19 & 4/11/19**	**10/8/19 & 10/9/19**	

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

Analytical Results: NIAGARA COUNTY REFUSE SITE 2020

PARAMETER	RESULT mg/l	RESULT mg/l	COMPLIANCE
pH (COMP.)	7.56		YES
COD	< 50		YES
SUSPENDED SOLIDS	10		YES
BOD	14.35		YES
PO4	< 0.10		YES
METALS			
ALUMINUM	< 0.20		YES
LEAD	< 0.010		YES
IRON	2.10		YES
MAGNESIUM	90.9		YES
MANGANESE	0.15		YES
SODIUM	66.3		YES
PURGEABLES			
Benzene	< 0.005		YES
Toluene	< 0.005		YES
Chlorobenzene	< 0.005		YES
Ethylbenzene	< 0.005		YES
Total Xylenes	< 0.015		YES
1,3 - Dichlorobenzene	< 0.005		YES
1,4-Dichlorobenzene	< 0.005		YES
1,2 - Dichlorobenzene	< 0.005		YES
Vinyl Chloride	< 0.005		YES
1,1-Dichloroethene	< 0.005		YES
Methylene chloride	< 0.005		YES
trans-1,2 Dichloroethene	< 0.005		YES
1,1-Dichloroethane	< 0.005		YES
Chloroform	< 0.005		YES
1,1,1-Trichloroethane	< 0.005		YES
Trichloroethene	< 0.005		YES
TOTAL FLOW (gallons)	**16,000**		
SAMPLE DATE	**4/22 & 4/23 2020**		
Report prepared by: Michael W. Gibbons, Lab Director / Chemist			

APPENDIX B
ANALYTICAL DATA AND FIELD DATA FORMS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 480-170182-1
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:
6/9/2020 4:36:31 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
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
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.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)
MQL	Method Quantitation Limit
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)

Job ID: 480-170182-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-170182-1

Comments
No additional comments.

Receipt
The samples were received on 5/20/2020 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

HPLC/IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WG-11109668-051920-DT-002 (480-170182-2), WG-11109668-051920-DT-003 (480-170182-3), WG-11109668-051920-DT-004 (480-170182-4), WG-11109668-051920-DT-005 (480-170182-5), WG-11109668-051920-DT-006 (480-170182-6) and WG-11109668-051920-DT-008 (480-170182-8). Elevated reporting limits (RLs) are provided.

Method 300.0: The following samples were reported with elevated reporting limits for all analytes: WG-11109668-051920-DT-001 (480-170182-1) and WG-11109668-051920-DT-007 (480-170182-7). The sample was analyzed at a dilution based on screening results.

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

Metals
Method 6010C: The interference check standard solution (ICSA) associated with the following samples showed results for Barium at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element / these elements and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. WG-11109668-051920-DT-001 (480-170182-1), WG-11109668-051920-DT-001 (480-170182-1[MS]), WG-11109668-051920-DT-001 (480-170182-1[MSD]), WG-11109668-051920-DT-002 (480-170182-2), WG-11109668-051920-DT-003 (480-170182-3), WG-11109668-051920-DT-004 (480-170182-4), WG-11109668-051920-DT-005 (480-170182-5), WG-11109668-051920-DT-006 (480-170182-6), WG-11109668-051920-DT-007 (480-170182-7), WG-11109668-051920-DT-008 (480-170182-8), (LCS 480-533068/2-A), (MB 480-533068/1-A), (480-170182-B-1-A PDS) and (480-170182-B-1-A SD ^5)

Method 6010C: The recovery of post spike, (480-170182-B-1-A PDS), associated with batch 480-533691, exhibited results outside quality control limits for Total Calcium and Magnesium. However, the serial dilution (SD) of this sample was compliant, therefore no corrective action was necessary.

Method 6010C: The recovery of post spike, (480-170182-C-1-A PDS), associated with batch 480-533690, exhibited a result outside quality control limits for Dissolved Calcium. However, the serial dilution (SD) of this sample was compliant, therefore no corrective action was necessary.

Method 6010C: The interference check standard solution (ICSA) associated with the following samples showed results for Barium at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element / these elements and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. WG-11109668-051920-DT-001 (480-170182-1), WG-11109668-051920-DT-001 (480-170182-1[MS]), WG-11109668-051920-DT-001 (480-170182-1[MSD]), WG-11109668-051920-DT-002 (480-170182-2), WG-11109668-051920-DT-003 (480-170182-3), WG-11109668-051920-DT-004 (480-170182-4), WG-11109668-051920-DT-005 (480-170182-5), WG-11109668-051920-DT-006 (480-170182-6), WG-11109668-051920-DT-007 (480-170182-7), (LCS 480-533075/2-A), (MB 480-533075/1-A), (480-170182-C-1-A PDS) and (480-170182-C-1-A SD ^5)

Method 6010C: The low level continuing calibration verification (CCVL 480-533936/19) recovered above the upper control limit for Dissolved Potassium. The samples associated with this CCVL were either less than the reporting limit (RL) for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples (LCS 480-533075/2-A) and (MB 480-533075/1-A) was not performed.

Method 6010C: The following sample was diluted due to the presence of Dissolved Calcium which interferes with Calcium: WG-11109668-051920-DT-004 (480-170182-4). Elevated reporting limits (RLs) are provided.

Job ID: 480-170182-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

Method 6010C: The following sample was diluted for Dissolved Silver and Thallium due to the nature of the sample matrix: WG-11109668-051920-DT-004 (480-170182-4). Elevated reporting limits (RLs) are provided.

Method 6010C: The following sample was diluted due to the presence of Total Calcium which interferes with Copper: WG-11109668-051920-DT-004 (480-170182-4). Elevated reporting limits (RLs) are provided.

Method 6010C: The following sample was diluted due to the presence of Total Iron which interferes with Cadmium, Chromium, Manganese, Nickel, Lead, Antimony, and Vanadium: WG-11109668-051920-DT-004 (480-170182-4). Elevated reporting limits (RLs) are provided.

Method 6010C: The following sample was diluted for Total Silver and Thallium due to the nature of the sample matrix: WG-11109668-051920-DT-004 (480-170182-4). Elevated reporting limits (RLs) are provided.

Method 6010C: The low level continuing calibration verification (CCVL 480-533935/42) recovered above the upper control limit for Total Potassium. The sample associated with this CCVL were either less than the reporting limit (RL) for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples WG-11109668-051920-DT-004 (480-170182-4) was not performed.

Method 6010C: The following sample was diluted due to the presence of Total Iron which interferes with Cadmium, Chromium, Manganese, Nickel, Vanadium, Lead, and Antimony: WG-11109668-051920-DT-004 (480-170182-4). Elevated reporting limits (RLs) are provided.

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

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

Detection Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-001 — Lab Sample ID: 480-170182-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.16	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	93.7		0.50	0.10	mg/L	1		6010C	Total/NA
Cobalt	0.00088	J	0.0040	0.00063	mg/L	1		6010C	Total/NA
Iron	0.40		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	45.5		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.13	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	0.31	J	0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	5.1		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0048	J	0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.16	^	0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	96.9		0.50	0.10	mg/L	1		6010C	Dissolved
Cobalt	0.00074	J	0.0040	0.00063	mg/L	1		6010C	Dissolved
Iron	0.13		0.050	0.019	mg/L	1		6010C	Dissolved
Magnesium	47.4		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.13	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0053	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	0.19	J	0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	5.4		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0021	J	0.010	0.0015	mg/L	1		6010C	Dissolved
Chloride	1.1		1.0	0.56	mg/L	2		300.0	Dissolved
Sulfate	3.1	J	4.0	0.70	mg/L	2		300.0	Dissolved
Alkalinity, Bicarbonate	447		50.0	20.0	mg/L	5		310.2	Dissolved
Nitrate Nitrite as N	0.055		0.050	0.020	mg/L	1		353.2	Dissolved

Client Sample ID: WG-11109668-051920-DT-002 — Lab Sample ID: 480-170182-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.048	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	134		0.50	0.10	mg/L	1		6010C	Total/NA
Copper	0.0056	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.070		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	55.5		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.029	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0045	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	2.4		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	7.9		1.0	0.32	mg/L	1		6010C	Total/NA
Barium	0.049	^	0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	137		0.50	0.10	mg/L	1		6010C	Dissolved
Copper	0.0017	J	0.010	0.0016	mg/L	1		6010C	Dissolved
Iron	0.10		0.050	0.019	mg/L	1		6010C	Dissolved
Magnesium	60.1		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.014	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0023	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	0.96		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	9.9		1.0	0.32	mg/L	1		6010C	Dissolved
Chloride	2.8		2.5	1.4	mg/L	5		300.0	Dissolved
Sulfate	139		10.0	1.7	mg/L	5		300.0	Dissolved
Alkalinity, Bicarbonate	553		60.0	24.0	mg/L	6		310.2	Dissolved
Nitrate Nitrite as N	0.092		0.050	0.020	mg/L	1		353.2	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-003
Lab Sample ID: 480-170182-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.042	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	143		0.50	0.10	mg/L	1		6010C	Total/NA
Copper	0.0035	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.33		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	69.8		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.048	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0033	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	1.4		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	16.1		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0023	J	0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.041	^	0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	138		0.50	0.10	mg/L	1		6010C	Dissolved
Copper	0.0019	J ^	0.010	0.0016	mg/L	1		6010C	Dissolved
Iron	0.13		0.050	0.019	mg/L	1		6010C	Dissolved
Lead	0.0078	J	0.010	0.0030	mg/L	1		6010C	Dissolved
Magnesium	65.9		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.027	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0024	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	0.65		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	14.0		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.0034	J	0.010	0.0015	mg/L	1		6010C	Dissolved
Chloride	3.6		2.5	1.4	mg/L	5		300.0	Dissolved
Sulfate	185		10.0	1.7	mg/L	5		300.0	Dissolved
Alkalinity, Bicarbonate	569		60.0	24.0	mg/L	6		310.2	Dissolved
Nitrate Nitrite as N	0.099		0.050	0.020	mg/L	1		353.2	Dissolved

Client Sample ID: WG-11109668-051920-DT-004
Lab Sample ID: 480-170182-4

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
Arsenic	0.079		0.010	0.0056	mg/L	1		6010C	Total/NA
Barium	0.19	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Beryllium	0.00030	J	0.0020	0.00030	mg/L	1		6010C	Total/NA
Calcium	2780		2.5	0.50	mg/L	5		6010C	Total/NA
Chromium	0.18		0.020	0.0050	mg/L	5		6010C	Total/NA
Cobalt	0.18		0.0040	0.00063	mg/L	1		6010C	Total/NA
Iron	1540		0.25	0.097	mg/L	5		6010C	Total/NA
Lead	0.79		0.025	0.015	mg/L	5		6010C	Total/NA
Magnesium	1400		1.0	0.22	mg/L	5		6010C	Total/NA
Manganese	17.8	B	0.015	0.0020	mg/L	5		6010C	Total/NA
Nickel	1.0		0.050	0.0063	mg/L	5		6010C	Total/NA
Potassium	1010	B ^	2.5	0.50	mg/L	5		6010C	Total/NA
Selenium	0.022		0.015	0.0087	mg/L	1		6010C	Total/NA
Sodium	2260	B	5.0	1.6	mg/L	5		6010C	Total/NA
Vanadium	0.035		0.025	0.0075	mg/L	5		6010C	Total/NA
Zinc	31.3		0.050	0.0075	mg/L	5		6010C	Total/NA
Aluminum	8.8		0.20	0.060	mg/L	1		6010C	Dissolved
Arsenic	0.074		0.015	0.0056	mg/L	1		6010C	Dissolved
Barium	0.18	^	0.0020	0.00070	mg/L	1		6010C	Dissolved
Beryllium	0.00035	J	0.0020	0.00030	mg/L	1		6010C	Dissolved
Cadmium	0.0037	J	0.010	0.0025	mg/L	5		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample ID: WG-11109668-051920-DT-004 (Continued) — Lab Sample ID: 480-170182-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	2780		2.5	0.50	mg/L	5		6010C	Dissolved
Chromium	0.19		0.020	0.0050	mg/L	5		6010C	Dissolved
Cobalt	0.18		0.0040	0.00063	mg/L	1		6010C	Dissolved
Iron	1610		0.25	0.097	mg/L	5		6010C	Dissolved
Lead	1.2		0.050	0.015	mg/L	5		6010C	Dissolved
Magnesium	1390		1.0	0.22	mg/L	5		6010C	Dissolved
Manganese	19.8	B	0.015	0.0020	mg/L	5		6010C	Dissolved
Nickel	1.1		0.050	0.0063	mg/L	5		6010C	Dissolved
Potassium	1060	B	2.5	0.50	mg/L	5		6010C	Dissolved
Selenium	0.014	J	0.025	0.0087	mg/L	1		6010C	Dissolved
Sodium	2320		5.0	1.6	mg/L	5		6010C	Dissolved
Vanadium	0.035		0.025	0.0075	mg/L	5		6010C	Dissolved
Zinc	31.3		0.050	0.0075	mg/L	5		6010C	Dissolved
Chloride	2590		50.0	28.2	mg/L	100		300.0	Dissolved
Sulfate	1760		200	34.9	mg/L	100		300.0	Dissolved
Ammonia	1570		20.0	9.0	mg/L	1000		350.1	Dissolved
Nitrate Nitrite as N	1.1		0.050	0.020	mg/L	1		353.2	Dissolved

Client Sample ID: WG-11109668-051920-DT-005 — Lab Sample ID: 480-170182-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.2		0.20	0.060	mg/L	1		6010C	Total/NA
Arsenic	0.020		0.010	0.0056	mg/L	1		6010C	Total/NA
Barium	0.65	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	142		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.075		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.022		0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.016		0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	55.9		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.24		0.0050	0.0030	mg/L	1		6010C	Total/NA
Magnesium	420		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.11	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.21		0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	438		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	1450	B	5.0	1.6	mg/L	5		6010C	Total/NA
Vanadium	0.0095		0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.37		0.010	0.0015	mg/L	1		6010C	Total/NA
Aluminum	1.0		0.20	0.060	mg/L	1		6010C	Dissolved
Arsenic	0.022		0.015	0.0056	mg/L	1		6010C	Dissolved
Barium	0.65	^	0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	140		0.50	0.10	mg/L	1		6010C	Dissolved
Chromium	0.073		0.0040	0.0010	mg/L	1		6010C	Dissolved
Cobalt	0.021		0.0040	0.00063	mg/L	1		6010C	Dissolved
Copper	0.013		0.010	0.0016	mg/L	1		6010C	Dissolved
Iron	51.0		0.050	0.019	mg/L	1		6010C	Dissolved
Lead	0.21		0.010	0.0030	mg/L	1		6010C	Dissolved
Magnesium	419		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.11	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.21		0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	435		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	1430		5.0	1.6	mg/L	5		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-005 (Continued) — Lab Sample ID: 480-170182-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	0.0083		0.0050	0.0015	mg/L	1		6010C	Dissolved
Zinc	0.29		0.010	0.0015	mg/L	1		6010C	Dissolved
Chloride	1160		25.0	14.1	mg/L	50		300.0	Dissolved
Alkalinity, Bicarbonate	28.2		10.0	4.0	mg/L	1		310.2	Dissolved
Ammonia	655		10.0	4.5	mg/L	500		350.1	Dissolved
Nitrate Nitrite as N	0.22		0.050	0.020	mg/L	1		353.2	Dissolved

Client Sample ID: WG-11109668-051920-DT-006 — Lab Sample ID: 480-170182-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.057	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	126		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0014	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Copper	0.0034	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.18		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	65.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.16	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0049	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	3.0		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	6.3		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.015		0.010	0.0015	mg/L	1		6010C	Total/NA
Barium	0.054	^	0.0020	0.00070	mg/L	1		6010C	Dissolved
Calcium	130		0.50	0.10	mg/L	1		6010C	Dissolved
Copper	0.0027	J	0.010	0.0016	mg/L	1		6010C	Dissolved
Iron	0.11		0.050	0.019	mg/L	1		6010C	Dissolved
Magnesium	65.7		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.14	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0048	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	2.1		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	6.3		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.014		0.010	0.0015	mg/L	1		6010C	Dissolved
Sulfate	87.7		10.0	1.7	mg/L	5		300.0	Dissolved
Alkalinity, Bicarbonate	547		60.0	24.0	mg/L	6		310.2	Dissolved
Nitrate Nitrite as N	0.089		0.050	0.020	mg/L	1		353.2	Dissolved

