2013 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:

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February 2014

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Submitted To:

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

and

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INTRODUCTION

1.1 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Record of Decision (USEPA, 1993), the United States District Court Consent Decree (USA, 1995), and the USEPA-approved Operation, Maintenance, and Monitoring (OM&M) Manual (CRA, 2000), the Niagara County Refuse Site Potentially Responsible Parties (PRP) Group performed a remedial action at the Niagara County Refuse Site (Site), Wheatfield, New York. The PRP Group currently provides site-related OM&M services. This Annual Monitoring Report summarizes monitoring activities from January through December 2013.

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 November 2013. These four wells are screened in the shallow overburden materials. Groundwater sampling on an annual schedule commenced in 2006.

Each groundwater monitoring well was purged prior to sample collection by pumping five well volumes of groundwater from the well using a dedicated bladder pump. Physical parameters including pH, temperature, conductivity, and turbidity of the purge water were periodically measured and recorded. In the event that a well could not supply enough water to purge five well volumes, the well was pumped dry on three consecutive days prior to sampling. 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).

Groundwater sampling began immediately at the completion of purging. A dedicated bladder pump was used to collect the groundwater samples. The discharge rate was first adjusted to approximately 100 milliliters per minute. The sample was then collected directly into laboratory supplied sample containers.

Since 2006, volatile organic compounds (VOC) and semi-volatile organic compound (SVOC) samples have been collected every other year and metals samples have been collected annually. In November, 2013, in accordance with this schedule, groundwater samples were collected and analyzed for:

- Volatile organics using EPA method 8260;
- Semivolatile organics using EPA method 8270;

- Mercury using EPA method 245.1 and method SW-7470; and
- Inorganics using EPA method 200.7 and method SW-6010.

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

As noted in previous reports, due to slow recovery times and low water levels in the wells to be sampled after purging, collection of the required groundwater volume for all groundwater and quality assurance samples is often not possible. During the November 2013 sampling event, however, each of the wells contained adequate water for sampling to be completed.

1.2.2 Effluent Sampling

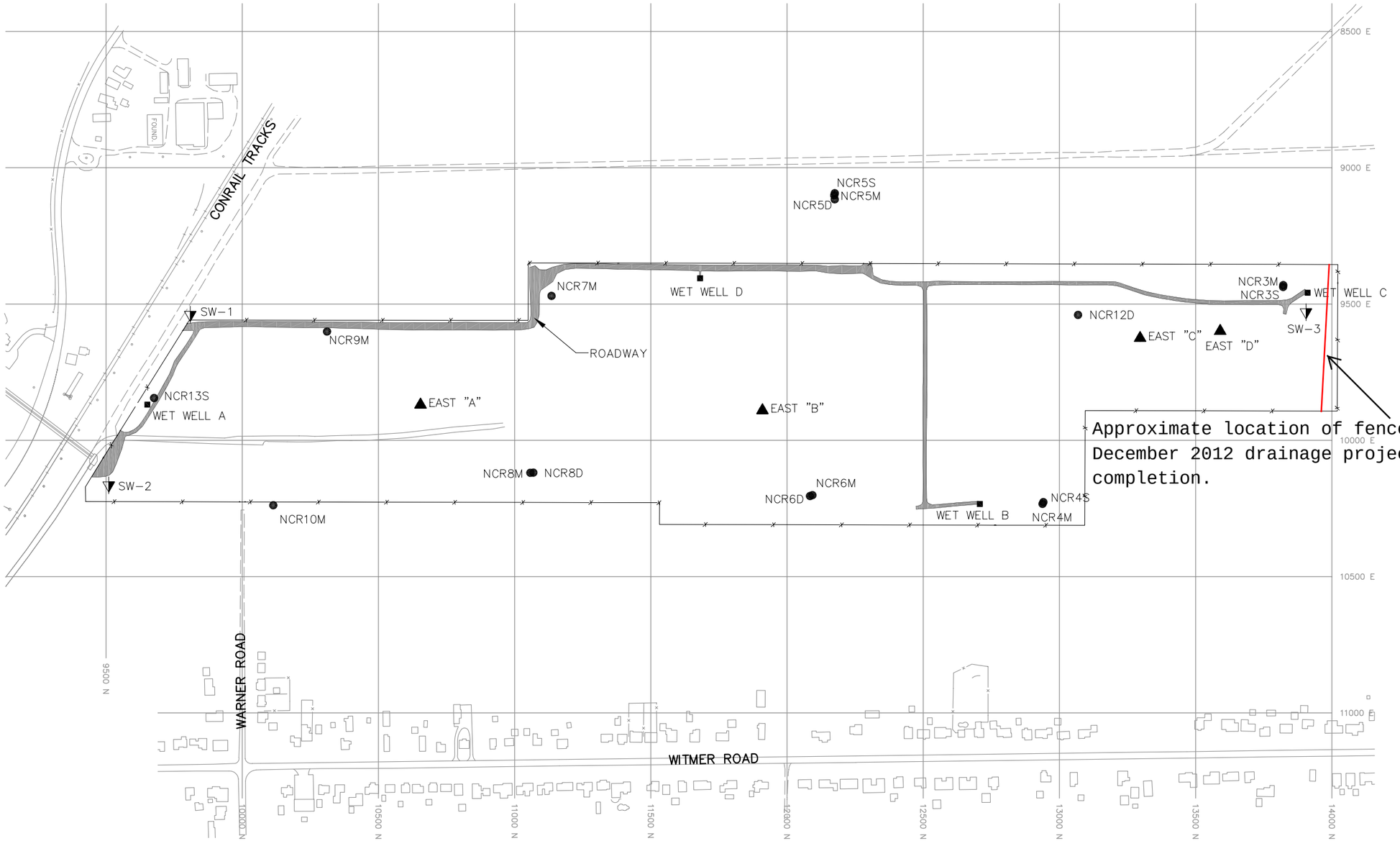
Groundwater from the perimeter collection system is discharged to the City of North Tonawanda treatment system without pre-treatment. A monitoring station in Wet Well A allows both the effluent water quality and the volume of effluent to be verified by the City of North Tonawanda. In compliance with the City of North Tonawanda Industrial Wastewater Discharge Permit, the effluent was sampled monthly through February 2007. A revised permit was issued covering from February 2007 through March 2010. A new Industrial Wastewater Discharge Permit (Appendix A) was issued by the City of North Tonawanda in 2013 and is effective from March 31, 2013 through April 1, 2016. The new permit has a reduced analytical parameter list compared to the original permit, and continues to require a semi-annual sampling frequency. Semi-annual samples were collected in March and September 2013. The effluent samples are collected in compliance with the permit using the procedures identified in the OM&M Manual. Effluent samples are 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 were measured in four monitoring well locations inside the limits of the landfill, and at four wet well locations. Water level measurements were collected monthly during 2013. 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 O&M Enterprises, Inc. on a monthly basis, 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.