Client Sample ID: WG-11109668-051920-DT-007 — Lab Sample ID: 480-170182-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.1		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.059	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	133		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0012	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Copper	0.0027	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	3.3		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	46.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.17	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0041	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	6.8		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	20.0		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.067		0.010	0.0015	mg/L	1		6010C	Total/NA
Aluminum	0.87		0.20	0.060	mg/L	1		6010C	Dissolved
Barium	0.058	^	0.0020	0.00070	mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-007 (Continued) — Lab Sample ID: 480-170182-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	132		0.50	0.10	mg/L	1		6010C	Dissolved
Chromium	0.0013	J	0.0040	0.0010	mg/L	1		6010C	Dissolved
Copper	0.0026	J	0.010	0.0016	mg/L	1		6010C	Dissolved
Iron	3.2		0.050	0.019	mg/L	1		6010C	Dissolved
Magnesium	45.8		0.20	0.043	mg/L	1		6010C	Dissolved
Manganese	0.16	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Nickel	0.0036	J	0.010	0.0013	mg/L	1		6010C	Dissolved
Potassium	6.5		0.50	0.10	mg/L	1		6010C	Dissolved
Sodium	19.6		1.0	0.32	mg/L	1		6010C	Dissolved
Zinc	0.055		0.010	0.0015	mg/L	1		6010C	Dissolved
Sulfate	66.0		10.0	1.7	mg/L	5		300.0	Dissolved
Alkalinity, Bicarbonate	528		60.0	24.0	mg/L	6		310.2	Dissolved
Nitrate Nitrite as N	0.058		0.050	0.020	mg/L	1		353.2	Dissolved

Client Sample ID: WG-11109668-051920-DT-008 — Lab Sample ID: 480-170182-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7.8		0.20	0.060	mg/L	1		6010C	Total/NA
Arsenic	0.014		0.010	0.0056	mg/L	1		6010C	Total/NA
Barium	0.62	^	0.0020	0.00070	mg/L	1		6010C	Total/NA
Beryllium	0.00045	J	0.0020	0.00030	mg/L	1		6010C	Total/NA
Cadmium	0.0055		0.0010	0.00050	mg/L	1		6010C	Total/NA
Calcium	226		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.037		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.013		0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.11		0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	164		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.46		0.0050	0.0030	mg/L	1		6010C	Total/NA
Magnesium	126		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.99	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.050		0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	15.0		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	66.1		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.019		0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.24		0.010	0.0015	mg/L	1		6010C	Total/NA
Chloride	213		2.5	1.4	mg/L	5		300.0	Dissolved
Sulfate	9.2	J	10.0	1.7	mg/L	5		300.0	Dissolved
Alkalinity, Bicarbonate	672		90.0	36.0	mg/L	9		310.2	Dissolved
Ammonia	3.7		0.040	0.018	mg/L	2		350.1	Dissolved
Nitrate Nitrite as N	0.074		0.050	0.020	mg/L	1		353.2	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-001
Lab Sample ID: 480-170182-1
Date Collected: 05/19/20 08:05
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:01	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:01	1
Arsenic	ND		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:01	1
Barium	**0.16**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:01	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:01	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:01	1
Calcium	**93.7**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:01	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:01	1
Cobalt	**0.00088**	**J**	0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:01	1
Copper	ND		0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:01	1
Iron	**0.40**		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:01	1
Lead	ND		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:01	1
Magnesium	**45.5**		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:01	1
Manganese	**0.13**	**B**	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:01	1
Nickel	**0.0050**	**J**	0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:01	1
Potassium	**0.31**	**J**	0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:01	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:01	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 22:36	1
Sodium	**5.1**		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 13:01	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:01	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:01	1
Zinc	**0.0048**	**J**	0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:01	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		05/26/20 09:54	05/27/20 11:17	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 11:17	1
Arsenic	ND		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 11:17	1
Barium	**0.16**	**^**	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 11:17	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 11:17	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 11:17	1
Calcium	**96.9**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:17	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 11:17	1
Cobalt	**0.00074**	**J**	0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 11:17	1
Copper	ND		0.010	0.0016	mg/L		05/26/20 09:54	05/27/20 11:17	1
Iron	**0.13**		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 11:17	1
Lead	ND		0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 11:17	1
Magnesium	**47.4**		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 11:17	1
Manganese	**0.13**	**B**	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 11:17	1
Nickel	**0.0053**	**J**	0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 11:17	1
Potassium	**0.19**	**J**	0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:17	1
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 11:17	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/29/20 00:05	1
Sodium	**5.4**		1.0	0.32	mg/L		05/26/20 09:54	05/27/20 11:17	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 11:17	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 11:17	1
Zinc	**0.0021**	**J**	0.010	0.0015	mg/L		05/26/20 09:54	05/27/20 11:17	1

Client Sample ID: WG-11109668-051920-DT-001
Lab Sample ID: 480-170182-1
Date Collected: 05/19/20 08:05
Matrix: Water
Date Received: 05/20/20 09:45

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.1**		1.0	0.56	mg/L			05/26/20 15:56	2
Sulfate	**3.1**	**J**	4.0	0.70	mg/L			05/26/20 15:56	2
Alkalinity, Bicarbonate	**447**		50.0	20.0	mg/L			05/22/20 19:30	5
Alkalinity, Carbonate	ND		50.0	20.0	mg/L			05/22/20 19:30	5
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 08:49	1
Nitrate Nitrite as N	**0.055**		0.050	0.020	mg/L			05/24/20 16:39	1

Client Sample ID: WG-11109668-051920-DT-002
Lab Sample ID: 480-170182-2
Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:20	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:20	1
Arsenic	ND		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:20	1
Barium	**0.048**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:20	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:20	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:20	1
Calcium	**134**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:20	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:20	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:20	1
Copper	**0.0056**	**J**	0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:20	1
Iron	**0.070**		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:20	1
Lead	ND		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:20	1
Magnesium	**55.5**		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:20	1
Manganese	**0.029**	**B**	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:20	1
Nickel	**0.0045**	**J**	0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:20	1
Potassium	**2.4**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:20	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:20	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 22:55	1
Sodium	**7.9**		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 13:20	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:20	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:20	1
Zinc	ND		0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:20	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		05/26/20 09:54	05/27/20 11:35	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 11:35	1
Arsenic	ND		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 11:35	1
Barium	**0.049**	**^**	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 11:35	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 11:35	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 11:35	1
Calcium	**137**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:35	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 11:35	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 11:35	1
Copper	**0.0017**	**J**	0.010	0.0016	mg/L		05/26/20 09:54	05/27/20 11:35	1
Iron	**0.10**		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 11:35	1
Lead	ND		0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 11:35	1

Client Sample ID: WG-11109668-051920-DT-002
Lab Sample ID: 480-170182-2
Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**60.1**		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 11:35	1
Manganese	**0.014**	**B**	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 11:35	1
Nickel	**0.0023**	**J**	0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 11:35	1
Potassium	**0.96**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:35	1
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 11:35	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/29/20 00:24	1
Sodium	**9.9**		1.0	0.32	mg/L		05/26/20 09:54	05/27/20 11:35	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 11:35	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 11:35	1
Zinc	ND		0.010	0.0015	mg/L		05/26/20 09:54	05/27/20 11:35	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2.8**		2.5	1.4	mg/L			05/26/20 15:14	5
Sulfate	**139**		10.0	1.7	mg/L			05/26/20 15:14	5
Alkalinity, Bicarbonate	**553**		60.0	24.0	mg/L			05/22/20 19:31	6
Alkalinity, Carbonate	ND		60.0	24.0	mg/L			05/22/20 19:31	6
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 08:52	1
Nitrate Nitrite as N	**0.092**		0.050	0.020	mg/L			05/24/20 16:22	1

Client Sample ID: WG-11109668-051920-DT-003
Lab Sample ID: 480-170182-3
Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:35	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:35	1
Arsenic	ND		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:35	1
Barium	**0.042**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:35	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:35	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:35	1
Calcium	**143**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:35	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:35	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:35	1
Copper	**0.0035**	**J**	0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:35	1
Iron	**0.33**		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:35	1
Lead	ND		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:35	1
Magnesium	**69.8**		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:35	1
Manganese	**0.048**	**B**	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:35	1
Nickel	**0.0033**	**J**	0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:35	1
Potassium	**1.4**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:35	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:35	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 23:10	1
Sodium	**16.1**		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 13:35	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:35	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:35	1
Zinc	**0.0023**	**J**	0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:35	1

Client Sample ID: WG-11109668-051920-DT-003
Lab Sample ID: 480-170182-3
Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:54	05/27/20 11:39	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 11:39	1
Arsenic	ND		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 11:39	1
Barium	**0.041**	**^**	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 11:39	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 11:39	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 11:39	1
Calcium	**138**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:39	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 11:39	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 11:39	1
Copper	**0.0019**	**J ^**	0.010	0.0016	mg/L		06/04/20 11:24	06/05/20 15:52	1
Iron	**0.13**		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 11:39	1
Lead	**0.0078**	**J**	0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 11:39	1
Magnesium	**65.9**		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 11:39	1
Manganese	**0.027**	**B**	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 11:39	1
Nickel	**0.0024**	**J**	0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 11:39	1
Potassium	**0.65**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:39	1
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 11:39	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/29/20 00:28	1
Sodium	**14.0**		1.0	0.32	mg/L		05/26/20 09:54	05/27/20 11:39	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 11:39	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 11:39	1
Zinc	**0.0034**	**J**	0.010	0.0015	mg/L		06/04/20 11:24	06/05/20 15:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.6**		2.5	1.4	mg/L			05/26/20 15:28	5
Sulfate	**185**		10.0	1.7	mg/L			05/26/20 15:28	5
Alkalinity, Bicarbonate	**569**		60.0	24.0	mg/L			05/22/20 19:32	6
Alkalinity, Carbonate	ND		60.0	24.0	mg/L			05/22/20 19:32	6
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 08:53	1
Nitrate Nitrite as N	**0.099**		0.050	0.020	mg/L			05/24/20 16:28	1

Client Sample ID: WG-11109668-051920-DT-004
Lab Sample ID: 480-170182-4
Date Collected: 05/19/20 09:00
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7.2**		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:39	1
Antimony	ND		0.10	0.034	mg/L		05/26/20 09:55	05/28/20 23:14	5
Arsenic	**0.079**		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:39	1
Barium	**0.19**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:39	1
Beryllium	**0.00030**	**J**	0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:39	1
Cadmium	ND		0.0050	0.0025	mg/L		05/26/20 09:55	05/28/20 23:14	5
Calcium	**2780**		2.5	0.50	mg/L		05/26/20 09:55	05/28/20 23:14	5
Chromium	**0.18**		0.020	0.0050	mg/L		05/26/20 09:55	05/28/20 23:14	5
Cobalt	**0.18**		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:39	1
Copper	ND		0.050	0.0080	mg/L		05/26/20 09:55	05/28/20 23:14	5
Iron	**1540**		0.25	0.097	mg/L		05/26/20 09:55	05/28/20 23:14	5
Lead	**0.79**		0.025	0.015	mg/L		05/26/20 09:55	05/28/20 23:14	5

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-004
Lab Sample ID: 480-170182-4
Date Collected: 05/19/20 09:00
Matrix: Water
Date Received: 05/20/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	1400		1.0	0.22	mg/L		05/26/20 09:55	05/28/20 23:14	5
Manganese	17.8	B	0.015	0.0020	mg/L		05/26/20 09:55	05/28/20 23:14	5
Nickel	1.0		0.050	0.0063	mg/L		05/26/20 09:55	05/28/20 23:14	5
Potassium	1010	B ^	2.5	0.50	mg/L		05/26/20 09:55	05/28/20 23:14	5
Selenium	0.022		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:39	1
Silver	ND		0.015	0.0085	mg/L		05/26/20 09:55	05/28/20 23:14	5
Sodium	2260	B	5.0	1.6	mg/L		05/26/20 09:55	05/28/20 23:14	5
Thallium	ND		0.10	0.051	mg/L		05/26/20 09:55	05/28/20 23:14	5
Vanadium	0.035		0.025	0.0075	mg/L		05/26/20 09:55	05/28/20 23:14	5
Zinc	31.3		0.050	0.0075	mg/L		05/26/20 09:55	05/28/20 23:14	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8.8		0.20	0.060	mg/L		05/26/20 09:54	05/27/20 11:43	1
Antimony	ND		0.10	0.034	mg/L		05/26/20 09:54	06/01/20 15:40	5
Arsenic	0.074		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 11:43	1
Barium	0.18	^	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 11:43	1
Beryllium	0.00035	J	0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 11:43	1
Cadmium	0.0037	J	0.010	0.0025	mg/L		05/26/20 09:54	06/01/20 15:40	5
Calcium	2780		2.5	0.50	mg/L		05/26/20 09:54	05/29/20 00:43	5
Chromium	0.19		0.020	0.0050	mg/L		05/26/20 09:54	06/01/20 15:40	5
Cobalt	0.18		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 11:43	1
Copper	ND		0.050	0.0080	mg/L		05/26/20 09:54	05/29/20 00:43	5
Iron	1610		0.25	0.097	mg/L		05/26/20 09:54	06/01/20 15:40	5
Lead	1.2		0.050	0.015	mg/L		05/26/20 09:54	06/01/20 15:40	5
Magnesium	1390		1.0	0.22	mg/L		05/26/20 09:54	05/29/20 00:43	5
Manganese	19.8	B	0.015	0.0020	mg/L		05/26/20 09:54	06/01/20 15:40	5
Nickel	1.1		0.050	0.0063	mg/L		05/26/20 09:54	06/01/20 15:40	5
Potassium	1060	B	2.5	0.50	mg/L		05/26/20 09:54	05/29/20 00:43	5
Selenium	0.014	J	0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 11:43	1
Silver	ND		0.030	0.0085	mg/L		05/26/20 09:54	05/29/20 00:43	5
Sodium	2320		5.0	1.6	mg/L		05/26/20 09:54	05/29/20 00:43	5
Thallium	ND		0.10	0.051	mg/L		05/26/20 09:54	05/29/20 00:43	5
Vanadium	0.035		0.025	0.0075	mg/L		05/26/20 09:54	06/01/20 15:40	5
Zinc	31.3		0.050	0.0075	mg/L		05/26/20 09:54	05/29/20 00:43	5

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2590		50.0	28.2	mg/L			05/26/20 15:42	100
Sulfate	1760		200	34.9	mg/L			05/26/20 15:42	100
Alkalinity, Bicarbonate	ND		10.0	4.0	mg/L			05/22/20 20:26	1
Alkalinity, Carbonate	ND		10.0	4.0	mg/L			05/22/20 20:26	1
Ammonia	1570		20.0	9.0	mg/L			05/27/20 10:27	1000
Nitrate Nitrite as N	1.1		0.050	0.020	mg/L			05/24/20 16:30	1

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-005
Lab Sample ID: 480-170182-5
Date Collected: 05/19/20 09:15
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.2		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:44	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:44	1
Arsenic	0.020		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:44	1
Barium	0.65	^	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:44	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:44	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:44	1
Calcium	142		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:44	1
Chromium	0.075		0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:44	1
Cobalt	0.022		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:44	1
Copper	0.016		0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:44	1
Iron	55.9		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:44	1
Lead	0.24		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:44	1
Magnesium	420		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:44	1
Manganese	0.11	B	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:44	1
Nickel	0.21		0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:44	1
Potassium	438		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:44	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:44	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 23:22	1
Sodium	1450	B	5.0	1.6	mg/L		05/26/20 09:55	05/28/20 23:26	5
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:44	1
Vanadium	0.0095		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:44	1
Zinc	0.37		0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:44	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.0		0.20	0.060	mg/L		05/26/20 09:54	05/27/20 11:48	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 11:48	1
Arsenic	0.022		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 11:48	1
Barium	0.65	^	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 11:48	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 11:48	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 11:48	1
Calcium	140		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:48	1
Chromium	0.073		0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 11:48	1
Cobalt	0.021		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 11:48	1
Copper	0.013		0.010	0.0016	mg/L		05/26/20 09:54	05/27/20 11:48	1
Iron	51.0		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 11:48	1
Lead	0.21		0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 11:48	1
Magnesium	419		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 11:48	1
Manganese	0.11	B	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 11:48	1
Nickel	0.21		0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 11:48	1
Potassium	435		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 11:48	1
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 11:48	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/29/20 00:51	1
Sodium	1430		5.0	1.6	mg/L		05/26/20 09:54	05/29/20 00:55	5
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 11:48	1
Vanadium	0.0083		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 11:48	1
Zinc	0.29		0.010	0.0015	mg/L		05/26/20 09:54	05/27/20 11:48	1

Client Sample ID: WG-11109668-051920-DT-005
Lab Sample ID: 480-170182-5
Date Collected: 05/19/20 09:15
Matrix: Water
Date Received: 05/20/20 09:45

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1160**		25.0	14.1	mg/L			05/26/20 17:07	50
Sulfate	ND		100	17.5	mg/L			05/26/20 17:07	50
Alkalinity, Bicarbonate	**28.2**		10.0	4.0	mg/L			05/22/20 18:44	1
Alkalinity, Carbonate	ND		10.0	4.0	mg/L			05/22/20 18:44	1
Ammonia	**655**		10.0	4.5	mg/L			05/27/20 10:07	500
Nitrate Nitrite as N	**0.22**		0.050	0.020	mg/L			05/24/20 16:31	1

Client Sample ID: WG-11109668-051920-DT-006
Lab Sample ID: 480-170182-6
Date Collected: 05/19/20 09:30
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:48	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:48	1
Arsenic	ND		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:48	1
Barium	**0.057**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:48	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:48	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:48	1
Calcium	**126**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:48	1
Chromium	**0.0014**	**J**	0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:48	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:48	1
Copper	**0.0034**	**J**	0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:48	1
Iron	**0.18**		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:48	1
Lead	ND		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:48	1
Magnesium	**65.3**		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:48	1
Manganese	**0.16**	**B**	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:48	1
Nickel	**0.0049**	**J**	0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:48	1
Potassium	**3.0**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:48	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:48	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 23:30	1
Sodium	**6.3**		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 13:48	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:48	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:48	1
Zinc	**0.015**		0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:48	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		05/26/20 09:54	05/27/20 12:03	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 12:03	1
Arsenic	ND		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 12:03	1
Barium	**0.054**	**^**	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 12:03	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 12:03	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 12:03	1
Calcium	**130**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 12:03	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 12:03	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 12:03	1
Copper	**0.0027**	**J**	0.010	0.0016	mg/L		05/26/20 09:54	05/27/20 12:03	1
Iron	**0.11**		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 12:03	1
Lead	ND		0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 12:03	1

Client Sample ID: WG-11109668-051920-DT-006
Lab Sample ID: 480-170182-6
Date Collected: 05/19/20 09:30
Matrix: Water
Date Received: 05/20/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**65.7**		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 12:03	1
Manganese	**0.14**	**B**	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 12:03	1
Nickel	**0.0048**	**J**	0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 12:03	1
Potassium	**2.1**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 12:03	1
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 12:03	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/29/20 00:59	1
Sodium	**6.3**		1.0	0.32	mg/L		05/26/20 09:54	05/27/20 12:03	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 12:03	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 12:03	1
Zinc	**0.014**		0.010	0.0015	mg/L		05/26/20 09:54	05/27/20 12:03	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		2.5	1.4	mg/L			05/26/20 17:21	5
Sulfate	**87.7**		10.0	1.7	mg/L			05/26/20 17:21	5
Alkalinity, Bicarbonate	**547**		60.0	24.0	mg/L			05/22/20 19:32	6
Alkalinity, Carbonate	ND		60.0	24.0	mg/L			05/22/20 19:32	6
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 08:55	1
Nitrate Nitrite as N	**0.089**		0.050	0.020	mg/L			05/24/20 16:32	1

Client Sample ID: WG-11109668-051920-DT-007
Lab Sample ID: 480-170182-7
Date Collected: 05/19/20 09:45
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1.1**		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:52	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:52	1
Arsenic	ND		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:52	1
Barium	**0.059**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:52	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:52	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:52	1
Calcium	**133**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:52	1
Chromium	**0.0012**	**J**	0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:52	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:52	1
Copper	**0.0027**	**J**	0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:52	1
Iron	**3.3**		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:52	1
Lead	ND		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:52	1
Magnesium	**46.2**		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:52	1
Manganese	**0.17**	**B**	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:52	1
Nickel	**0.0041**	**J**	0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:52	1
Potassium	**6.8**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:52	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:52	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 23:34	1
Sodium	**20.0**		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 13:52	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:52	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:52	1
Zinc	**0.067**		0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:52	1

Client Sample ID: WG-11109668-051920-DT-007
Lab Sample ID: 480-170182-7
Date Collected: 05/19/20 09:45
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.87**		0.20	0.060	mg/L		05/26/20 09:54	05/27/20 12:07	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 12:07	1
Arsenic	ND		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 12:07	1
Barium	**0.058**	**^**	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 12:07	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 12:07	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 12:07	1
Calcium	**132**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 12:07	1
Chromium	**0.0013**	**J**	0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 12:07	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 12:07	1
Copper	**0.0026**	**J**	0.010	0.0016	mg/L		05/26/20 09:54	05/27/20 12:07	1
Iron	**3.2**		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 12:07	1
Lead	ND		0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 12:07	1
Magnesium	**45.8**		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 12:07	1
Manganese	**0.16**	**B**	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 12:07	1
Nickel	**0.0036**	**J**	0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 12:07	1
Potassium	**6.5**		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 12:07	1
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 12:07	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/29/20 01:03	1
Sodium	**19.6**		1.0	0.32	mg/L		05/26/20 09:54	05/27/20 12:07	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 12:07	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 12:07	1
Zinc	**0.055**		0.010	0.0015	mg/L		05/26/20 09:54	05/27/20 12:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		2.5	1.4	mg/L			05/26/20 17:35	5
Sulfate	**66.0**		10.0	1.7	mg/L			05/26/20 17:35	5
Alkalinity, Bicarbonate	**528**		60.0	24.0	mg/L			05/22/20 19:32	6
Alkalinity, Carbonate	ND		60.0	24.0	mg/L			05/22/20 19:32	6
Ammonia	ND	F1	0.020	0.0090	mg/L			05/27/20 08:58	1
Nitrate Nitrite as N	**0.058**		0.050	0.020	mg/L			05/24/20 16:34	1

Client Sample ID: WG-11109668-051920-DT-008
Lab Sample ID: 480-170182-8
Date Collected: 05/19/20 10:05
Matrix: Water
Date Received: 05/20/20 09:45

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7.8**		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 13:56	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 13:56	1
Arsenic	**0.014**		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 13:56	1
Barium	**0.62**	**^**	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 13:56	1
Beryllium	**0.00045**	**J**	0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 13:56	1
Cadmium	**0.0055**		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 13:56	1
Calcium	**226**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:56	1
Chromium	**0.037**		0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 13:56	1
Cobalt	**0.013**		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 13:56	1
Copper	**0.11**		0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 13:56	1
Iron	**164**		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 13:56	1
Lead	**0.46**		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 13:56	1

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-008
Lab Sample ID: 480-170182-8
Date Collected: 05/19/20 10:05
Matrix: Water
Date Received: 05/20/20 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**126**		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 13:56	1
Manganese	**0.99**	**B**	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 13:56	1
Nickel	**0.050**		0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 13:56	1
Potassium	**15.0**		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 13:56	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 13:56	1
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 23:38	1
Sodium	**66.1**		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 13:56	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 13:56	1
Vanadium	**0.019**		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 13:56	1
Zinc	**0.24**		0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 13:56	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**213**		2.5	1.4	mg/L			05/26/20 17:59	5
Sulfate	**9.2**	**J**	10.0	1.7	mg/L			05/26/20 17:59	5
Alkalinity, Bicarbonate	**672**		90.0	36.0	mg/L			05/22/20 19:33	9
Alkalinity, Carbonate	ND		90.0	36.0	mg/L			05/22/20 19:33	9
Ammonia	**3.7**		0.040	0.018	mg/L			05/27/20 10:11	2
Nitrate Nitrite as N	**0.074**		0.050	0.020	mg/L			05/24/20 16:35	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-533068/1-A
Matrix: Water
Analysis Batch: 533691

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 533068

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:55	05/27/20 12:11	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:55	05/27/20 12:11	1
Arsenic	ND		0.010	0.0056	mg/L		05/26/20 09:55	05/27/20 12:11	1
Barium	ND	^	0.0020	0.00070	mg/L		05/26/20 09:55	05/27/20 12:11	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:55	05/27/20 12:11	1
Cadmium	ND		0.0010	0.00050	mg/L		05/26/20 09:55	05/27/20 12:11	1
Calcium	ND		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 12:11	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:55	05/27/20 12:11	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:55	05/27/20 12:11	1
Copper	ND		0.010	0.0016	mg/L		05/26/20 09:55	05/27/20 12:11	1
Iron	ND		0.050	0.019	mg/L		05/26/20 09:55	05/27/20 12:11	1
Lead	ND		0.0050	0.0030	mg/L		05/26/20 09:55	05/27/20 12:11	1
Magnesium	ND		0.20	0.043	mg/L		05/26/20 09:55	05/27/20 12:11	1
Manganese	0.00104	J	0.0030	0.00040	mg/L		05/26/20 09:55	05/27/20 12:11	1
Nickel	ND		0.010	0.0013	mg/L		05/26/20 09:55	05/27/20 12:11	1
Potassium	ND		0.50	0.10	mg/L		05/26/20 09:55	05/27/20 12:11	1
Selenium	ND		0.015	0.0087	mg/L		05/26/20 09:55	05/27/20 12:11	1
Sodium	ND		1.0	0.32	mg/L		05/26/20 09:55	05/27/20 12:11	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:55	05/27/20 12:11	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:55	05/27/20 12:11	1
Zinc	ND		0.010	0.0015	mg/L		05/26/20 09:55	05/27/20 12:11	1

Lab Sample ID: MB 480-533068/1-A
Matrix: Water
Analysis Batch: 533935

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 533068

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0030	0.0017	mg/L		05/26/20 09:55	05/28/20 22:28	1

Lab Sample ID: LCS 480-533068/2-A
Matrix: Water
Analysis Batch: 533691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.39		mg/L		94	80 - 120
Antimony	0.200	0.220		mg/L		110	80 - 120
Arsenic	0.200	0.200		mg/L		100	80 - 120
Barium	0.200	0.215	^	mg/L		108	80 - 120
Beryllium	0.200	0.203		mg/L		101	80 - 120
Cadmium	0.200	0.197		mg/L		99	80 - 120
Calcium	10.0	10.05		mg/L		101	80 - 120
Chromium	0.200	0.194		mg/L		97	80 - 120
Cobalt	0.200	0.195		mg/L		98	80 - 120
Copper	0.200	0.204		mg/L		102	80 - 120
Iron	10.0	9.84		mg/L		98	80 - 120
Lead	0.200	0.194		mg/L		97	80 - 120
Magnesium	10.0	10.26		mg/L		103	80 - 120
Manganese	0.200	0.199		mg/L		100	80 - 120
Nickel	0.200	0.191		mg/L		96	80 - 120

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

Lab Sample ID: LCS 480-533068/2-A
Matrix: Water
Analysis Batch: 533691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.46		mg/L		95	80 - 120
Selenium	0.200	0.200		mg/L		100	80 - 120
Sodium	10.0	8.81		mg/L		88	80 - 120
Thallium	0.200	0.203		mg/L		102	80 - 120
Vanadium	0.200	0.199		mg/L		99	80 - 120
Zinc	0.200	0.207		mg/L		103	80 - 120

Lab Sample ID: LCS 480-533068/2-A
Matrix: Water
Analysis Batch: 533935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.0500	0.0494		mg/L		99	80 - 120

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533691

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		10.0	9.42		mg/L		94	75 - 125
Antimony	ND		0.200	0.223		mg/L		111	75 - 125
Arsenic	ND		0.200	0.207		mg/L		104	75 - 125
Barium	0.16	^	0.200	0.375	^	mg/L		107	75 - 125
Beryllium	ND		0.200	0.204		mg/L		102	75 - 125
Cadmium	ND		0.200	0.199		mg/L		99	75 - 125
Calcium	93.7		10.0	104.5	4	mg/L		107	75 - 125
Chromium	ND		0.200	0.191		mg/L		96	75 - 125
Cobalt	0.00088	J	0.200	0.198		mg/L		99	75 - 125
Copper	ND		0.200	0.198		mg/L		99	75 - 125
Iron	0.40		10.0	9.93		mg/L		95	75 - 125
Lead	ND		0.200	0.199		mg/L		100	75 - 125
Magnesium	45.5		10.0	56.11	4	mg/L		106	75 - 125
Manganese	0.13	B	0.200	0.324		mg/L		96	75 - 125
Nickel	0.0050	J	0.200	0.197		mg/L		96	75 - 125
Potassium	0.31	J	10.0	9.89		mg/L		96	75 - 125
Selenium	ND		0.200	0.202		mg/L		101	75 - 125
Sodium	5.1		10.0	14.20		mg/L		90	75 - 125
Thallium	ND		0.200	0.205		mg/L		103	75 - 125
Vanadium	ND		0.200	0.198		mg/L		99	75 - 125
Zinc	0.0048	J	0.200	0.200		mg/L		97	75 - 125

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533935

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		0.0500	0.0498		mg/L		100	75 - 125

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

Lab Sample ID: 480-170182-1 MSD
Matrix: Water
Analysis Batch: 533691

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		10.0	9.32		mg/L		93	75 - 125	1	20
Antimony	ND		0.200	0.216		mg/L		108	75 - 125	3	20
Arsenic	ND		0.200	0.204		mg/L		102	75 - 125	1	20
Barium	0.16	^	0.200	0.368	^	mg/L		103	75 - 125	2	20
Beryllium	ND		0.200	0.200		mg/L		100	75 - 125	2	20
Cadmium	ND		0.200	0.196		mg/L		98	75 - 125	2	20
Calcium	93.7		10.0	102.7	4	mg/L		89	75 - 125	2	20
Chromium	ND		0.200	0.187		mg/L		93	75 - 125	2	20
Cobalt	0.00088	J	0.200	0.196		mg/L		98	75 - 125	1	20
Copper	ND		0.200	0.194		mg/L		97	75 - 125	2	20
Iron	0.40		10.0	9.77		mg/L		94	75 - 125	2	20
Lead	ND		0.200	0.197		mg/L		98	75 - 125	1	20
Magnesium	45.5		10.0	55.19	4	mg/L		97	75 - 125	2	20
Manganese	0.13	B	0.200	0.319		mg/L		94	75 - 125	2	20
Nickel	0.0050	J	0.200	0.194		mg/L		95	75 - 125	1	20
Potassium	0.31	J	10.0	9.71		mg/L		94	75 - 125	2	20
Selenium	ND		0.200	0.195		mg/L		97	75 - 125	4	20
Sodium	5.1		10.0	13.84		mg/L		87	75 - 125	3	20
Thallium	ND		0.200	0.205		mg/L		102	75 - 125	0	20
Vanadium	ND		0.200	0.196		mg/L		98	75 - 125	1	20
Zinc	0.0048	J	0.200	0.193		mg/L		94	75 - 125	3	20

Lab Sample ID: 480-170182-1 MSD
Matrix: Water
Analysis Batch: 533935

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Total/NA
Prep Batch: 533068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		0.0500	0.0495		mg/L		99	75 - 125	1	20