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

400 200 0 400 800

SCALE: 1"=400'

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

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No XREFs

SECTION 2
RESULTS

2.1 ANALYTICAL RESULTS

2.1.1 Effluent Samples

Effluent samples were collected in March and September 2013 by O&M Enterprises, Inc. 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 discharge permit effective March 31, 2013. Effluent analytical results for 2013 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 147 to 158, 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 of groundwater samples began in 2006. Groundwater sample analytes are currently scheduled to include metals annually, and VOCs and SVOCs every two years, as approved by the USEPA (see Appendix B). The groundwater samples collected during this reporting period were analyzed for metals, VOCs, and SVOCs.

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

November 2013 Event

Monitoring wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S were sampled on November 20, 2013. The locations of the monitoring wells are provided in Figure 1.1. The data validation report is presented in Appendix D.

No VOCs were detected in any of the samples. One SVOC, di-n-butyl phthalate, was identified in each of the samples below 0.4 ug/L and qualified as estimated. The NYSDEC AWQS and the NYSDOH MCL for di-n-butyl phthalate are both 50 ug/L.

Seventeen metals were identified in one or more of the groundwater samples. Eight of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs, which is consistent with previous sampling events. In general the detected values are consistent with ranges observed in previous sampling events. Plots of selected metals concentrations over time are presented in Figure 2.1A through Figure 2.1J.

- Aluminum exceeded the NYSDEC AWQS in each of the four samples. Historically, aluminum has been above the NYSDEC AWQS.
- Copper was identified in each of the samples and was above the NYSDEC AWQS in three of the samples (NCR-3S, NCR-5S, and NCR-13S). Typically, copper has exceeded the NYSDEC AWQS in two or more of the groundwater samples.
- Lead exceeded the NYSDEC AWQS, the NYSDOH MCL, and USEPA MCL in one of the four samples and was detected in the other three below screening criteria. Lead has been observed in the past in the groundwater samples and has occasionally exceeded the screening criteria.
- Iron was identified in each of the samples exceeding both the AWQS and the NYSDOH MCL. The Record of Decision (ROD) (USEPA, 1993) identifies iron as typically exceeding MCLs in the regional groundwater.
- Magnesium was identified in each of the four samples and exceeded the AWQS guidance value (not a standard) in each of the samples. Historically, magnesium has frequently exceeded the AWQS guidance value.
- Manganese exceeded the NYSDEC AWQS and NYSDOH MCL in MW-5S and was detected below the AWQS and NYSDOH MCL in the other three samples.
- Sodium was found above the NYSDEC AWQS, the NYSDOH MCL, and USEPA MCL in two of the four samples. The ROD identifies sodium as typically exceeding MCLs in the regional groundwater.
- Vanadium exceeded the NYSDEC AWQS in one sample (NCR-5S) and was identified above the detection limits in two of the other three samples. Vanadium has been detected in each of the wells in the past and has previously exceeded the NYSDEC AWQS in NCR-5S.

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.

No validation issues were identified in the volatile organic analyses and data were 100% complete and considered usable without qualification. For the semivolatile organic analyses, all continuing calibration compounds were considered acceptable with relative response factors (RRFs) greater than 0.05 and percent differences (%Ds) within ±20% with the exception of N-nitroso-di-n-propylamine (23%D) in the continuing calibration associated with all project samples. Therefore, sample results for this compound which were nondetects were considered estimated and qualified "UJ". After validation the semivolatile data was considered usable. The semivolatile results were 100% complete.

A project blank associated with the metals samples was found to have several metals identified in it. No qualifications of any samples was required since samples were not

affected by contamination in this blank. Certain metals results were considered estimated, and flagged with a "J". Due to high matrix spike recovery, positive metals results for aluminum, antimony, iron, manganese, and potassium were considered estimated, possibly biased high, and qualified with a "J". Field duplicate precision results were acceptable with the exception of the results for aluminum, iron, zinc, vanadium, nickel, and chromium and the results for these analyses were considered estimated and flagged with a "J". Metals sample results were considered usable following data validation. The metals results were 100% complete.

2.2 SITE INSPECTIONS

Monthly Site inspections were conducted between January and December 2013. 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). High water levels were noted in Wet Well A and Wet Well C during the January site inspection. A larger pump was installed in Wet Well A, along with a larger diameter flow meter in February, diminishing the likelihood and longevity of future high alarm events at Wet Well A.

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. The landfill cap vegetation was noted to be normal in January, May, and December, snow covered in February, short during the May, April, October, and November site inspections, and tall in the June through September inspections. The landfill cap was mowed in September.

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 will continue, 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 established wetland 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. Water levels in the wetlands were noted as normal in February through April and July through December, and low in January and May. Wetland vegetation was noted as normal for the time of year or as in good condition during each of the inspections in 2013.

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

2.3 MAINTENANCE

Scheduled maintenance during 2013 included:

- A new circuit breaker was installed to handle greater amperage required by a planned new Wet Well A pump. A Cutler-Hammer brand Series C 30 Amp Motor Circuit Protector was installed.
- The pump in Wet Well A was removed and replaced with a higher capacity pump. The new pump is a Grundfos model 85S75-6. Additionally, the flow meter at Wet Well A was replaced with an Istek brand 3-inch flow meter to replace the existing 1.5-inch flow meter.
- Repairs were completed to the level controller in Wet Well A involving rewiring one of the connections.
- A failed pump was replaced with a new pump in Wet Well C.
- Mowing inside the perimeter fence line and the walking paths to observation and monitoring wells was completed on May 21, May 22, June 25, and July 19.
- Repairs to holes in the perimeter fence cut by trespassers, were completed on May 23.
- The annual mowing of the landfill cap was completed between September 3 and 6.
- A failed transformer and battery on the alarm system was replaced with a new transformer and battery.