Lab Sample ID: MB 480-533075/1-A
Matrix: Water
Analysis Batch: 533690

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 533075

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		05/26/20 09:54	05/27/20 10:30	1
Antimony	ND		0.020	0.0068	mg/L		05/26/20 09:54	05/27/20 10:30	1
Arsenic	ND		0.015	0.0056	mg/L		05/26/20 09:54	05/27/20 10:30	1
Barium	ND	^	0.0020	0.00070	mg/L		05/26/20 09:54	05/27/20 10:30	1
Beryllium	ND		0.0020	0.00030	mg/L		05/26/20 09:54	05/27/20 10:30	1
Cadmium	ND		0.0020	0.00050	mg/L		05/26/20 09:54	05/27/20 10:30	1
Calcium	ND		0.50	0.10	mg/L		05/26/20 09:54	05/27/20 10:30	1
Chromium	ND		0.0040	0.0010	mg/L		05/26/20 09:54	05/27/20 10:30	1
Cobalt	ND		0.0040	0.00063	mg/L		05/26/20 09:54	05/27/20 10:30	1
Copper	ND		0.010	0.0016	mg/L		05/26/20 09:54	05/27/20 10:30	1
Iron	ND		0.050	0.019	mg/L		05/26/20 09:54	05/27/20 10:30	1
Lead	ND		0.010	0.0030	mg/L		05/26/20 09:54	05/27/20 10:30	1
Magnesium	ND		0.20	0.043	mg/L		05/26/20 09:54	05/27/20 10:30	1
Manganese	0.000790	J	0.0030	0.00040	mg/L		05/26/20 09:54	05/27/20 10:30	1
Nickel	ND		0.010	0.0013	mg/L		05/26/20 09:54	05/27/20 10:30	1

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

Lab Sample ID: MB 480-533075/1-A
Matrix: Water
Analysis Batch: 533690

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 533075

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.025	0.0087	mg/L		05/26/20 09:54	05/27/20 10:30	1
Sodium	ND		1.0	0.32	mg/L		05/26/20 09:54	05/27/20 10:30	1
Thallium	ND		0.020	0.010	mg/L		05/26/20 09:54	05/27/20 10:30	1
Vanadium	ND		0.0050	0.0015	mg/L		05/26/20 09:54	05/27/20 10:30	1
Zinc	ND		0.010	0.0015	mg/L		05/26/20 09:54	05/27/20 10:30	1

Lab Sample ID: MB 480-533075/1-A
Matrix: Water
Analysis Batch: 533936

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 533075

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	0.180	J ^	0.50	0.10	mg/L		05/26/20 09:54	05/28/20 23:57	1
Silver	ND		0.0060	0.0017	mg/L		05/26/20 09:54	05/28/20 23:57	1

Lab Sample ID: LCS 480-533075/2-A
Matrix: Water
Analysis Batch: 533690

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 533075

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.21		mg/L		92	80 - 120
Antimony	0.200	0.216		mg/L		108	80 - 120
Arsenic	0.200	0.200		mg/L		100	80 - 120
Barium	0.200	0.213	^	mg/L		106	80 - 120
Beryllium	0.200	0.200		mg/L		100	80 - 120
Cadmium	0.200	0.196		mg/L		98	80 - 120
Calcium	10.0	9.85		mg/L		98	80 - 120
Chromium	0.200	0.192		mg/L		96	80 - 120
Cobalt	0.200	0.192		mg/L		96	80 - 120
Copper	0.200	0.194		mg/L		97	80 - 120
Iron	10.0	9.64		mg/L		96	80 - 120
Lead	0.200	0.191		mg/L		95	80 - 120
Magnesium	10.0	10.07		mg/L		101	80 - 120
Manganese	0.200	0.197		mg/L		98	80 - 120
Nickel	0.200	0.189		mg/L		94	80 - 120
Selenium	0.200	0.192		mg/L		96	80 - 120
Sodium	10.0	8.63		mg/L		86	80 - 120
Thallium	0.200	0.201		mg/L		100	80 - 120
Vanadium	0.200	0.194		mg/L		97	80 - 120
Zinc	0.200	0.197		mg/L		98	80 - 120

Lab Sample ID: LCS 480-533075/2-A
Matrix: Water
Analysis Batch: 533936

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 533075

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.55	^	mg/L		95	80 - 120
Silver	0.0500	0.0480		mg/L		96	80 - 120

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

Lab Sample ID: MB 480-534745/1-A
Matrix: Water
Analysis Batch: 535114

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 534745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.010	0.0016	mg/L		06/04/20 11:24	06/05/20 14:22	1
Zinc	ND	^	0.010	0.0015	mg/L		06/04/20 11:24	06/05/20 14:22	1

Lab Sample ID: LCS 480-534745/2-A
Matrix: Water
Analysis Batch: 535114

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 534745

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	0.200	0.195		mg/L		98	80 - 120
Zinc	0.200	0.208	^	mg/L		104	80 - 120

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533690

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved
Prep Batch: 533075

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		10.0	9.39		mg/L		94	75 - 125
Antimony	ND		0.200	0.226		mg/L		113	75 - 125
Arsenic	ND		0.200	0.208		mg/L		104	75 - 125
Barium	0.16	^	0.200	0.370	^	mg/L		104	75 - 125
Beryllium	ND		0.200	0.206		mg/L		103	75 - 125
Cadmium	ND		0.200	0.202		mg/L		101	75 - 125
Calcium	96.9		10.0	105.9	4	mg/L		90	75 - 125
Chromium	ND		0.200	0.191		mg/L		95	75 - 125
Cobalt	0.00074	J	0.200	0.200		mg/L		100	75 - 125
Copper	ND		0.200	0.200		mg/L		100	75 - 125
Iron	0.13		10.0	9.88		mg/L		98	75 - 125
Lead	ND		0.200	0.203		mg/L		101	75 - 125
Magnesium	47.4		10.0	56.78	4	mg/L		93	75 - 125
Manganese	0.13	B	0.200	0.326		mg/L		96	75 - 125
Nickel	0.0053	J	0.200	0.200		mg/L		97	75 - 125
Potassium	0.19	J	10.0	9.95		mg/L		97	75 - 125
Selenium	ND		0.200	0.196		mg/L		98	75 - 125
Sodium	5.4		10.0	14.45		mg/L		90	75 - 125
Thallium	ND		0.200	0.209		mg/L		104	75 - 125
Vanadium	ND		0.200	0.197		mg/L		99	75 - 125
Zinc	0.0021	J	0.200	0.199		mg/L		98	75 - 125

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533936

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved
Prep Batch: 533075

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		0.0500	0.0502		mg/L		100	75 - 125

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

Lab Sample ID: 480-170182-1 MSD
Client Sample ID: WG-11109668-051920-DT-001
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 533690
Prep Batch: 533075

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		10.0	9.60		mg/L		96	75 - 125	2	20
Antimony	ND		0.200	0.227		mg/L		113	75 - 125	0	20
Arsenic	ND		0.200	0.212		mg/L		106	75 - 125	2	20
Barium	0.16	^	0.200	0.376	^	mg/L		106	75 - 125	2	20
Beryllium	ND		0.200	0.210		mg/L		105	75 - 125	2	20
Cadmium	ND		0.200	0.206		mg/L		103	75 - 125	2	20
Calcium	96.9		10.0	106.4	4	mg/L		94	75 - 125	0	20
Chromium	ND		0.200	0.195		mg/L		98	75 - 125	2	20
Cobalt	0.00074	J	0.200	0.204		mg/L		102	75 - 125	2	20
Copper	ND		0.200	0.203		mg/L		101	75 - 125	1	20
Iron	0.13		10.0	10.03		mg/L		99	75 - 125	2	20
Lead	ND		0.200	0.204		mg/L		102	75 - 125	0	20
Magnesium	47.4		10.0	56.71	4	mg/L		93	75 - 125	0	20
Manganese	0.13	B	0.200	0.328		mg/L		97	75 - 125	1	20
Nickel	0.0053	J	0.200	0.202		mg/L		99	75 - 125	1	20
Potassium	0.19	J	10.0	10.16		mg/L		100	75 - 125	2	20
Selenium	ND		0.200	0.205		mg/L		102	75 - 125	4	20
Sodium	5.4		10.0	14.77		mg/L		93	75 - 125	2	20
Thallium	ND		0.200	0.209		mg/L		105	75 - 125	0	20
Vanadium	ND		0.200	0.201		mg/L		100	75 - 125	2	20
Zinc	0.0021	J	0.200	0.201		mg/L		99	75 - 125	1	20

Lab Sample ID: 480-170182-1 MSD
Client Sample ID: WG-11109668-051920-DT-001
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 533936
Prep Batch: 533075

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		0.0500	0.0513		mg/L		103	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-533353/4
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 533353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/26/20 14:32	1
Sulfate	ND		2.0	0.35	mg/L			05/26/20 14:32	1

Lab Sample ID: LCS 480-533353/3
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 533353

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	45.92		mg/L		92	90 - 110		
Sulfate			50.0	46.78		mg/L		94	90 - 110		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 480-170182-1 MS
Client Sample ID: WG-11109668-051920-DT-001
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 533353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1.1		100	90.69		mg/L		90	81 - 120		
Sulfate	3.1	J	100	93.40		mg/L		90	80 - 120		

Lab Sample ID: 480-170182-1 MSD
Client Sample ID: WG-11109668-051920-DT-001
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 533353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.1		100	90.28		mg/L		89	81 - 120	0	15
Sulfate	3.1	J	100	92.86		mg/L		90	80 - 120	1	15

Method: 310.2 - Alkalinity

Lab Sample ID: MB 480-533200/12
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 533200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Bicarbonate	ND		10.0	4.0	mg/L			05/22/20 18:43	1
Alkalinity, Carbonate	ND		10.0	4.0	mg/L			05/22/20 18:43	1

Lab Sample ID: MB 480-533200/156
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 533200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Bicarbonate	ND		10.0	4.0	mg/L			05/22/20 20:16	1
Alkalinity, Carbonate	ND		10.0	4.0	mg/L			05/22/20 20:16	1

Lab Sample ID: MB 480-533200/73
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 533200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Bicarbonate	ND		10.0	4.0	mg/L			05/22/20 19:28	1
Alkalinity, Carbonate	ND		10.0	4.0	mg/L			05/22/20 19:28	1

Lab Sample ID: MB 480-533200/82
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 533200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Bicarbonate	ND		10.0	4.0	mg/L			05/22/20 19:31	1
Alkalinity, Carbonate	ND		10.0	4.0	mg/L			05/22/20 19:31	1

Method: 310.2 - Alkalinity (Continued)

Lab Sample ID: LCS 480-533200/10
Matrix: Water
Analysis Batch: 533200

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Bicarbonate	50.0	47.38		mg/L		95	90 - 110

Lab Sample ID: LCS 480-533200/154
Matrix: Water
Analysis Batch: 533200

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Bicarbonate	50.0	46.28		mg/L		93	90 - 110

Lab Sample ID: LCS 480-533200/71
Matrix: Water
Analysis Batch: 533200

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Bicarbonate	50.0	49.41		mg/L		99	90 - 110

Lab Sample ID: LCS 480-533200/80
Matrix: Water
Analysis Batch: 533200

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Bicarbonate	50.0	48.63		mg/L		97	90 - 110

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533200

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Bicarbonate	447		20.0	457.3	4	mg/L		51	60 - 140

Lab Sample ID: 480-170182-1 MSD
Matrix: Water
Analysis Batch: 533200

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity, Bicarbonate	447		20.0	460.4	4	mg/L		67	60 - 140	1	20

Lab Sample ID: 480-170182-4 DU
Matrix: Water
Analysis Batch: 533200

Client Sample ID: WG-11109668-051920-DT-004
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Bicarbonate	ND		ND		mg/L		NC	20
Alkalinity, Carbonate	ND		ND		mg/L		NC	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-533543/3
Matrix: Water
Analysis Batch: 533543

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 08:48	1

Lab Sample ID: MB 480-533543/75
Matrix: Water
Analysis Batch: 533543

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 09:49	1

Lab Sample ID: MB 480-533543/99
Matrix: Water
Analysis Batch: 533543

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/27/20 10:10	1

Lab Sample ID: LCS 480-533543/100
Matrix: Water
Analysis Batch: 533543

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110
Ammonia as NH3	1.22	1.27		mg/L		104	90 - 110

Lab Sample ID: LCS 480-533543/4
Matrix: Water
Analysis Batch: 533543

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110
Ammonia as NH3	1.22	1.27		mg/L		104	90 - 110

Lab Sample ID: LCS 480-533543/76
Matrix: Water
Analysis Batch: 533543

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110
Ammonia as NH3	1.22	1.27		mg/L		104	90 - 110

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533543

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND		0.200	0.196		mg/L		98	90 - 110
Ammonia as NH3	ND		0.243	0.239		mg/L		98	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 480-170182-1 MSD — **Client Sample ID: WG-11109668-051920-DT-001**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 533543

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	ND		0.200	0.189		mg/L		95	90 - 110	4	20
Ammonia as NH3	ND		0.243	0.230		mg/L		95	90 - 110	4	20

Lab Sample ID: 480-170182-7 MS — **Client Sample ID: WG-11109668-051920-DT-007**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 533543

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND	F1	0.200	0.165	F1	mg/L		83	90 - 110
Ammonia as NH3	ND	F1	0.243	0.201	F1	mg/L		83	90 - 110

Lab Sample ID: 480-170182-8 MS — **Client Sample ID: WG-11109668-051920-DT-008**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 533543

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	3.7		0.400	3.80	4	mg/L		35	90 - 110
Ammonia as NH3	4.5		0.487	4.62	4	mg/L		25	90 - 110

Lab Sample ID: 480-170182-8 DU — **Client Sample ID: WG-11109668-051920-DT-008**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 533543

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	3.7		3.80		mg/L		4	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 480-533278/28 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 533278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/24/20 15:58	1

Lab Sample ID: MB 480-533278/52 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 533278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/24/20 16:26	1

Lab Sample ID: LCS 480-533278/29 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 533278

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.50	1.46		mg/L		97	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 480-533278/53
Matrix: Water
Analysis Batch: 533278

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			1.50	1.49		mg/L		99	90 - 110		

Lab Sample ID: 480-170182-1 MS
Matrix: Water
Analysis Batch: 533278

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.055		1.00	1.04		mg/L		99	90 - 110		

Lab Sample ID: 480-170182-1 MSD
Matrix: Water
Analysis Batch: 533278

Client Sample ID: WG-11109668-051920-DT-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.055		1.00	1.07		mg/L		102	90 - 110	3	20

Lab Sample ID: 480-170182-3 MS
Matrix: Water
Analysis Batch: 533278

Client Sample ID: WG-11109668-051920-DT-003
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.099		1.00	1.06		mg/L		96	90 - 110		

Metals

Prep Batch: 533068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Total/NA	Water	3005A	
480-170182-2	WG-11109668-051920-DT-002	Total/NA	Water	3005A	
480-170182-3	WG-11109668-051920-DT-003	Total/NA	Water	3005A	
480-170182-4	WG-11109668-051920-DT-004	Total/NA	Water	3005A	
480-170182-5	WG-11109668-051920-DT-005	Total/NA	Water	3005A	
480-170182-6	WG-11109668-051920-DT-006	Total/NA	Water	3005A	
480-170182-7	WG-11109668-051920-DT-007	Total/NA	Water	3005A	
480-170182-8	WG-11109668-051920-DT-008	Total/NA	Water	3005A	
MB 480-533068/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-533068/2-A	Lab Control Sample	Total/NA	Water	3005A	
480-170182-1 MS	WG-11109668-051920-DT-001	Total/NA	Water	3005A	
480-170182-1 MSD	WG-11109668-051920-DT-001	Total/NA	Water	3005A	

Prep Batch: 533075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	3005A	
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	3005A	
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	3005A	
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	3005A	
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	3005A	
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	3005A	
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	3005A	
MB 480-533075/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 480-533075/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	3005A	
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	3005A	

Analysis Batch: 533690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	6010C	533075
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	6010C	533075
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	6010C	533075
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	6010C	533075
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	6010C	533075
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	6010C	533075
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	6010C	533075
MB 480-533075/1-A	Method Blank	Total Recoverable	Water	6010C	533075
LCS 480-533075/2-A	Lab Control Sample	Total Recoverable	Water	6010C	533075
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	6010C	533075
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	6010C	533075