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

- Between January 1 and 13, daily site visits were made to confirm pump operation while in high alarm status. The Wet Well A pump was unable to keep up with the inflow of water during this time period causing the high alarm. This continuing issue was ultimately remedied by installing a higher capacity pump in Wet Well A (along with a new circuit breaker to handle the greater power requirement and a new flow meter).
- On January 26, the pump and motor were pulled from Wet Well D and a new pump and motor were installed. The motor on the original pump had failed.
- On February 26, a float control was replaced in Wet Well A.
- On April 10, a leaking discharge line on Wet Well A was replaced.

- On April 15, a failed pump in Wet Well C was replaced.

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 2013, water levels were collected from the monitoring wells on a monthly basis. Water levels generally varied between 1.7 and 4.8 feet over the course of the year.

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

City of North Tonawanda 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Data December 2013		Sample ID: Lab Id: Source: SDG: Matrix: Sampled: Validated:	NYS DEC AWQS*	NYS DOH MCL	US EPA MCL	NCR-3S 480-50508-1 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-4S 480-50508-2 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-5S 480-50508-3 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-13S 480-50508-4 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	Field Duplicate 480-50508-5 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013
CAS NO.	COMPOUND	UNITS:								DUP of NCR-13S
	SEMIVOLATILES									
84-74-2	Di-n-butyl phthalate	ug/L	50	50	-	0.35 J	0.32 J	0.23 J	0.33 J	0.26 J
	METALS									
7429-90-5	Aluminum	ug/L	100	-	-	1600 J	1300 J	12600 J	5400 J	800 J
7440-39-3	Barium	ug/L	1000	2000	2000	57	78	310	88	67
7440-41-7	Beryllium	ug/L	3+	4	4	0.3 U	0.3 U	0.46 J	0.3 U	0.3 U
7440-43-9	Cadmium	ug/L	5	5	5	0.5 U	0.5 U	1.5	1.5	0.74 J
7440-70-2	Calcium	ug/L	-	-	-	145000	154000	174000	198000	195000
7440-47-3	Chromium	ug/L	50	100	100	13	2 J	30	24 J	4.6 J
7440-48-4	Cobalt	ug/L	-	-	-	2 J	0.63 U	5.7	1.4 J	0.63 U
7440-50-8	Copper	ug/L	5	-	-	10	1.9 J	36	12	6.5 J
7439-89-6	Iron	ug/L	300>	300>	-	**2800 J**	**4700 J**	**14200 J**	**10700 J**	**1300 J**
7439-92-1	Lead	ug/L	25	25	15	5.1	4 J	**27**	8.7	3.5 J
7439-95-4	Magnesium	ug/L	35000>	-	-	79500	49400	78100	77400	71000
7439-96-5	Manganese	ug/L	300>	300>	-	200 J	240 J	**540 J**	49 J	7.3 J
7440-02-0	Nickel	ug/L	100	-	-	25	1.8 J	29	13 J	4.2 J
7440-09-7	Potassium	ug/L	-	-	-	3100 J	12300 J	3900 J	2200 J	1800 J
7440-23-5	Sodium	ug/L	20000	20000	20000	8400	**32800**	**25700**	18800	16700
7440-62-2	Vanadium	ug/L	14	-	-	3.5 J	1.5 U	21	14 J	2.6 J
7440-66-6	Zinc	ug/L	2000+	5000	-	250	91	190	410 J	30 J

* = NYSDEC Ambient Water Quality Standards.

+=Guidance value.

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

J = Estimated value. - = No standard identified. U = not detected at the value given.

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 Results

Inspection Item	Acceptable	Not Acceptable	Comments
Manholes	X		
Wet Wells	X		Water levels were measured monthly.
Wetlands	X		A lower than normal water level was noted during the January and May inspections. Normal water levels were observed during the other monthly inspections.
Perimeter Fence	X		Repairs to holes cut in fence by trespassers were repaired in May.
Condition of Roads	X		No erosion or other problems.
Integrity of the Cap	X		No problems were noted in 2013.
Drainage Ditches/Swales	X		
Gas Venting System	X		
Wells	X		Water levels were measured monthly.
Culverts	X		
Vegetative Cover	X		Height of vegetation on the cap was noted as short during the March, April, and October inspections and noted as tall during the June through September inspections. The cap was mowed in September 2013.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

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

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

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

Observation Point	Elevation Top of Casing (ft. msl)	1/6/2003		2/5/2003		3/6/2003		4/2/2003		5/5/2003		6/5/2003		7/1/2003		8/11/2003		9/2/2003		10/8/2003		11/12/2003		12/6/2003	
		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	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		2/5/2004		3/1/2004		4/5/2004		5/4/2004		6/11/2004		7/10/2004		8/9/2004		9/8/2004		10/2/2004		11/4/2004		12/3/2004	
		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	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 Depth to Water (ft)	1/9/2009 Elevation (ft. msl)	2/5/2009 Depth to Water (ft)	2/5/2009 Elevation (ft. msl)	3/5/2009 Depth to Water (ft)	3/5/2009 Elevation (ft. msl)	4/3/2009 Depth to Water (ft)	4/3/2009 Elevation (ft. msl)	5/1/2009 Depth to Water (ft)	5/1/2009 Elevation (ft. msl)	6/4/2009 Depth to Water (ft)	6/4/2009 Elevation (ft. msl)	7/10/2009 Depth to Water (ft)	7/10/2009 Elevation (ft. msl)	8/12/2009 Depth to Water (ft)	8/12/2009 Elevation (ft. msl)	9/5/2009 Depth to Water (ft)	9/5/2009 Elevation (ft. msl)	10/9/2009 Depth to Water (ft)	10/9/2009 Elevation (ft. msl)	11/8/2009 Depth to Water (ft)	11/8/2009 Elevation (ft. msl)	12/4/2009 Depth to Water (ft)	12/4/2009 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 Depth to Water (ft)	1/7/2010 Elevation (ft. msl)	2/1/2010 Depth to Water (ft)	2/1/2010 Elevation (ft. msl)	3/11/2010 Depth to Water (ft)	3/11/2010 Elevation (ft. msl)	4/1/2010 Depth to Water (ft)	4/1/2010 Elevation (ft. msl)	5/6/2010 Depth to Water (ft)	5/6/2010 Elevation (ft. msl)	6/1/2010 Depth to Water (ft)	6/1/2010 Elevation (ft. msl)	7/2/2010 Depth to Water (ft)	7/2/2010 Elevation (ft. msl)	8/12/2010 Depth to Water (ft)	8/12/2010 Elevation (ft. msl)	9/16/2010 Depth to Water (ft)	9/16/2010 Elevation (ft. msl)	10/8/2010 Depth to Water (ft)	10/8/2010 Elevation (ft. msl)	11/5/2010 Depth to Water (ft)	11/5/2010 Elevation (ft. msl)	12/2/2010 Depth to Water (ft)	12/2/2010 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		2/9/2011		3/3/2011		4/9/2011		5/6/2011		6/3/2011		7/15/2011		8/5/2011		9/5/2011		10/7/2011		11/3/2011		12//2011	
		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	25.88	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		2/6/2012		3/1/2012		4/12/2012		5/1/2012		6/4/2012		7/13/2012		8/2/2012		9/4/2012		10/8/2012		11/12/2012		12/10/2012	
		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	26.25	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

Notes:

- = measurment not collected.

dry = no water in well.