Analysis Batch: 533691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Total/NA	Water	6010C	533068
480-170182-2	WG-11109668-051920-DT-002	Total/NA	Water	6010C	533068
480-170182-3	WG-11109668-051920-DT-003	Total/NA	Water	6010C	533068
480-170182-4	WG-11109668-051920-DT-004	Total/NA	Water	6010C	533068
480-170182-5	WG-11109668-051920-DT-005	Total/NA	Water	6010C	533068
480-170182-6	WG-11109668-051920-DT-006	Total/NA	Water	6010C	533068
480-170182-7	WG-11109668-051920-DT-007	Total/NA	Water	6010C	533068
480-170182-8	WG-11109668-051920-DT-008	Total/NA	Water	6010C	533068

Metals (Continued)

Analysis Batch: 533691 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-533068/1-A	Method Blank	Total/NA	Water	6010C	533068
LCS 480-533068/2-A	Lab Control Sample	Total/NA	Water	6010C	533068
480-170182-1 MS	WG-11109668-051920-DT-001	Total/NA	Water	6010C	533068
480-170182-1 MSD	WG-11109668-051920-DT-001	Total/NA	Water	6010C	533068

Analysis Batch: 533935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Total/NA	Water	6010C	533068
480-170182-2	WG-11109668-051920-DT-002	Total/NA	Water	6010C	533068
480-170182-3	WG-11109668-051920-DT-003	Total/NA	Water	6010C	533068
480-170182-4	WG-11109668-051920-DT-004	Total/NA	Water	6010C	533068
480-170182-5	WG-11109668-051920-DT-005	Total/NA	Water	6010C	533068
480-170182-5	WG-11109668-051920-DT-005	Total/NA	Water	6010C	533068
480-170182-6	WG-11109668-051920-DT-006	Total/NA	Water	6010C	533068
480-170182-7	WG-11109668-051920-DT-007	Total/NA	Water	6010C	533068
480-170182-8	WG-11109668-051920-DT-008	Total/NA	Water	6010C	533068
MB 480-533068/1-A	Method Blank	Total/NA	Water	6010C	533068
LCS 480-533068/2-A	Lab Control Sample	Total/NA	Water	6010C	533068
480-170182-1 MS	WG-11109668-051920-DT-001	Total/NA	Water	6010C	533068
480-170182-1 MSD	WG-11109668-051920-DT-001	Total/NA	Water	6010C	533068

Analysis Batch: 533936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	6010C	533075
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	6010C	533075
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	6010C	533075
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	6010C	533075
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	6010C	533075
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	6010C	533075
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	6010C	533075
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	6010C	533075
MB 480-533075/1-A	Method Blank	Total Recoverable	Water	6010C	533075
LCS 480-533075/2-A	Lab Control Sample	Total Recoverable	Water	6010C	533075
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	6010C	533075
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	6010C	533075

Analysis Batch: 534339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	6010C	533075

Prep Batch: 534745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	3005A	
MB 480-534745/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 480-534745/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 535114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	6010C	534745
MB 480-534745/1-A	Method Blank	Total Recoverable	Water	6010C	534745
LCS 480-534745/2-A	Lab Control Sample	Total Recoverable	Water	6010C	534745

General Chemistry

Analysis Batch: 533200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	310.2	
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	310.2	
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	310.2	
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	310.2	
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	310.2	
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	310.2	
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	310.2	
480-170182-8	WG-11109668-051920-DT-008	Dissolved	Water	310.2	
MB 480-533200/12	Method Blank	Total/NA	Water	310.2	
MB 480-533200/156	Method Blank	Total/NA	Water	310.2	
MB 480-533200/73	Method Blank	Total/NA	Water	310.2	
MB 480-533200/82	Method Blank	Total/NA	Water	310.2	
LCS 480-533200/10	Lab Control Sample	Total/NA	Water	310.2	
LCS 480-533200/154	Lab Control Sample	Total/NA	Water	310.2	
LCS 480-533200/71	Lab Control Sample	Total/NA	Water	310.2	
LCS 480-533200/80	Lab Control Sample	Total/NA	Water	310.2	
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	310.2	
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	310.2	
480-170182-4 DU	WG-11109668-051920-DT-004	Dissolved	Water	310.2	

Analysis Batch: 533278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	353.2	
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	353.2	
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	353.2	
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	353.2	
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	353.2	
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	353.2	
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	353.2	
480-170182-8	WG-11109668-051920-DT-008	Dissolved	Water	353.2	
MB 480-533278/28	Method Blank	Total/NA	Water	353.2	
MB 480-533278/52	Method Blank	Total/NA	Water	353.2	
LCS 480-533278/29	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-533278/53	Lab Control Sample	Total/NA	Water	353.2	
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	353.2	
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	353.2	
480-170182-3 MS	WG-11109668-051920-DT-003	Dissolved	Water	353.2	

Analysis Batch: 533353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	300.0	
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	300.0	
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	300.0	
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	300.0	
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	300.0	
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	300.0	
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	300.0	
480-170182-8	WG-11109668-051920-DT-008	Dissolved	Water	300.0	
MB 480-533353/4	Method Blank	Total/NA	Water	300.0	
LCS 480-533353/3	Lab Control Sample	Total/NA	Water	300.0	
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 533353 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	300.0	

Analysis Batch: 533543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-170182-1	WG-11109668-051920-DT-001	Dissolved	Water	350.1	
480-170182-2	WG-11109668-051920-DT-002	Dissolved	Water	350.1	
480-170182-3	WG-11109668-051920-DT-003	Dissolved	Water	350.1	
480-170182-4	WG-11109668-051920-DT-004	Dissolved	Water	350.1	
480-170182-5	WG-11109668-051920-DT-005	Dissolved	Water	350.1	
480-170182-6	WG-11109668-051920-DT-006	Dissolved	Water	350.1	
480-170182-7	WG-11109668-051920-DT-007	Dissolved	Water	350.1	
480-170182-8	WG-11109668-051920-DT-008	Dissolved	Water	350.1	
MB 480-533543/3	Method Blank	Total/NA	Water	350.1	
MB 480-533543/75	Method Blank	Total/NA	Water	350.1	
MB 480-533543/99	Method Blank	Total/NA	Water	350.1	
LCS 480-533543/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-533543/4	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-533543/76	Lab Control Sample	Total/NA	Water	350.1	
480-170182-1 MS	WG-11109668-051920-DT-001	Dissolved	Water	350.1	
480-170182-1 MSD	WG-11109668-051920-DT-001	Dissolved	Water	350.1	
480-170182-7 MS	WG-11109668-051920-DT-007	Dissolved	Water	350.1	
480-170182-8 MS	WG-11109668-051920-DT-008	Dissolved	Water	350.1	
480-170182-8 DU	WG-11109668-051920-DT-008	Dissolved	Water	350.1	

Lab Chronicle

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-001
Lab Sample ID: 480-170182-1

Date Collected: 05/19/20 08:05
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 11:17	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533936	05/29/20 00:05	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:01	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 22:36	LMH	TAL BUF
Dissolved	Analysis	300.0		2	533353	05/26/20 15:56	IMZ	TAL BUF
Dissolved	Analysis	310.2		5	533200	05/22/20 19:30	SRW	TAL BUF
Dissolved	Analysis	350.1		1	533543	05/27/20 08:49	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:39	BEF	TAL BUF

Client Sample ID: WG-11109668-051920-DT-002
Lab Sample ID: 480-170182-2

Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 11:35	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533936	05/29/20 00:24	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:20	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 22:55	LMH	TAL BUF
Dissolved	Analysis	300.0		5	533353	05/26/20 15:14	IMZ	TAL BUF
Dissolved	Analysis	310.2		6	533200	05/22/20 19:31	SRW	TAL BUF
Dissolved	Analysis	350.1		1	533543	05/27/20 08:52	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:22	BEF	TAL BUF

Client Sample ID: WG-11109668-051920-DT-003
Lab Sample ID: 480-170182-3

Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 11:39	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533936	05/29/20 00:28	LMH	TAL BUF
Dissolved	Prep	3005A			534745	06/04/20 11:24	NSW	TAL BUF
Dissolved	Analysis	6010C		1	535114	06/05/20 15:52	AMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:35	LMH	TAL BUF

Lab Chronicle

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-003
Lab Sample ID: 480-170182-3
Date Collected: 05/19/20 08:25
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 23:10	LMH	TAL BUF
Dissolved	Analysis	300.0		5	533353	05/26/20 15:28	IMZ	TAL BUF
Dissolved	Analysis	310.2		6	533200	05/22/20 19:32	SRW	TAL BUF
Dissolved	Analysis	350.1		1	533543	05/27/20 08:53	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:28	BEF	TAL BUF

Client Sample ID: WG-11109668-051920-DT-004
Lab Sample ID: 480-170182-4
Date Collected: 05/19/20 09:00
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 11:43	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		5	533936	05/29/20 00:43	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		5	534339	06/01/20 15:40	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:39	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		5	533935	05/28/20 23:14	LMH	TAL BUF
Dissolved	Analysis	300.0		100	533353	05/26/20 15:42	IMZ	TAL BUF
Dissolved	Analysis	310.2		1	533200	05/22/20 20:26	SRW	TAL BUF
Dissolved	Analysis	350.1		1000	533543	05/27/20 10:27	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:30	BEF	TAL BUF

Client Sample ID: WG-11109668-051920-DT-005
Lab Sample ID: 480-170182-5
Date Collected: 05/19/20 09:15
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 11:48	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533936	05/29/20 00:51	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		5	533936	05/29/20 00:55	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:44	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 23:22	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		5	533935	05/28/20 23:26	LMH	TAL BUF

Lab Chronicle

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-005
Lab Sample ID: 480-170182-5
Date Collected: 05/19/20 09:15
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		50	533353	05/26/20 17:07	IMZ	TAL BUF
Dissolved	Analysis	310.2		1	533200	05/22/20 18:44	SRW	TAL BUF
Dissolved	Analysis	350.1		500	533543	05/27/20 10:07	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:31	BEF	TAL BUF

Client Sample ID: WG-11109668-051920-DT-006
Lab Sample ID: 480-170182-6
Date Collected: 05/19/20 09:30
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 12:03	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533936	05/29/20 00:59	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:48	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 23:30	LMH	TAL BUF
Dissolved	Analysis	300.0		5	533353	05/26/20 17:21	IMZ	TAL BUF
Dissolved	Analysis	310.2		6	533200	05/22/20 19:32	SRW	TAL BUF
Dissolved	Analysis	350.1		1	533543	05/27/20 08:55	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:32	BEF	TAL BUF

Client Sample ID: WG-11109668-051920-DT-007
Lab Sample ID: 480-170182-7
Date Collected: 05/19/20 09:45
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533690	05/27/20 12:07	LMH	TAL BUF
Dissolved	Prep	3005A			533075	05/26/20 09:54	ADM	TAL BUF
Dissolved	Analysis	6010C		1	533936	05/29/20 01:03	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:52	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 23:34	LMH	TAL BUF
Dissolved	Analysis	300.0		5	533353	05/26/20 17:35	IMZ	TAL BUF
Dissolved	Analysis	310.2		6	533200	05/22/20 19:32	SRW	TAL BUF
Dissolved	Analysis	350.1		1	533543	05/27/20 08:58	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:34	BEF	TAL BUF

Lab Chronicle

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Client Sample ID: WG-11109668-051920-DT-008
Lab Sample ID: 480-170182-8

Date Collected: 05/19/20 10:05
Matrix: Water
Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533691	05/27/20 13:56	LMH	TAL BUF
Total/NA	Prep	3005A			533068	05/26/20 09:55	ADM	TAL BUF
Total/NA	Analysis	6010C		1	533935	05/28/20 23:38	LMH	TAL BUF
Dissolved	Analysis	300.0		5	533353	05/26/20 17:59	IMZ	TAL BUF
Dissolved	Analysis	310.2		9	533200	05/22/20 19:33	SRW	TAL BUF
Dissolved	Analysis	350.1		2	533543	05/27/20 10:11	CLT	TAL BUF
Dissolved	Analysis	353.2		1	533278	05/24/20 16:35	BEF	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-02-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
310.2		Water	Alkalinity, Bicarbonate
310.2		Water	Alkalinity, Carbonate

Method Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
310.2	Alkalinity	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL BUF
3005A	Preparation, Total Metals	SW846	TAL BUF
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL BUF

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

Laboratory References:

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

Sample Summary

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

Job ID: 480-170182-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-170182-1	WG-11109668-051920-DT-001	Water	05/19/20 08:05	05/20/20 09:45	
480-170182-2	WG-11109668-051920-DT-002	Water	05/19/20 08:25	05/20/20 09:45	
480-170182-3	WG-11109668-051920-DT-003	Water	05/19/20 08:25	05/20/20 09:45	
480-170182-4	WG-11109668-051920-DT-004	Water	05/19/20 09:00	05/20/20 09:45	
480-170182-5	WG-11109668-051920-DT-005	Water	05/19/20 09:15	05/20/20 09:45	
480-170182-6	WG-11109668-051920-DT-006	Water	05/19/20 09:30	05/20/20 09:45	
480-170182-7	WG-11109668-051920-DT-007	Water	05/19/20 09:45	05/20/20 09:45	
480-170182-8	WG-11109668-051920-DT-008	Water	05/19/20 10:05	05/20/20 09:45	

Quantitation Limit Exceptions Summary

Client: N Tonawanda Water Works
Job ID: 480-170182-1
Project/Site: City of North Tonawanda - NCRS

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Analyte	Matrix	Prep Type	Unit	Client RL	Lab PQL
6010C	Arsenic	Water	Total/NA	mg/L	0.010	0.015
6010C	Cadmium	Water	Total/NA	mg/L	0.0010	0.002
6010C	Lead	Water	Total/NA	mg/L	0.0050	0.01
6010C	Selenium	Water	Total/NA	mg/L	0.015	0.025
6010C	Silver	Water	Total/NA	mg/L	0.0030	0.006

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

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: D. Tyron S. Gardner	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-145007-32290.2
Client Contact: Michael Gibbons	Phone: 716 570 4787	E-Mail: judy.stone@testamericainc.com		Page: Page 2 of 2
Company: N Tonawanda Water Works		Analysis Requested		Job #: 1110968-01

Address: 830 River Road	Due Date Requested:	
City: North Tonawanda	TAT Requested (days):	
State, Zip: NY, 14120		
Phone: 716-695-8560(Tel)	PO #: Purchase Order not required	
Email: mwg208@live.com	WO #:	
Project Name: City of North Tonawanda - NCRS	Project #: 48002901	
Site: NCR	SSOW#:	

480-170182 Chain of Custody

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)	6010C - TAL Metals	6010C - Dissolved TAL Metals	300.0_28D - Cl, SO4	353.2_Pres - Nitrate/Nitrite	310.2 - Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	D	N	S	N	X	
WG-1110968-051920-DT-001	5-19-20	0805	G	Water	Y	N	X	X	X	X	X	5	* Run MS/MSD on
WG-1110968-051920-DT-002	5-19-20	0825	G	Water	Y	N	X	X	X	X	X	5	Sample 001
WG-1110968-051920-DT-003	5-19-20	0825	G	Water	Y	N	X	X	X	X	X	5	use same bottles
WG-1110968-051920-DT-004	5-19-20	0900	G	Water	Y	N	X	X	X	X	X	5	as parent Sample
WG-1110968-051920-DT-005	5-19-20	0915	G	Water	Y	N	X	X	X	X	X	5	
WG-1110968-051920-DT-006	5-19-20	0930	G	Water	Y	N	X	X	X	X	X	5	
WG-1110968-051920-DT-007	5-19-20	0945	G	Water	Y	N	X	X	X	X	X	5	DT
WG-1110968-051920-DT-008	5-19-20	1005	G	Water	Y	N	X	X	X	X	X	5	4

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:	Company	Received by:	Date/Time:	Company
Dave Tyron	5.19.20 / 1025	GHD			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				5/20/20 9:45	TAB

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		3.7 #1

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: N Tonawanda Water Works

Job Number: 480-170182-1

Login Number: 170182
List Number: 1
Creator: Sabuda, Brendan D

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7 #1 ICE
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	Limited volume for QC
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	N Tonawanda Water Works
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