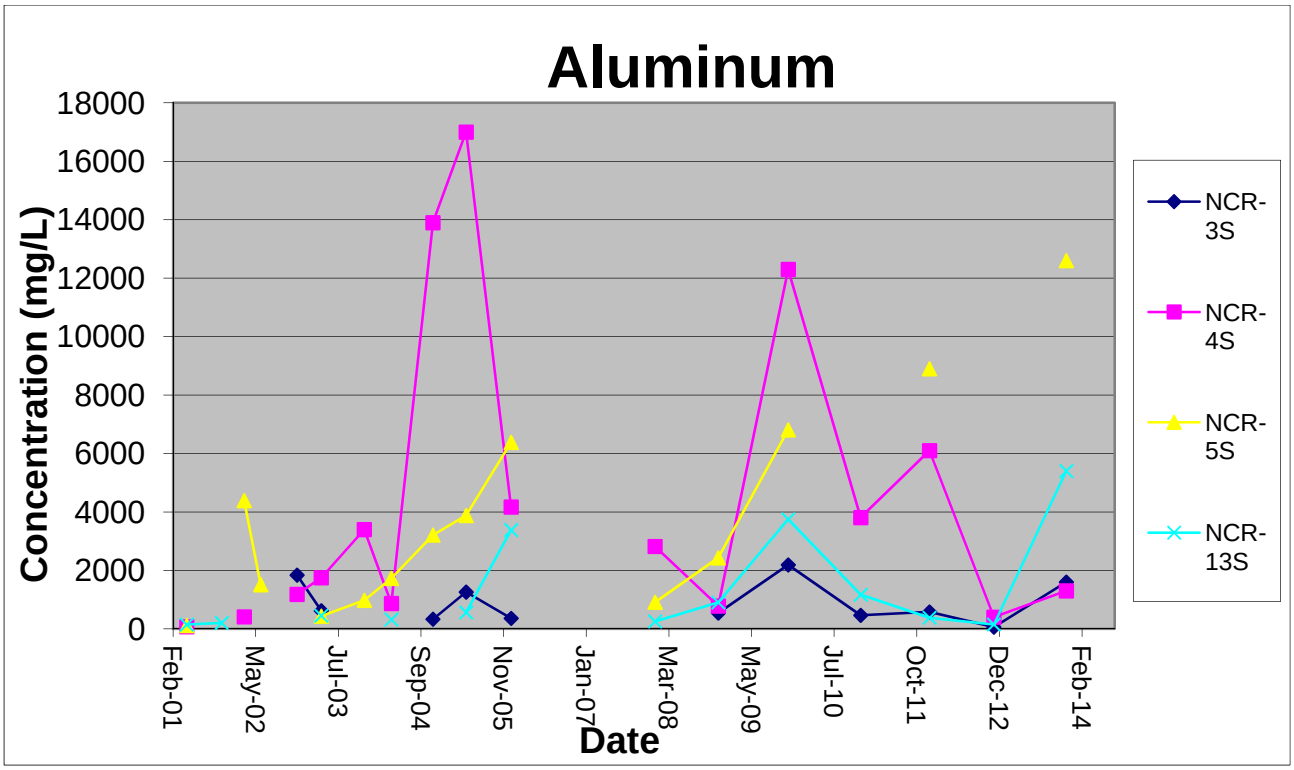


Figure 2.1A: Plot of Historical Aluminum Concentration

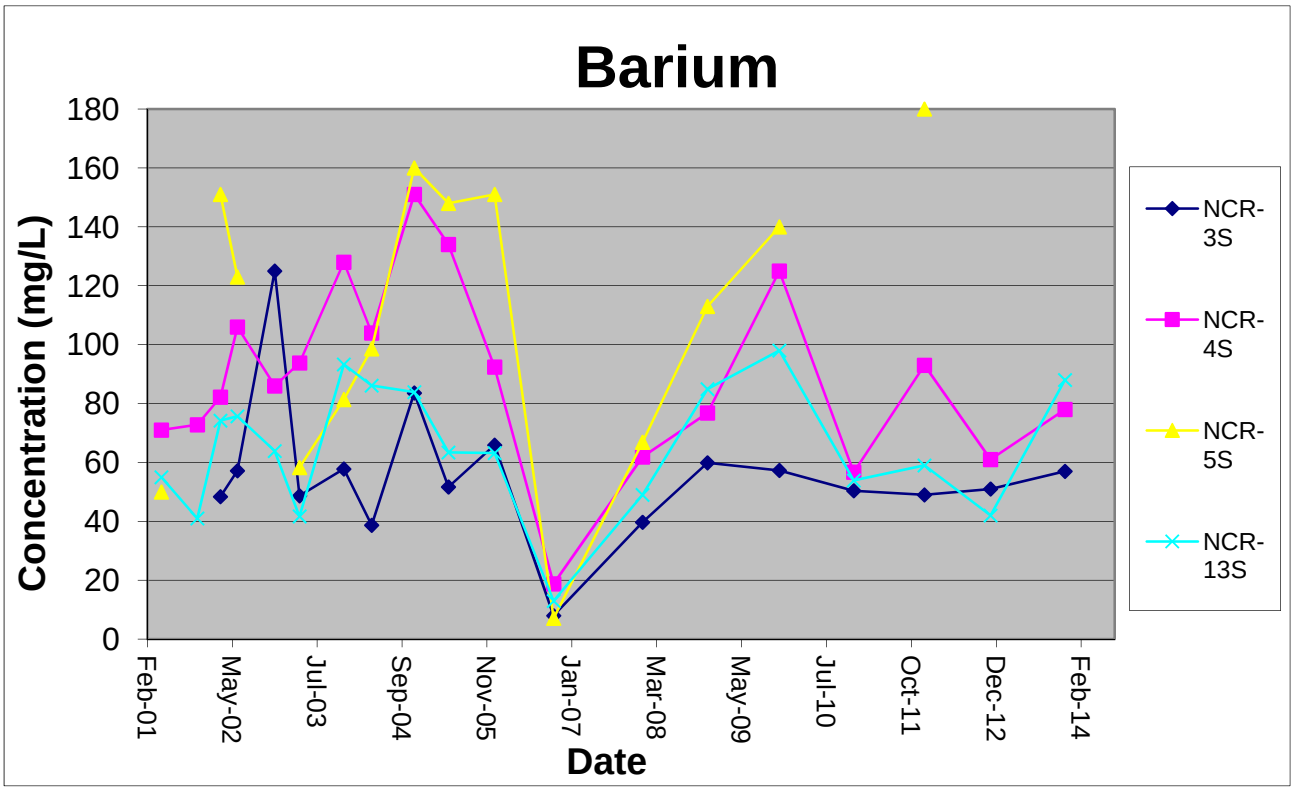


Figure 2.1B: Plot of Historical Barium Concentration