1110968-01

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: D. Tyran S. Gardner

DATE OF SAMPLE COLLECTION: 05/19/20
(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*
WG-1110968 05/19/20 DT-006	NCR 3S	0.3	0.3	0930	Clear, Colorless	See Chain		
WG-1110968 05/19/20 DT-007	NCR 4S	0.4	0.4	0945	Clear, Colorless	See Chain		
WG-1110968 05/19/20 DT-001	NCR 5S	0.6	1.0	0805	Clear, Colorless	See Chain	~~55214~~ (SIT)	
WG-1110968 05/19/20 DT-002	NCR 13S	0.4	0.7	0825	Clear, Colorless	See Chain		
	(MS/MSD) *							
WG-1110968 05/19/20 DT-003	(Duplicate) * NCR-13S							
WG-1110968 05/19/20 DT-005	~~(Rinse Blank) *~~ East-D	3.5	10.5	0915	Cloudy Dark Grey	See Chain		
WG-1110968 05/19/20 DT-004	East-C	4.2	12.6	0900	Clear Lt. Brown Tint	See Chain		

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: _____

FP-5A

CRA 5723 (17)

Dave Tyran

1110968 -01

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: D. Tyran S Gardner

DATE OF SAMPLE COLLECTION: 0 3 / 1 9 2 0
(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							
	NCR 4S							
	NCR 5S							
	NCR 13S							
	(MS/MSD) *							
	(Duplicate) *							
	~~(Rinse Blank) *~~							
WG-1110968 03192D-DT-008	East-A	0.4	0.4	1005	cloudy Dark Brown	See chain		

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: _____

FP-5A

CRA 5723 (17)

Dave J Tyran

NCR
Annual GW Sampling
11109668-01

DAILY LOG

5/18/20 Calibrate Horiba meter control # NF06156 with auto cal Solution Lot#19380154 Expires 10/21/2020

	Before	After
pH 4.00	4.11	3.98
Cond 4.49	4.52	4.48

Cloudy, rain on & off 52-56°F Winds ENE 12-15 mph
0821 DST on-site
0830 Setup on NCR-5S Rope cut bailer @ bottom of well. Fish out bailer purge well dry.
0905 Purge NCR-13S Dry.
0929 Purge NCR-3S Dry.
1000 Purge NCR-4S Dry
1024 Set up on East-D Well is partially obstructed about 8' BTOC can't get bailer past will grab Jerk tubing & foot valve from office. Purge well
1315 Set up on East-C purge well
1413 Dump water
1433 check out East-B Well obstructed
1440 Set up on East-A purge Dry
1500 Dump water
1505 Off-site

Dave Tyron

NCR Annual GW

1110966B-01

DAILY LOG

5/19/20 Cloudy 50-60°F Winds ~~SW~~ E 8-12 mph

0750 DJT, SG on-site Sample NCR-5S

0823 Sample NCR-13S + Duplicate

0900 Sample East-C

0915 Sample East-D

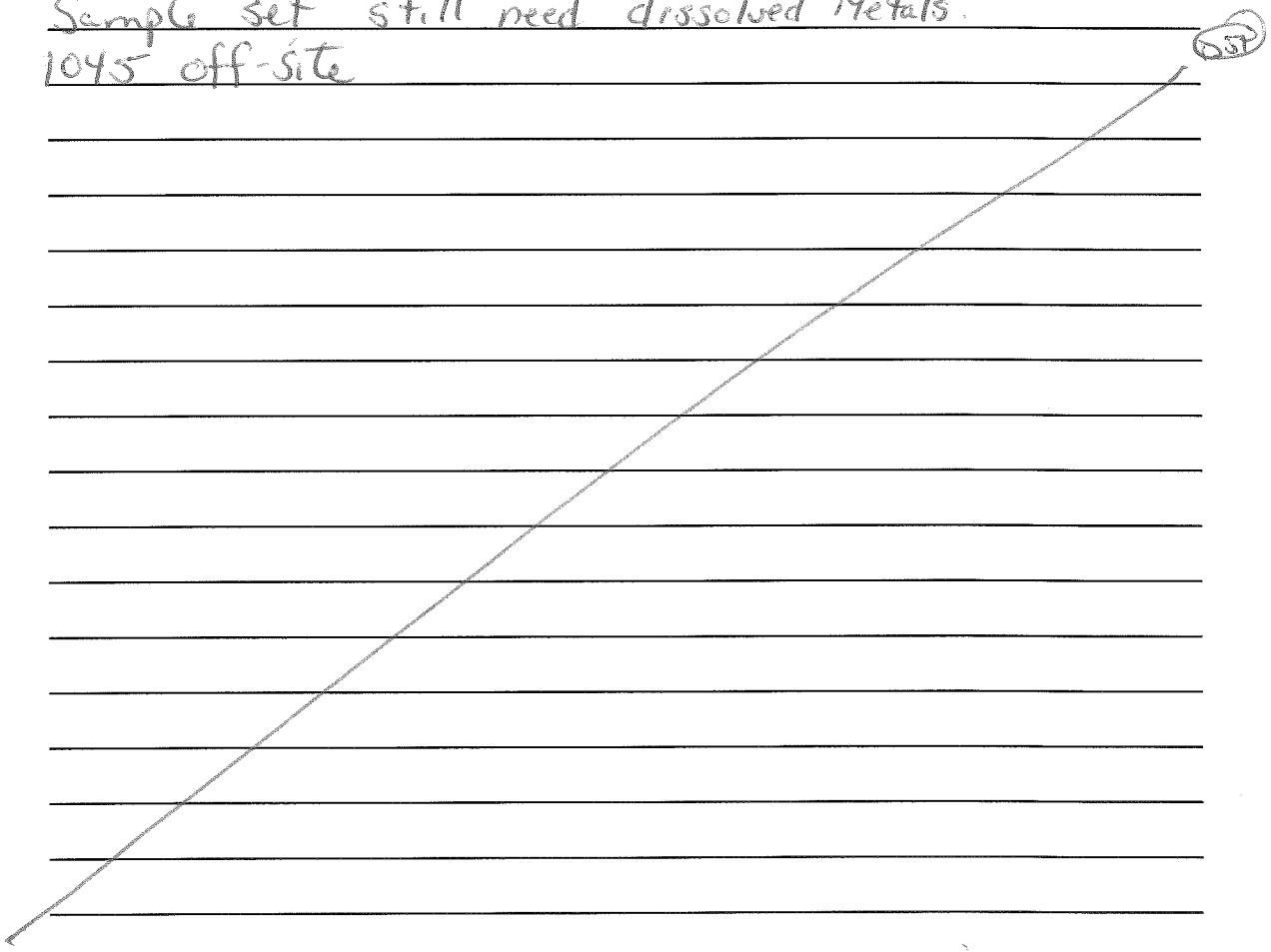
0926 Sample NCR-3S

0943 Sample NCR-4S

1003 Sample East-A Well went dry only partial Sample Set still need dissolved Metals.

1045 off-site

DJT



1110968 -01

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: D. Tyran S Gardner

DATE OF SAMPLE COLLECTION: 0 3 / 1 9 2 0
(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							
	NCR 4S							
	NCR 5S							
	NCR 13S							
	(MS/MSD) *							
	(Duplicate) *							
	~~(Rinse Blank) *~~							
WG-1110968 03192D-DT-008	East-A	0.4	0.4	1005	cloudy Dark Brown	See chain		

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: _____

FP-5A

CRA 5723 (17)

Dave J Tyran

1110968-01

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: D. Tyran S. Gardner

DATE OF SAMPLE COLLECTION: 05/19/20
(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*
WG-1110968 05/19/20 DT-006	NCR 3S	0.3	0.3	0930	Clear, Colorless	See Chain		
WG-1110968 05/19/20 DT-007	NCR 4S	0.4	0.4	0945	Clear, Colorless	See Chain		
WG-1110968 05/19/20 DT-001	NCR 5S	0.6	1.0	0805	Clear, Colorless	See Chain	~~55214~~ (SIT)	
WG-1110968 05/19/20 DT-002	NCR 13S	0.4	0.7	0825	Clear, Colorless	See Chain		
	(MS/MSD) *							
WG-1110968 05/19/20 DT-003	(Duplicate) * NCR-13S							
WG-1110968 05/19/20 DT-005	~~(Rinse Blank) *~~ East-D	3.5	10.5	0915	Cloudy Dark Grey	See Chain		
WG-1110968 05/19/20 DT-004	East-C	4.2	12.6	0900	Clear Lt. Brown Tint	See Chain		

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: _____

FP-5A

CRA 5723 (17)

Dave Tyran

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 05/18/20 (MM DD YY)

CREW MEMBERS: D. Tyran

PURGING METHOD: Bailer (dedicated)

Sounded Depth 7.98
Initial W/L 5.75

WELL NUMBER: NCR-135

ONE WELL VOLUME: 0.4 gallons

FIVE WELL VOLUMES: 2.0 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).

Well Dry @ 0.7 gallons

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.4					0.4
pH	6.55					6.55
TEMPERATURE	11.27					11.27
CONDUCTIVITY	1.81					1.81
TURBIDITY	28.7					28.7
COLOR	Clear					Clear
ODOR	None					None
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/18/20 — DATE

David J Tyran — PRINT NAME

David J Tyran — SIGNATURE

FP-4C 7.98 - 5.75 = 2.23 x .16 = 0.4

Procasing - needs painting otherwise good

Pad - Covered with Sod

No infilling

Lock - Y J-Plug - Y

David J Tyran

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 05/18/20 (MM DD YY)

CREW MEMBERS: D. Tyran

PURGING METHOD: Bailer (dedicated)

WELL NUMBER: NCR-55

ONE WELL VOLUME: 0.6 gallons

FIVE WELL VOLUMES: 3.0 gallons

Sounded Dpth 11.30
W/L 7.73

(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 @ 1.0 gallon

WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	0.6					0.6
pH	6.10					6.10
TEMPERATURE	12.31					12.31
CONDUCTIVITY	2.23					2.23
TURBIDITY	62.5					62.5
COLOR	Lt. Brown					Lt. Brown
ODOR	None					None
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — David J Tyran — David J Tyran

DATE — PRINT NAME — SIGNATURE

FP-4C 11.3 - 7.73 = 3.57 X .16 = 0.6

Procasing - needs painting otherwise good

Pad - good J-Plug - Y

Lock - Y No infilling

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 5 1 8 2 0 (MM DD YY)

CREW MEMBERS: D Tyran

PURGING METHOD: Dedicated Bailer

Sounded Depth 6.08
Initial w/L 3.90

WELL NUMBER: NCR-3S

ONE WELL VOLUME: 0.3 gallons

FIVE WELL VOLUMES: 1.5 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).

Well dry @ 0.3 gallons

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.3					0.3
pH	6.87					6.87
TEMPERATURE	10.60					10.60
CONDUCTIVITY	1.14					1.14
TURBIDITY	12.4					12.4
COLOR	Clear					Clear
ODOR	None					
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — DATE

David J Tyran — PRINT NAME

David J Tyran — SIGNATURE

FP-4C 6.08 - 3.9 = 2.18 x .16 = 0.3

Procasing - needs painting otherwise good

Pad - good

J-Plug - Y

Lock - Y

No infilling

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 05/18/20 (MM DD YY)

CREW MEMBERS: D. Tyran

PURGING METHOD: Dedicated Bailer

Sounded Depth 5.18
Intial W/L 2.60

WELL NUMBER: NCR-45

ONE WELL VOLUME: 0.4 gallons

FIVE WELL VOLUMES: 2.0 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).

well Dry @ 0.4 gallons

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.4					0.4
pH	7.04					7.04
TEMPERATURE	12.08					12.08
CONDUCTIVITY	1.04					1.04
TURBIDITY	5.59					5.59
COLOR	Lt. Brown					Lt. Brown
ODOR	None					None
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — DATE

David J Tyran — PRINT NAME

David J Tyran — SIGNATURE

FP-4C 5.18 - 2.6 = 2.58 x .16 = 0.4

Procasing - needs painting otherwise good

Pad - good J-plug - Y

Lock - Y No infilling

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 05/18/20 (MM DD YY)

CREW MEMBERS: D. Tyran

PURGING METHOD: ~~Ded. cated Bailer~~ Waterra foot valve DIT

WELL NUMBER: East D

ONE WELL VOLUME: 3.5 gallons

FIVE WELL VOLUMES: 17.5 gallons

Sounded Depth 37.85
Initial w/l 16.24

(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 VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	3.5	7.0	10.5			
pH	6.97	6.94	6.85			
TEMPERATURE	14.13	14.56	14.25			
CONDUCTIVITY	15.5	15.1	13.9			44.5/14.8
TURBIDITY	>1000	>1000	>1000			>1000
COLOR	Black	Same	Same			
ODOR	Petroleum like odor	Same	Same			
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — David J Tyran — David J Tyran

DATE — PRINT NAME — SIGNATURE

FP-4C 37.85 - 16.24 = 21.61 x .16 = 3.5

Procasing - needs painting otherwise good

Pad - covered by sod

Lock - Y J- Plug - Y

No infilling

* Approx 8' BTOC it looks like the riser has shifted over partially blocking the well. Purge by Waterra

Added 2" J-Plug

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 0 5 / 1 8 / 2 0 (MM DD YY)

CREW MEMBERS: D Tyran

PURGING METHOD: Dedicated Bailer

WELL NUMBER: East-C

Initial W/L: 20.95
Sounded Depth 47.4

ONE WELL VOLUME: 4.2 gallons

FIVE WELL VOLUMES: 21.0 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)	4.2	8.4	12.6			
pH	6.16	6.13	6.14			
TEMPERATURE	12.73	12.76	12.51			
CONDUCTIVITY	29.2	28.7	28.9			
TURBIDITY	930	686	357			
COLOR	Dark Brown	same	same			
ODOR	Leachate like odor	same	same			
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — David J Tyran — David J Tyran

DATE — PRINT NAME — SIGNATURE

FP-4C 47.4 − 20.95 = 26.45 × .16 = 4.2

Procasing - needs painting otherwise good

Pad - covered by Sod

Lock - Y

J-Plug - Y — No infilling

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 05/18/20 (MM DD YY)

CREW MEMBERS: D. Tyran

PURGING METHOD: NA

WELL NUMBER: East - B

ONE WELL VOLUME: NA gallons

FIVE WELL VOLUMES: NA 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)						
pH						
TEMPERATURE						
CONDUCTIVITY						
TURBIDITY						
COLOR						
ODOR						
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — David J Tyran — David J Tyran

DATE | PRINT NAME | SIGNATURE

FP-4C Well obstructed @ 14.3' BTOC

Procasing - needs painting otherwise good

Pad - good J- Plug - N

Lock - Y

Added 2" J-Plug

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuge Site

DATE: 05/18/20 (MM DD YY)

CREW MEMBERS: D. Tyran

PURGING METHOD: Dedicated Bailer

WELL NUMBER: East-A

Sounded Depth 29.35
Initial w/L 27.11

ONE WELL VOLUME: 0.4 gallons

FIVE WELL VOLUMES: 2.0 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).

Well Dry @ 0.4 gallons

	1	2	3	4	5	TOT/AVG
WELL VOLUME						
VOLUME PURGED (total)	0.4					
pH	6.60					
TEMPERATURE	12.17					
CONDUCTIVITY	2.18					
TURBIDITY	114					
COLOR	Dark Gray					
ODOR	None					
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5.18.20 — David J Tyran — David J Tyran

DATE — PRINT NAME — SIGNATURE

FP-4C 29.35 − 27.11 = 2.24 x .16 = 0.4

Procasing - needs painting otherwise good
Pad - covered by Sod
Lock - Y J-Plug - Y infilling ?

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: D. Tyron S. Gartner	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-145007-32290.2
Client Contact: Michael Gibbons	Phone: 716 570 4787	E-Mail: judy.stone@testamericainc.com		Page: Page 2 of 2
Company: N Tonawanda Water Works				Job #: 11109668 01
Address: 830 River Road	Due Date 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)
City: North Tonawanda	TAT Requested (days):			
State, Zip: NY, 14120				
Phone: 716-695-8560(Tel)	PO #: Purchase Order not required			
Email: mwg208@live.com	WO #:			
Project Name: City of North Tonawanda - NCRS	Project #: 48002901			Other:
Site: NCR	SSOW#:			

Analysis Requested

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)	6010C - TAL Metals D	6010C - Dissolved TAL Metals D	300.0_28D - Cl, SO4 N	353.2_Pres - Nitrate/Nitrite S	310.2 - Alkalinity N	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
WG-11109668-051920-DT-001	5-19-20	0805	G	Water	Y	N	X	X	X	X	X	5	** Run MS/MSD on
WG-11109668-051920-DT-002	5-19-20	0825	G	Water	Y	N	X	X	X	X	X	5	Sample 001
WG-11109668-051920-DT-003	5-19-20	0825	G	Water	Y	N	X	X	X	X	X	5	use same bottles
WG-11109668-051920-DT-004	5-19-20	0700	G	Water	Y	N	X	X	X	X	X	5	as parent Sample
WG-11109668-051920-DT-005	5-19-20	0715	G	Water	Y	N	X	X	X	X	X	5	
WG-11109668-051920-DT-006	5-19-20	0730	G	Water	Y	N	X	X	X	X	X	5	
WG-11109668-051920-DT-007	5-19-20	0945	G	Water	Y	N	X	X	X	X	X	5	
WG-11109668-051920-DT-008	5-19-20	1005	G	Water	Y	N	X	X	X	X	X	5 → 4	

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: D. Tyron	Date/Time: 5-19-20 / 1025	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: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

APPENDIX C

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 D
DATA VALIDATION REPORT

DATA USABILITY SUMMARY REPORT
FOR
2019 FOURTH QUARTERLY SAMPLING
NIAGARA COUNTY REFUSE SITE

Prepared By:

PARSONS

301 Plainfield Road, Suite 350
Syracuse, New York 13212

JULY 2020

TABLE OF CONTENTS

LIST OF ATTACHMENTS

SECTION 1 DATA USABILITY SUMMARY

Groundwater samples were collected from the Niagara County Refuse site in North Tonawanda, New York on May 19, 2020. 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 inorganic data review.

The analytical laboratory for this project was Eurofins – Test America Laboratories (TAL) in Amherst, New York. This laboratory is certified to conduct project analyses through New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) and 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 20 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 total and dissolved metals, dissolved chloride, dissolved sulfate, dissolved carbonate and bicarbonate alkalinity, dissolved nitrate, and dissolved ammonia. Summaries of issues concerning this laboratory analysis are presented in Subsections 1.3.1 and 1.3.2. 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 Metals Analysis

Groundwater samples collected from the site were analyzed for total and dissolved metals using the USEPA SW-846 6010C analytical method. Certain metals results were qualified as estimated based upon instrument calibrations and field duplicate precision. All of the metals data were considered usable and 100% complete for the groundwater data presented by TAL. PARCCS requirements were met.

1.3.2 General Chemistry Analysis

Groundwater samples collected from the site were analyzed for dissolved chloride and sulfate using the USEPA 300.0 analytical method; dissolved carbonate and bicarbonate alkalinity using the USEPA 310.2 analytical method; dissolved nitrate using the USEPA 353.2 analytical method; and dissolved ammonia using the USEPA 350.1 analytical method. Certain metals results were qualified as estimated based upon matrix spike recoveries. All of the general chemistry 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. 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 group (SDG) 480-170182-1. 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 inorganic data review and analytical methodologies. This data validation and usability report is presented by analysis type.

2.1.1 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 blank, and laboratory preparation blank contamination
- Inductively coupled plasma (ICP) interference check sample (ICS)
- Matrix spike/matrix spike duplicate (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, continuing calibration verifications, and field duplicate precision as discussed below.

Blank Contamination

The laboratory preparation blanks associated with the project samples contained total manganese and total potassium below the reporting limits at concentrations of 0.00104 and 0.180 mg/L, respectively. Validation qualification was not required for the affected samples.

Continuing Calibration Verifications

All continuing calibration verifications were analyzed at the appropriate frequency with recoveries within QC limits. All low reference standard verifications were analyzed at the appropriate frequency with recoveries within the 70-130%R QC limit with the exception of the high verification recoveries for dissolved copper (186%R) associated with sample DT-003 and total potassium (138%R) associated with sample DT-004. 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 total iron (130%RPD), total manganese (49%RPD), total potassium (53%RPD), total sodium (68%RPD), dissolved manganese (63%RPD), dissolved potassium (39%RPD), and dissolved sodium (34%RPD) associated with sample DT-002 and its field duplicate sample DT-003. Therefore, results for these analytes were considered estimated and qualified "J" for the affected parent sample and field duplicate.

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.

2.1.2 General Chemistry

The following items were reviewed for compliancy in the general chemistry analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration blank, and laboratory preparation blank contamination
- MS/MSD recoveries
- Laboratory duplicate precision
- Laboratory control sample (LCS) recoveries
- 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 MS/MSD recoveries as discussed below.

MS/MSD Recoveries

All MS/MSD recoveries were considered acceptable and within QC limits with the exception of the low MS recovery for ammonia (83%R; QC limit 90-110%R) associated with sample DT-007. Therefore, the nondetected ammonia result was considered estimated and qualified "UJ" for the affected sample.

Usability

All general chemistry 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 general chemistry data presented by TAL were 100% complete with all data considered valid and usable. The validated general chemistry laboratory data are tabulated and presented in Attachment A.

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 June 2020		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR-3S WG-11109668-051920-DT-006 480-170182-6 TALBUFF 4801701821 WATER 5/19/2020 9:30 7/1/2020	NCR-4S WG-11109668-051920-DT-007 480-170182-7 TALBUFF 4801701821 WATER 5/19/2020 9:45 7/1/2020	NCR-5S WG-11109668-051920-DT-001 480-170182-1 TALBUFF 4801701821 WATER 5/19/2020 8:05 7/1/2020	NCR-13S WG-11109668-051920-DT-002 480-170182-2 TALBUFF 4801701821 WATER 5/19/2020 8:25 7/1/2020
CAS NO.	COMPOUND	UNITS:				
	METALS					
7429-90-5	ALUMINUM	mg/l	0.2 U	1.1	0.2 U	0.2 U
7440-36-0	ANTIMONY	mg/l	0.02 U	0.02 U	0.02 U	0.02 U
7440-38-2	ARSENIC	mg/l	0.01 U	0.01 U	0.01 U	0.01 U
7440-39-3	BARIUM	mg/l	0.057	0.059	0.16	0.048
7440-41-7	BERYLLIUM	mg/l	0.002 U	0.002 U	0.002 U	0.002 U
7440-43-9	CADMIUM	mg/l	0.001 U	0.001 U	0.001 U	0.001 U
7440-70-2	CALCIUM	mg/l	126	133	93.7	134
7440-47-3	CHROMIUM, TOTAL	mg/l	0.0014 J	0.0012 J	0.004 U	0.004 U
7440-48-4	COBALT	mg/l	0.004 U	0.004 U	0.00088 J	0.004 U
7440-50-8	COPPER	mg/l	0.0034 J	0.0027 J	0.01 U	0.0056 J
7439-89-6	IRON	mg/l	0.18	3.3	0.4	0.07 J
7439-92-1	LEAD	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
7439-95-4	MAGNESIUM	mg/l	65.3	46.2	45.5	55.5
7439-96-5	MANGANESE	mg/l	0.16	0.17	0.13	0.029 J
7440-02-0	NICKEL	mg/l	0.0049 J	0.0041 J	0.005 J	0.0045 J
7440-09-7	POTASSIUM	mg/l	3	6.8	0.31 J	2.4 J
7782-49-2	SELENIUM	mg/l	0.015 U	0.015 U	0.015 U	0.015 U
7440-22-4	SILVER	mg/l	0.003 U	0.003 U	0.003 U	0.003 U
7440-23-5	SODIUM	mg/l	6.3	20	5.1	7.9 J
7440-28-0	THALLIUM	mg/l	0.02 U	0.02 U	0.02 U	0.02 U
7440-62-2	VANADIUM	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
7440-66-6	ZINC	mg/l	0.015	0.067	0.0048 J	0.01 U
	DISSOLVED METALS					
7429-90-5	ALUMINUM	mg/l	0.2 U	0.87	0.2 U	0.2 U
7440-36-0	ANTIMONY	mg/l	0.02 U	0.02 U	0.02 U	0.02 U
7440-38-2	ARSENIC	mg/l	0.015 U	0.015 U	0.015 U	0.015 U
7440-39-3	BARIUM	mg/l	0.054	0.058	0.16	0.049
7440-41-7	BERYLLIUM	mg/l	0.002 U	0.002 U	0.002 U	0.002 U
7440-43-9	CADMIUM	mg/l	0.002 U	0.002 U	0.002 U	0.002 U
7440-70-2	CALCIUM	mg/l	130	132	96.9	137
7440-47-3	CHROMIUM, TOTAL	mg/l	0.004 U	0.0013 J	0.004 U	0.004 U
7440-48-4	COBALT	mg/l	0.004 U	0.004 U	0.00074 J	0.004 U
7440-50-8	COPPER	mg/l	0.0027 J	0.0026 J	0.01 U	0.0017 J
7439-89-6	IRON	mg/l	0.11	3.2	0.13	0.1
7439-92-1	LEAD	mg/l	0.01 U	0.01 U	0.01 U	0.01 U
7439-95-4	MAGNESIUM	mg/l	65.7	45.8	47.4	60.1
7439-96-5	MANGANESE	mg/l	0.14	0.16	0.13	0.014 J
7440-02-0	NICKEL	mg/l	0.0048 J	0.0036 J	0.0053 J	0.0023 J
7440-09-7	POTASSIUM	mg/l	2.1	6.5	0.19 J	0.96 J
7782-49-2	SELENIUM	mg/l	0.025 U	0.025 U	0.025 U	0.025 U
7440-22-4	SILVER	mg/l	0.006 U	0.006 U	0.006 U	0.006 U
7440-23-5	SODIUM	mg/l	6.3	19.6	5.4	9.9 J
7440-28-0	THALLIUM	mg/l	0.02 U	0.02 U	0.02 U	0.02 U
7440-62-2	VANADIUM	mg/l	0.005 U	0.005 U	0.005 U	0.005 U
7440-66-6	ZINC	mg/l	0.014	0.055	0.0021 J	0.01 U
	OTHER					
ALKB	ALKALINITY, BICARBONATE (AS CACO3)	mg/l	547	528	447	553
ALKC	ALKALINITY, CARBONATE (AS CACO3)	mg/l	60 U	60 U	50 U	60 U
16887-00-6	CHLORIDE (AS CL)	mg/l	2.5 U	2.5 U	1.1	2.8
7664-41-7	NITROGEN, AMMONIA (AS N)	mg/l	0.02 U	0.02 UJ	0.02 U	0.02 U
NO3NO2N	NITROGEN, NITRATE-NITRITE	mg/l	0.089	0.058	0.055	0.092
14808-79-8	SULFATE (AS SO4)	mg/l	87.7	66	3.1 J	139

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event June 2020			Duplicate of NCR-13S			
		Location ID:	NCR-13S	EAST-A	EAST-C	EAST-D
		Sample ID:	WG-11109668-051920-DT-003	WG-11109668-051920-DT-008	WG-11109668-051920-DT-004	WG-11109668-051920-DT-005
		Lab Sample Id:	480-170182-3	480-170182-8	480-170182-4	480-170182-5
		Source:	TALBUFF	TALBUFF	TALBUFF	TALBUFF
		SDG:	4801701821	4801701821	4801701821	4801701821
		Matrix:	WATER	WATER	WATER	WATER
		Sampled:	5/19/2020 8:25	5/19/2020 10:05	5/19/2020 9:00	5/19/2020 9:15
		Validated:	7/1/2020	7/1/2020	7/1/2020	7/1/2020
CAS NO.	COMPOUND	UNITS:				
	METALS					
7429-90-5	ALUMINUM	mg/l	0.2 U	7.8	7.2	1.2
7440-36-0	ANTIMONY	mg/l	0.02 U	0.02 U	0.1 U	0.02 U
7440-38-2	ARSENIC	mg/l	0.01 U	0.014	0.079	0.02
7440-39-3	BARIUM	mg/l	0.042	0.62	0.19	0.65
7440-41-7	BERYLLIUM	mg/l	0.002 U	0.00045 J	0.0003 J	0.002 U
7440-43-9	CADMIUM	mg/l	0.001 U	0.0055	0.005 U	0.001 U
7440-70-2	CALCIUM	mg/l	143	226	2780	142
7440-47-3	CHROMIUM, TOTAL	mg/l	0.004 U	0.037	0.18	0.075
7440-48-4	COBALT	mg/l	0.004 U	0.013	0.18	0.022
7440-50-8	COPPER	mg/l	0.0035 J	0.11	0.05 U	0.016
7439-89-6	IRON	mg/l	0.33 J	164	1540	55.9
7439-92-1	LEAD	mg/l	0.005 U	0.46	0.79	0.24
7439-95-4	MAGNESIUM	mg/l	69.8	126	1400	420
7439-96-5	MANGANESE	mg/l	0.048 J	0.99	17.8	0.11
7440-02-0	NICKEL	mg/l	0.0033 J	0.05	1	0.21
7440-09-7	POTASSIUM	mg/l	1.4 J	15	1010 J+	438
7782-49-2	SELENIUM	mg/l	0.015 U	0.015 U	0.022	0.015 U
7440-22-4	SILVER	mg/l	0.003 U	0.003 U	0.015 U	0.003 U
7440-23-5	SODIUM	mg/l	16.1 J	66.1	2260	1450
7440-28-0	THALLIUM	mg/l	0.02 U	0.02 U	0.1 U	0.02 U
7440-62-2	VANADIUM	mg/l	0.005 U	0.019	0.035	0.0095
7440-66-6	ZINC	mg/l	0.0023 J	0.24	31.3	0.37
	DISSOLVED METALS					
7429-90-5	ALUMINUM	mg/l	0.2 U		8.8	1
7440-36-0	ANTIMONY	mg/l	0.02 U		0.1 U	0.02 U
7440-38-2	ARSENIC	mg/l	0.015 U		0.074	0.022
7440-39-3	BARIUM	mg/l	0.041		0.18	0.65
7440-41-7	BERYLLIUM	mg/l	0.002 U		0.00035 J	0.002 U
7440-43-9	CADMIUM	mg/l	0.002 U		0.0037 J	0.002 U
7440-70-2	CALCIUM	mg/l	138		2780	140
7440-47-3	CHROMIUM, TOTAL	mg/l	0.004 U		0.19	0.073
7440-48-4	COBALT	mg/l	0.004 U		0.18	0.021
7440-50-8	COPPER	mg/l	0.1 J+		0.05 U	0.013
7439-89-6	IRON	mg/l	0.13		1610	51
7439-92-1	LEAD	mg/l	0.0078 J		1.2	0.21
7439-95-4	MAGNESIUM	mg/l	65.9		1390	419
7439-96-5	MANGANESE	mg/l	0.027 J		19.8	0.11
7440-02-0	NICKEL	mg/l	0.0024 J		1.1	0.21
7440-09-7	POTASSIUM	mg/l	0.65 J		1060	435
7782-49-2	SELENIUM	mg/l	0.025 U		0.014 J	0.025 U
7440-22-4	SILVER	mg/l	0.006 U		0.03 U	0.006 U
7440-23-5	SODIUM	mg/l	14 J		2320	1430
7440-28-0	THALLIUM	mg/l	0.02 U		0.1 U	0.02 U
7440-62-2	VANADIUM	mg/l	0.005 U		0.035	0.0083
7440-66-6	ZINC	mg/l	0.059		31.3	0.29
	OTHER					
ALKB	ALKALINITY, BICARBONATE (AS CACO3)	mg/l	569	672	10 U	28.2
ALKC	ALKALINITY, CARBONATE (AS CACO3)	mg/l	60 U	90 U	10 U	10 U
16887-00-6	CHLORIDE (AS CL)	mg/l	3.6	213	2590	1160
7664-41-7	NITROGEN, AMMONIA (AS N)	mg/l	0.02 U	3.7	1570	655
NO3NO2N	NITROGEN, NITRATE-NITRITE	mg/l	0.099	0.074	1.1	0.22
14808-79-8	SULFATE (AS SO4)	mg/l	185	9.2 J	1760	100 U