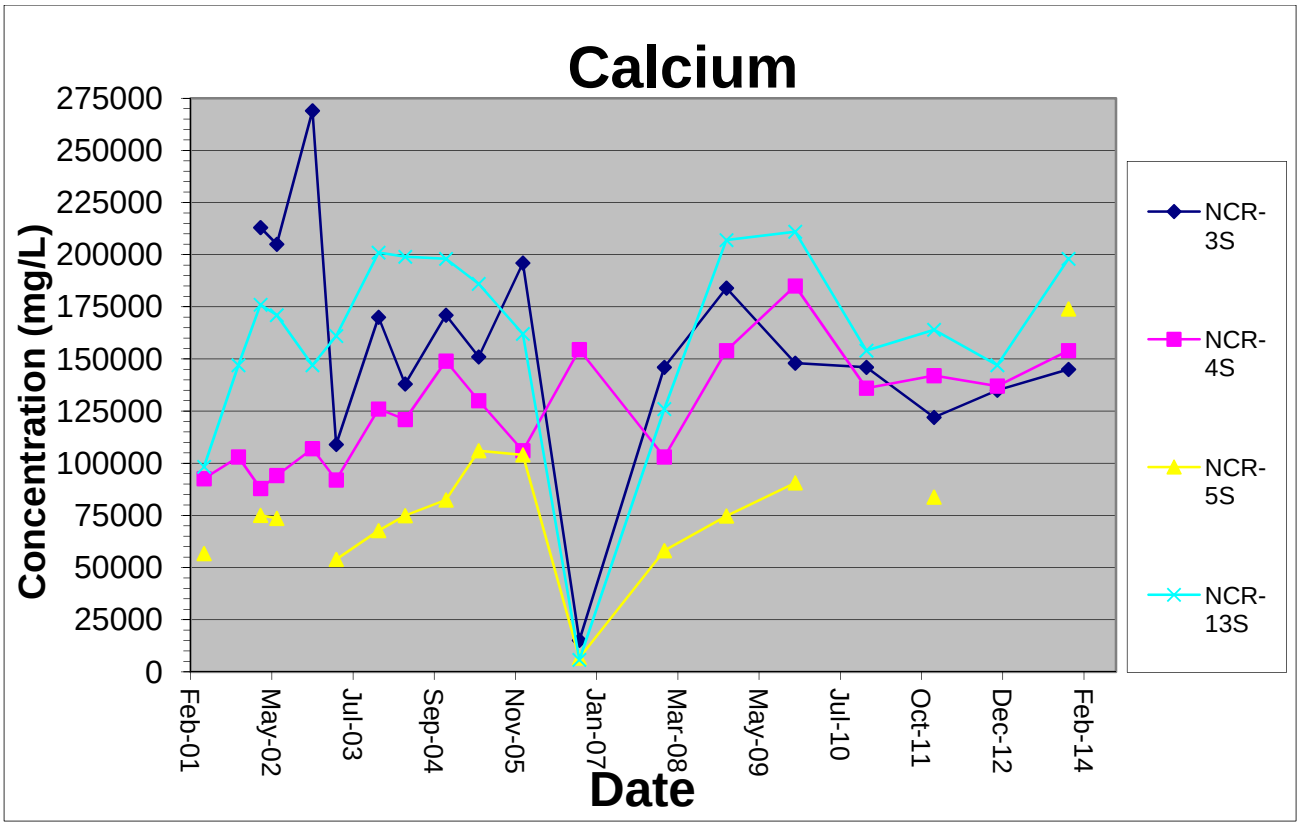


Figure 2.1C: Plot of Historical Calcium Concentration

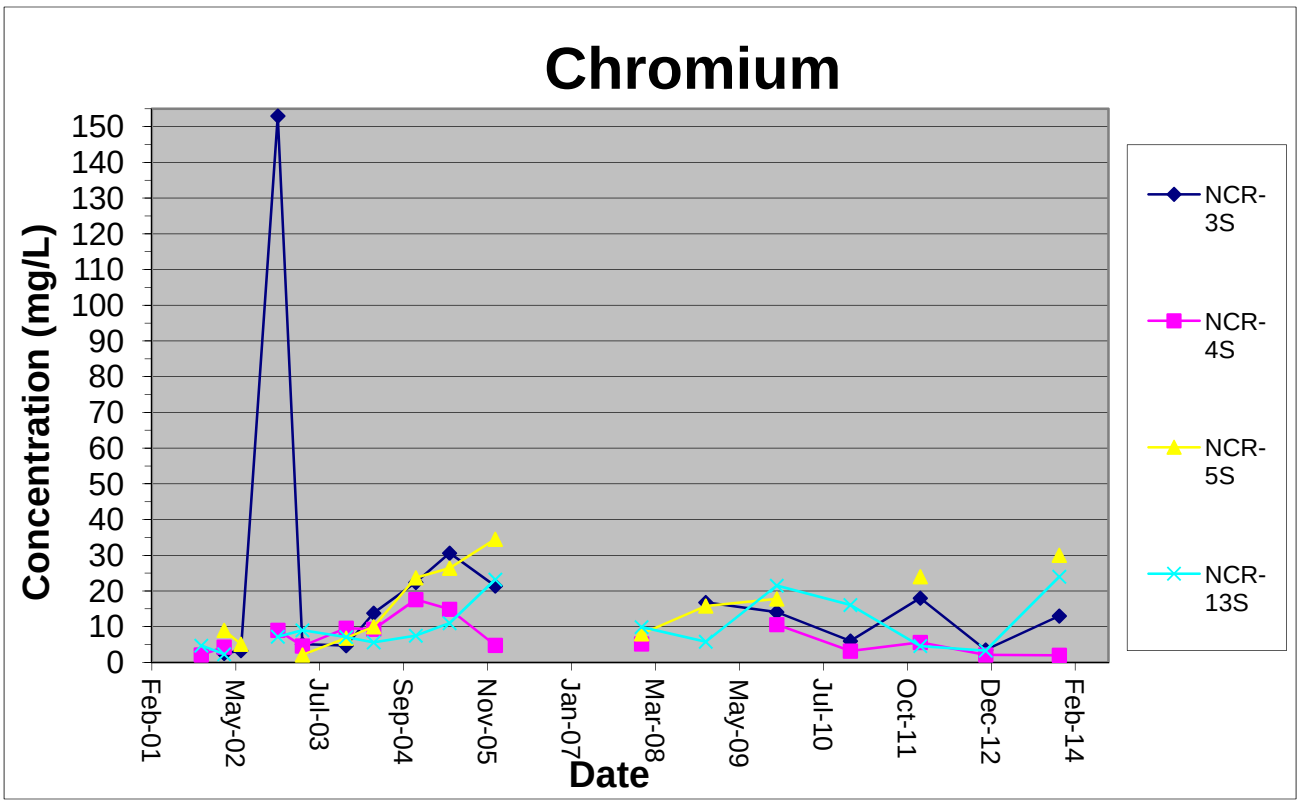