APPENDIX E
MONTHLY INSPECTION LOGS

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 05/22/19 (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: 05/22/19 (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: 05/22/19 (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: 06/19/19 (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: 06/19/19 (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: 06/19/19 (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: 07/25/19 (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: 07/25/19 (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: 07/25/19 (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: 08/21/19 (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: 08/21/19 (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: 08/21/19 (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: 09/11/19 (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: 09/11/19 (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: 09/11/19 (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: 10/21/19 (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: 10/21/19 (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: 10/21/19 (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: 11/21/19
(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: 11/21/19 (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: 11/21/19 (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: 12/17/19 (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: 12/17/19 (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: 12/17/19 (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: 01/21/1/20
(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: 01/21/20 (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: 01/21/20 (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: 02/26/20 (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: 02/26/20 (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: 02/26/20 (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: 03/17/20 (MM DD YY)

INSPECTOR(S): Britt Gebhardt

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: 03/17/20 (MM DD YY)

INSPECTOR(S): Britt Gebhardt

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: 03/17/20 (MM DD YY)

INSPECTOR(S): Britt Gebhardt

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: 04/22/20
(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: 04/22/20 (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: 04/22/20 (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: 5/27/2020

INSPECTOR(S): Britt Gebhardt

Item	*Inspect For*	*Action Required*	*Comments*
1 Perimeter collection System/Off-Site Forcemain			
 Manholes	- cover on securely		
	- condition of cover		
	- condition of inside of manhole		
	- flow conditions		
 Wet Wells	- cover on securely		
	- condition of cover		
	- condition of inside of wet well		
2 Landfill Cap			
 Vegetated Soil Cover	- erosion		
	- bare areas		
	- washouts		
	- leachate seeps		
	- length of vegetation		
	- dead/dying vegetation		

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/27/2020

INSPECTOR(S): Britt Gebhardt

Item	*Inspect For*	*Action Required*	*Comments*
2 Landfill Cap (continued)			
☒ Access Roads	- bare areas, dead/dying veg.		
	- erosion		
	- potholes or puddles		
	- obstruction		
3 Wetlands (Area "F")	- dead/dying vegetation		
	- change in water budget		
	- general conditions of wetlands		
4 Other Site Systems			
☒ Perimeter Fence	- integrity of fence		
	- integrity of gates		
	- integrity of locks		
	- placement and condition of signs		

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/27/2020

INSPECTOR(S): Britt Gebhardt

Item	*Inspect For*	*Action Required*	*Comments*
4 Other Site Systems (continued)			
☒ Drainage Ditches/ Swale Outlets	- sediment buildup		
	- erosion		
	- condition of erosion protection		
	- flow obstructions		
	- dead/dying vegetation		
	- cable concrete/gabion mats and riprap		
☒ Culverts	- sediment build-up		
	- erosion		
	- condition of erosion protection		
	- flow obstructions		
☒ Gas Vents	- intact/damage		
☒ Wells	- locks secure		

FORM 1

APPENDIX F
MAINTENANCE RECORD LOGS

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Tony Manns

1. Date 6/19/2019
   Time 0750
   Scheduled/Unscheduled: Unscheduled
   Type of Maintenance Performed: Repair float switches in 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 broken float switches and replaced with new..

Description of Material Removed: 3 float switches.

Problems/Comments: WWA was back up and running by 1400.

DATE 06/19/2019 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

1. Date 6/21/2019
   Time 1025
   Scheduled/Unscheduled: Unscheduled
   Type of Maintenance Performed: Lock on the building wouldn't unlock
2. Company Performing Maintenance Niagara Lock & Key
   Name: Ron
   Address: 2035 Military Rd.
   Niagara Falls, NY 14304
   Contact Name: (716) 818-6241
3. Methods Used: Repair lock mechanism.

Description of Material Removed: N/A

Problems/Comments: Door wouldn't unlock.

DATE 06/21/2019 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

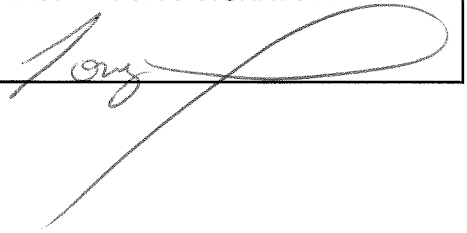
1. Date 9/5/2019
   Time 0915
   Scheduled/Unscheduled: Unscheduled
   Type of Maintenance Performed: Repair leaky discharge hose in WWC.
2. Company Performing Maintenance GHD
   Name: Tony Manns
   Address: 2055 Niagara Falls blvd
   Niagara Falls, NY 14304
   Contact Name: (716) 818-6241
3. Methods Used: Cut 1" off and replace male cam lock. Hose is very brittle. In the process of getting quotes to replace hoses.

Description of Material Removed: 1" of discharge hose, and 1 male cam lock.

Problems/Comments: WWC was back up and running by 1330.

DATE 09/05/2019 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

1. Date 9/10/2019

   Time 0800

   Scheduled/Unscheduled: Scheduled

   Type of Maintenance Performed: Preventative maintenance on WWA, and WWC

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: Cleaned pumps, tightened hoses, etc.

Description of Material Removed: N/A

Problems/Comments: N/A

DATE 09/10/2019 INSPECTOR Tony Manns INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Tony Manns

1. Date 9/11/2019

   Time 1900

   Scheduled/Unscheduled: Unscheduled

   Type of Maintenance Performed: Site check due to power failure

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:

Description of Material Removed:

Problems/Comments: There was a power failure for the surrounding area and I wanted to check to make sure everything came back on line. I drove over at 1900 hours and found everything was normal.

DATE 09/11/2019 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

1. Date 10/08/19

   Time 0800

   Scheduled/Unscheduled: Scheduled

   Type of Maintenance Performed: Replaced discharge hose on WWB, WWC, and WWD

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 existing discharge hose and replaced with new hose.

Description of Material Removed: Old discharge hose.

Problems/Comments: Existing hose was old and crumbling.

DATE 10/08/2019 INSPECTOR Tony Manns INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Tony Manns

1. Date 11/06/19

   Time 1045

   Scheduled/Unscheduled: Unscheduled

   Type of Maintenance Performed: Removed down tree and limbs from the main road.

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: I removed everything that was blocking the road. I just placed it in the woods.

Description of Material Removed: N/A

Problems/Comments: Wind storm must have knocked the tree down.

DATE 11/06/2019 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

1. Date 01/15/20

   Time 1000

   Scheduled/Unscheduled: Unscheduled

   Type of Maintenance Performed: Pulled totalizer and cleaned unit

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 unit and brought it back to the office for a good cleaning.

Description of Material Removed: N/A

Problems/Comments: Totalizer wasn't reading properly. Unit was all gummed up inside the chamber. Stayed on site for a half hour, and unit was back to reading properly.

DATE 01/15/2020 INSPECTOR Tony Manns INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Tony Manns

1. Date 04/17/20

   Time 0800

   Scheduled/Unscheduled: Unscheduled

   Type of Maintenance Performed: Wet Well B is not functionly.

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 submersible pump, and replaced it with new unit.

Description of Material Removed: Broken submersible pump.

Problems/Comments: WWB is back to functionong normally.

4/17/2020	Tony Manns	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Tony Manns

1. Date 05/05/20

   Time 1005

   Scheduled/Unscheduled: Scheduled

   Type of Maintenance Performed: PM on Wet Well C

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 submersible pump, and performed PM.

Description of Material Removed: N/A

Problems/Comments: WWC is functionong normally.

5/5/2020	Tony Manns	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Tony Manns

1. Date 05/06/20

Time 0900

Scheduled/Unscheduled: Scheduled

Type of Maintenance Performed: PM on Wet Well 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 submersible pump, and performed PM.

Description of Material Removed: N/A

Problems/Comments: WWD is functionong normally.

05/06/20	Tony Manns	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

APPENDIX G
WATER LEVEL RECORDS

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 05/08/19 (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"	1100	598.93	27.25	571.68
EAST "B"	1109	596.23	Dry	596.23
EAST "C"	1043	598.69	21.91	576.78
EAST "D"	1039	593.20	16.39	576.81
NCR-3S	1033	579.60	4.44	575.16
NCR-4S	1049	577.88	3.18	574.70
NCR-5S	1120	579.34	6.76	572.58
NCR-13S	1024	577.15	5.33	571.82

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1016		3' 1"
WW B	1055		3' 3"
WW C	1035		2' 8"
WW D	1028		2' 11"

Total System Flow	Time of Measurement
016114	1013

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 06/19/19 (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"	1322	598.93	27.14	571.79
EAST "B"	1316	596.23	Dry	596.23
EAST "C"	1337	598.69	21.36	577.33
EAST "D"	1331	593.20	16.23	576.97
NCR-3S	1327	579.60	4.88	574.72
NCR-4S	1310	577.88	3.89	573.99
NCR-5S	1358	579.34	7.98	571.36
NCR-13S	1300	577.15	7.20	569.95

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1250		2' 1"
WW B	1344		3' 2"
WW C	1347		3' 2"
WW D	1306		3' 0"

Total System Flow	Time of Measurement
016703	1254

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 07/10/19 (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"	1006	598.93	27.09	571.84
EAST "B"	0951	596.23	Dry	596.23
EAST "C"	0937	598.69	21.64	577.05
EAST "D"	0934	593.20	16.38	576.82
NCR-3S	0930	579.60	6.33	573.27
NCR-4S	0942	577.88	4.30	573.58
NCR-5S	0855	579.34	10.12	569.22
NCR-13S	0920	577.15	7.69	569.46

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0917		2' 1"
WW B	0946		2' 6"
WW C	0931		2' 4"
WW D	0926		2' 6"

Total System Flow	Time of Measurement
016770	0916

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 08/21/19 (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"	1143	598.93	27.04	571.89
EAST "B"	1146	596.23	Dry	596.23
EAST "C"	1130	598.69	21.44	577.25
EAST "D"	1126	593.20	16.20	577.00
NCR-3S	1120	579.60	6.39	573.21
NCR-4S	1134	577.88	4.84	573.04
NCR-5S	1050	579.34	Dry	579.34
NCR-13S	1104	577.15	7.94	569.21

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1100		2' 10"
WW B	1136		2' 2"
WW C	1122		2' 6"
WW D	1109		3' 0"

Total System Flow	Time of Measurement
16808	1059

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 09/23/19 (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"	1019	598.93	27.02	571.91
EAST "B"	1010	596.23	Dry	596.23
EAST "C"	0959	598.69	21.36	577.33
EAST "D"	0955	593.20	15.70	577.50
NCR-3S	0947	579.60	Dry	579.60
NCR-4S	1006	577.88	Dry	578.88
NCR-5S	0929	579.34	Dry	579.34
NCR-13S	0938	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0932		2' 6"
WW B	1008		3' 2"
WW C	0951		3' 0"
WW D	0944		3' 2"

Total System Flow	Time of Measurement
16828	0933

x 1000 Gallons

Water Level Meter: NF08874

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 10/21/19 (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"	1124	598.93	26.98	571.95
EAST "B"	1120	596.23	Dry	596.23
EAST "C"	1103	598.69	21.60	577.09
EAST "D"	1058	593.20	16.11	577.09
NCR-3S	1050	579.60	Dry	579.60
NCR-4S	1108	577.88	4.41	573.47
NCR-5S	1042	579.34	Dry	579.34
NCR-13S	1035	577.15	Dry	577.15

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1040		2' 6"
WW B	1111		3' 2"
WW C	1053		2' 10"
WW D	1047		2' 5"

Total System Flow	Time of Measurement
16867	1040

x 1000 Gallons

Water Level Meter: NF08874

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 11/21/19 (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"	1101	598.93	26.88	572.05
EAST "B"	1107	596.23	Dry	596.23
EAST "C"	0954	598.69	21.66	577.03
EAST "D"	0950	593.20	16.11	577.09
NCR-3S	0940	579.60	4.00	575.60
NCR-4S	1000	577.88	3.20	574.68
NCR-5S	0937	579.34	10.83	568.51
NCR-13S	0927	577.15	5.41	571.74

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0922		3' 1"
WW B	1005		3' 2"
WW C	0946		2' 2"
WW D	0931		3' 1"

Total System Flow	Time of Measurement
17332	0921

x 1000 Gallons

Water Level Meter: NF08874

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 12/17/19 (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"	0919	598.93	27.01	571.92
EAST "B"	0912	596.23	Dry	596.23
EAST "C"	0900	598.69	21.44	577.25
EAST "D"	0857	593.20	16.05	577.15
NCR-3S	0846	579.60	4.17	575.43
NCR-4S	0904	577.88	3.19	574.69
NCR-5S	0841	579.34	6.26	573.08
NCR-13S	0830	577.15	4.53	572.62

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0827		3' 0"
WW B	0907		3' 4"
WW C	0854		2' 10"
WW D	0834		3' 6"

Total System Flow	Time of Measurement
18182	0825

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: **1/21/20** (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"	1513	598.93	26.96	571.97
EAST "B"	1509	596.23	Dry	596.23
EAST "C"	1450	598.69	21.52	577.17
EAST "D"	1444	593.20	16.07	577.13
NCR-3S	1434	579.60	4.22	575.38
NCR-4S	1456	577.88	3.17	574.71
NCR-5S	1429	579.34	7.11	572.23
NCR-13S	1415	577.15	4.96	572.19

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1411		3' 1"
WW B	1502		2' 10"
WW C	1438		3' 3"
WW D	1421		3' 7"

Total System Flow	Time of Measurement
18727	1410

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 02/19/20 (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"	0918	598.93	27.21	571.72
EAST "B"	0915	596.23	Dry	596.23
EAST "C"	0904	598.69	21.89	576.80
EAST "D"	0900	593.20	16.22	576.98
NCR-3S	0854	579.60	4.03	575.57
NCR-4S	0908	577.80	3.10	574.70
NCR-5S	0828	579.34	6.00	573.34
NCR-13S	0843	577.15	4.33	572.82

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0841		2' 7"
WW B	0912		3' 2"
WW C	0857		3' 0"
WW D	0850		2' 11"

Total System Flow	Time of Measurement
019526	0840

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 3/17/2020 (MM DD YY)

CREW MEMBERS: Britt Gebhardt

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	1155	598.93	27.27	571.66
EAST "B"	1200	596.23	Dry	596.23
EAST "C"	1235	598.69	21.35	577.34
EAST "D"	1230	593.20	16.11	577.09
NCR-3S	1223	579.60	4.35	575.25
NCR-4S	1210	577.88	3.47	574.41
NCR-5S	1117	579.34	6.55	572.79
NCR-13S	1149	577.15	4.86	572.29

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1142		3' 4"
WW B	1206		2' 3"
WW C	1220		2' 2"
WW D	1240		3' 0"

Total System Flow	Time of Measurement
20321	1139

x 1000 Gallons

Water Level Meter: NF07581

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 04/22/20 (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"	1002	598.93	27.11	571.82
EAST "B"	0953	596.23	Dry	596.23
EAST "C"	0941	598.69	21.36	577.33
EAST "D"	0937	593.20	16.24	576.96
NCR-3S	0916	579.60	4.53	575.07
NCR-4S	0945	577.80	3.35	574.45
NCR-5S	0855	579.34	6.99	572.35
NCR-13S	0910	577.15	5.44	571.71

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	0843		2' 11"
WW B	0949		2' 8"
WW C	0921		3' 1"
WW D	0913		3' 4"

Total System Flow	Time of Measurement
21126	0848

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 05/21/20 (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"	1127	598.93	28.60	570.33
EAST "B"	1134	596.23	Dry	596.23
EAST "C"	1109	598.69	21.90	576.79
EAST "D"	1103	593.20	17.32	575.88
NCR-3S	1052	579.60	4.73	574.87
NCR-4S	1118	577.80	3.49	574.31
NCR-5S	1148	579.34	7.51	571.83
NCR-13S	1036	577.15	6.16	570.99

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	1027		2' 6"
WW B	1126		2' 11"
WW C	1056		2' 8"
WW D	1047		2' 9"

Total System Flow	Time of Measurement
21572	1030

x 1000 Gallons

Water Level Meter: NF07181

FP-3D

APPENDIX H
COMPACT DISC CONTAINING REPORT