Figure 2.1D: Plot of Historical Chromium Concentration

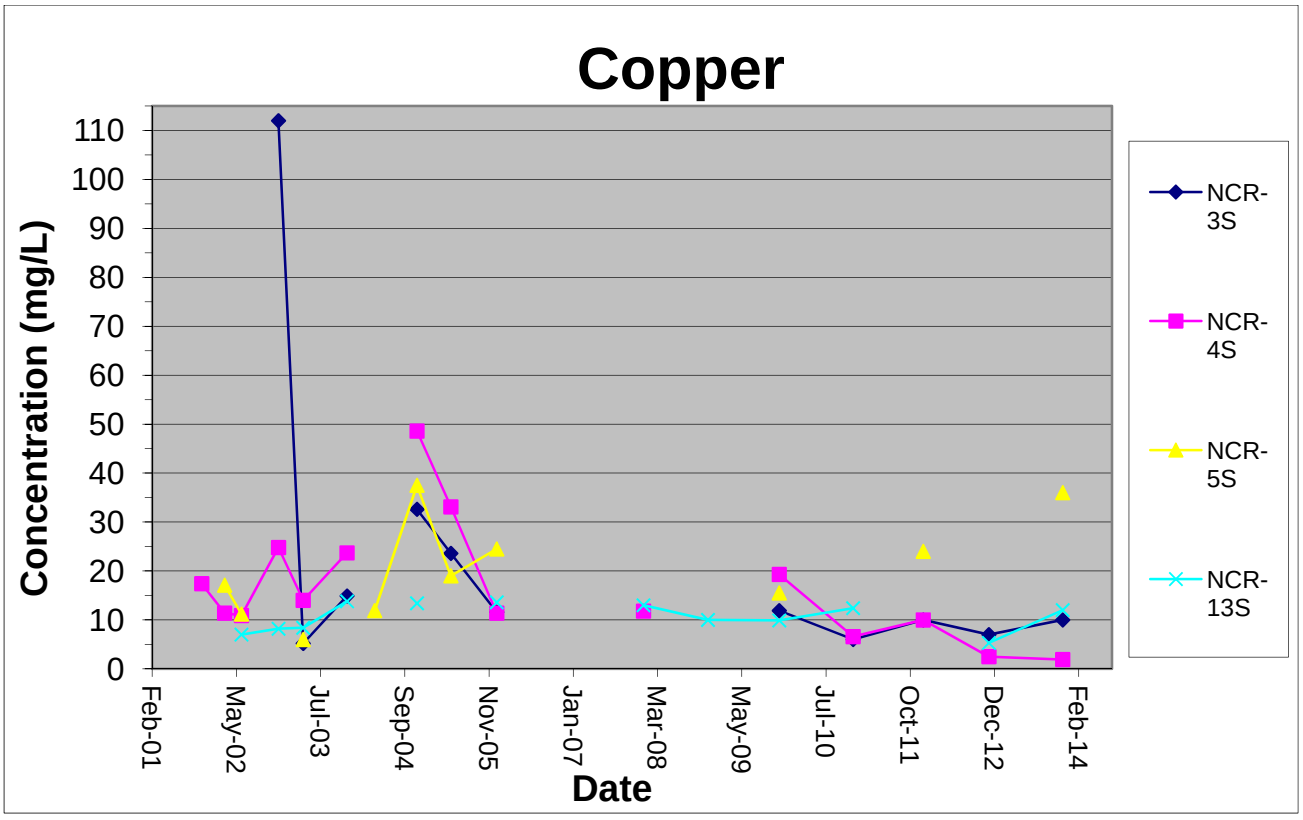


Figure 2.1E: Plot of Historical Copper Concentration

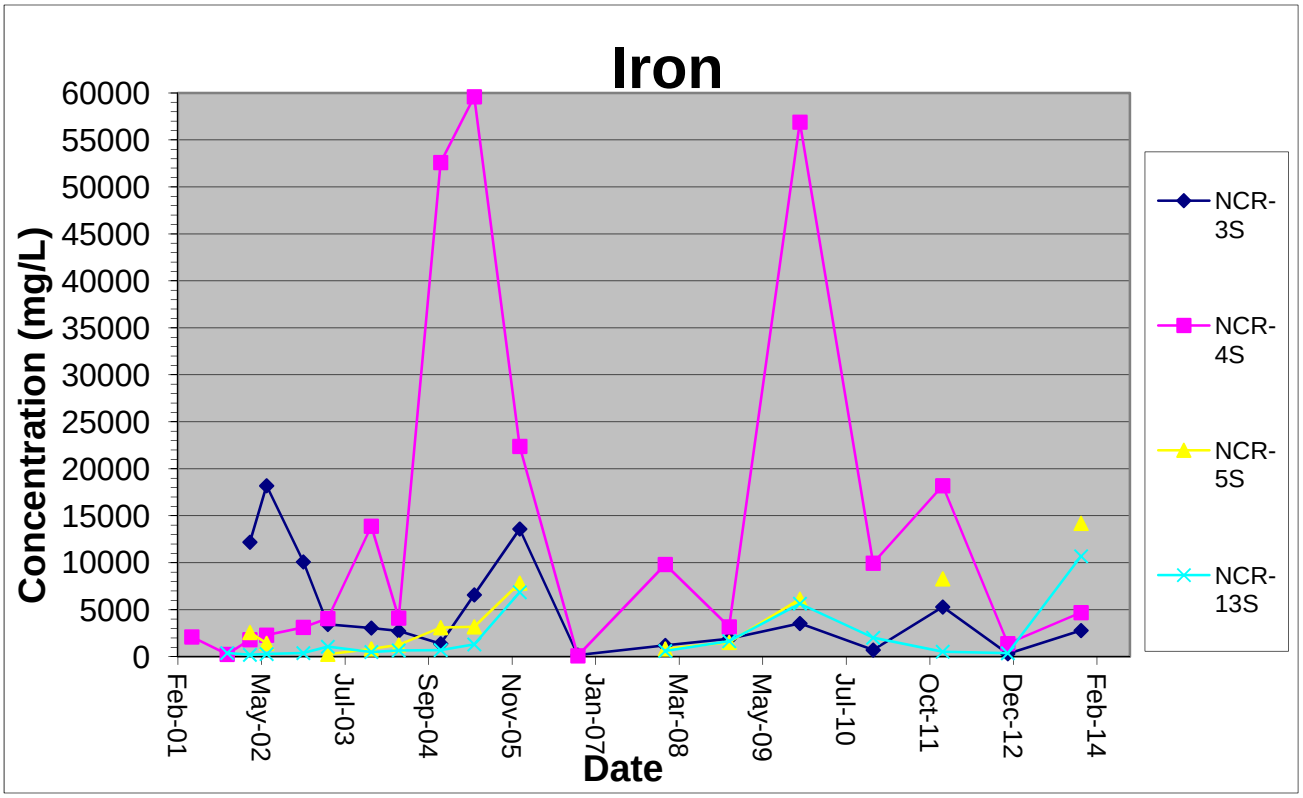


Figure 2.1F: Plot of Historical Iron Concentration

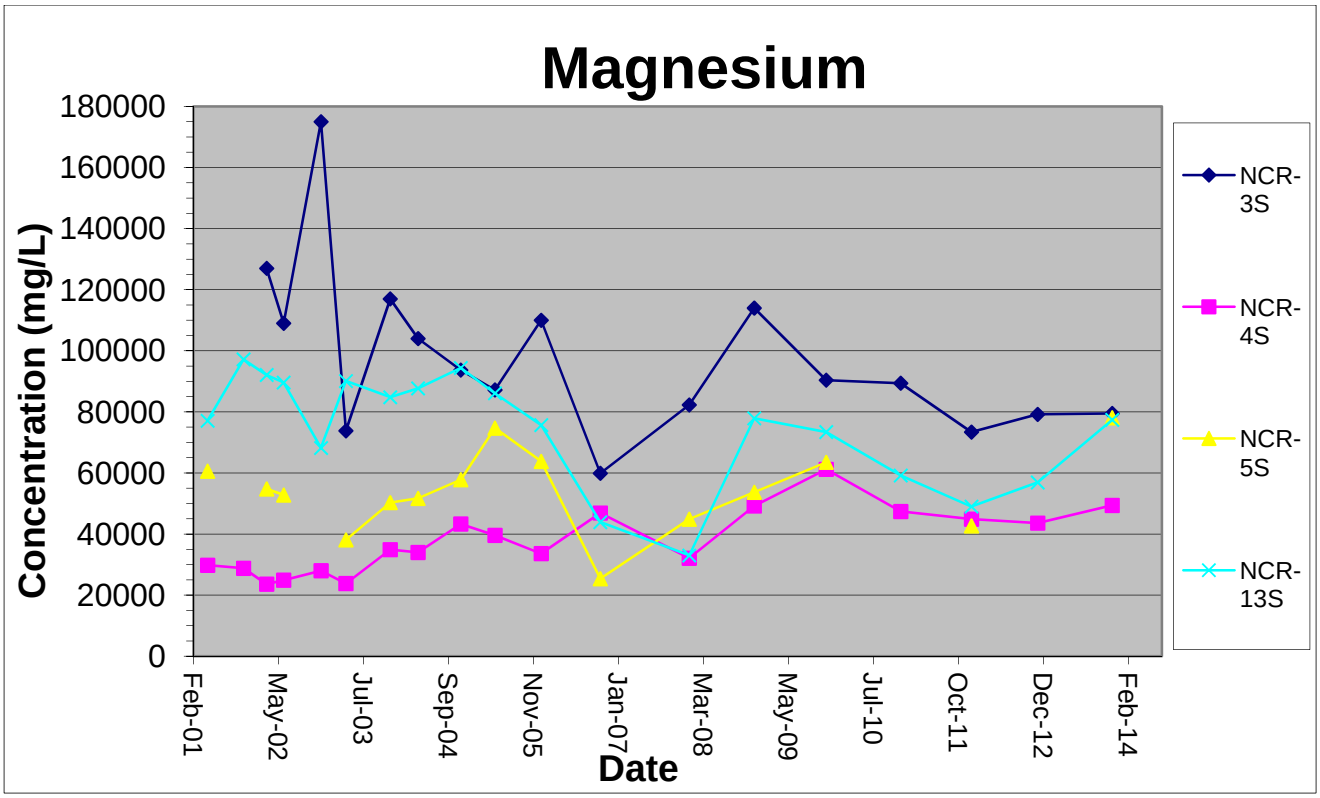


Figure 2.1G: Plot of Historical Magnesium Concentration

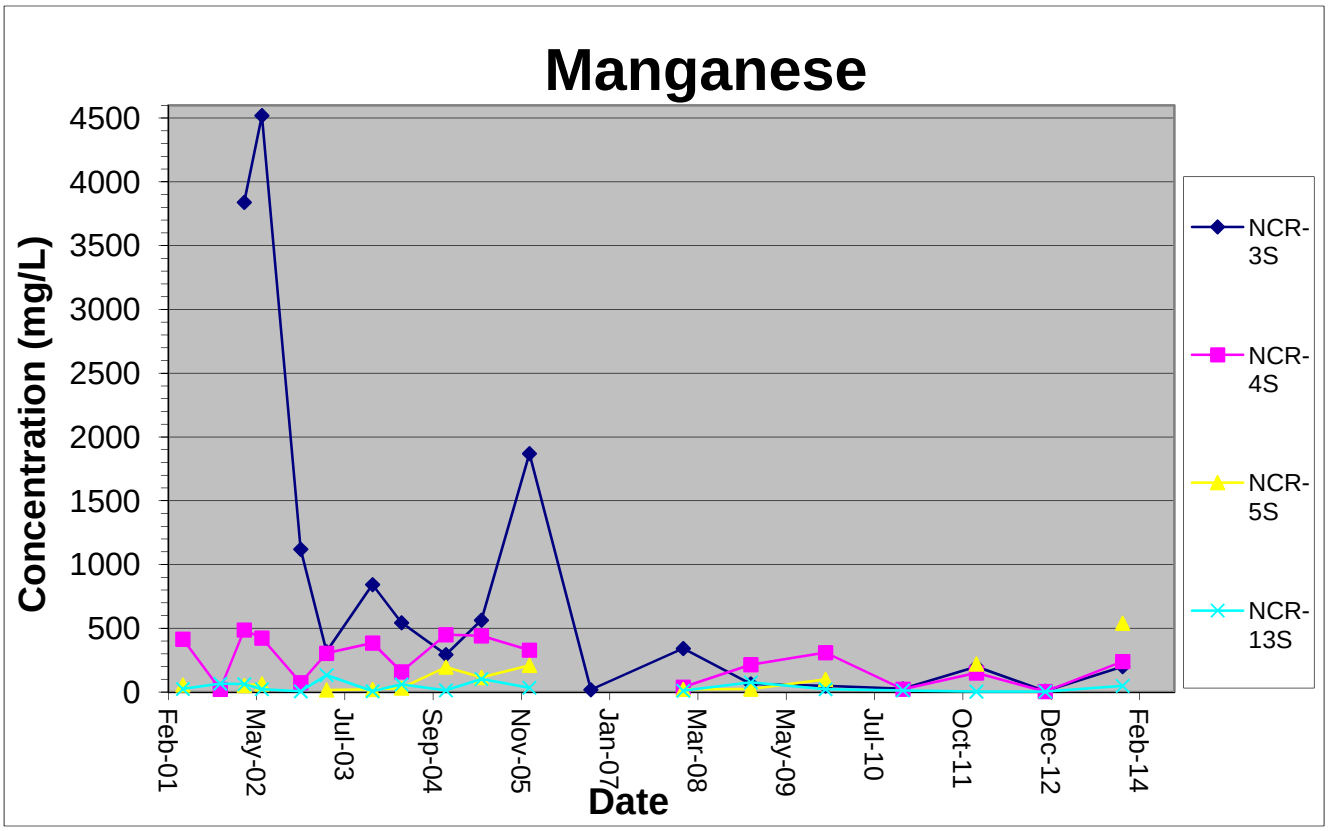


Figure 2.1H: Plot of Historical Manganese Concentration

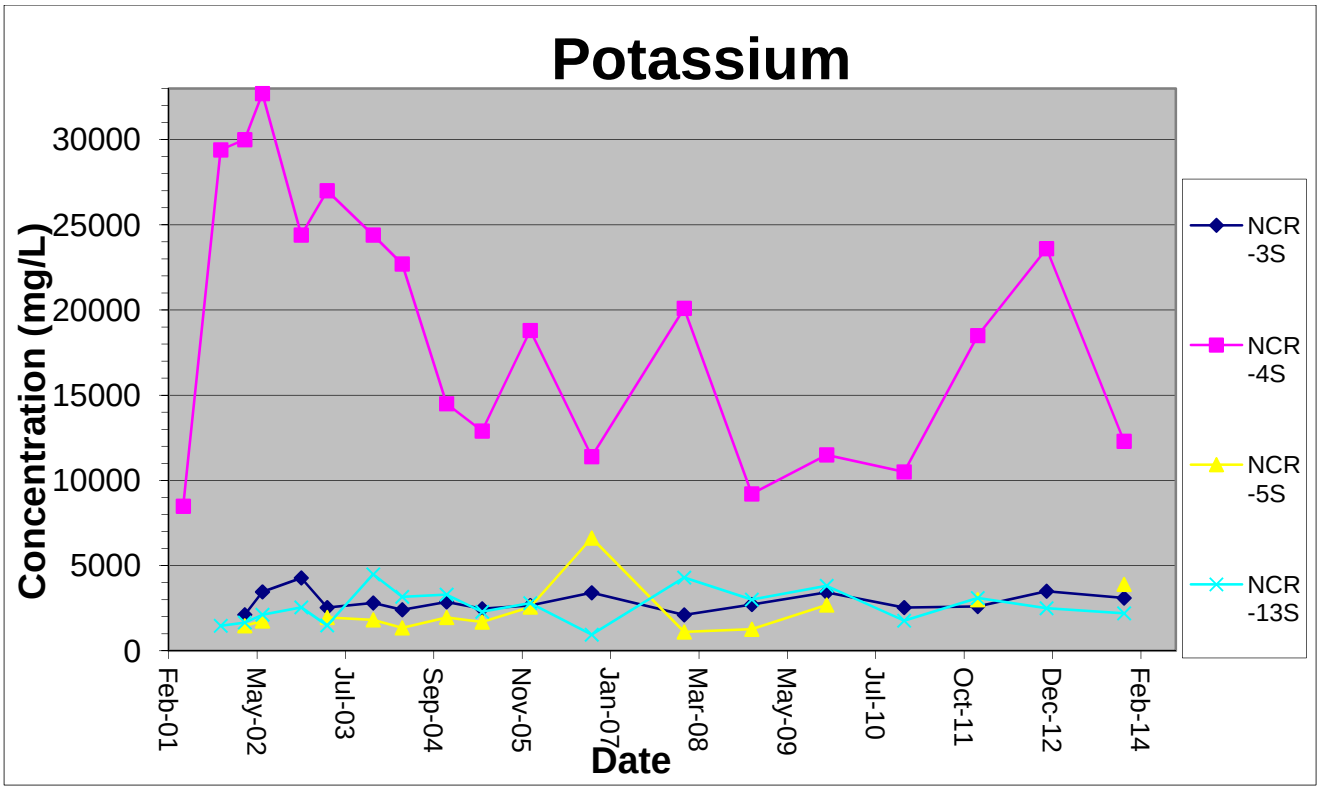


Figure 2.1I: Plot of Historical Potassium Concentration

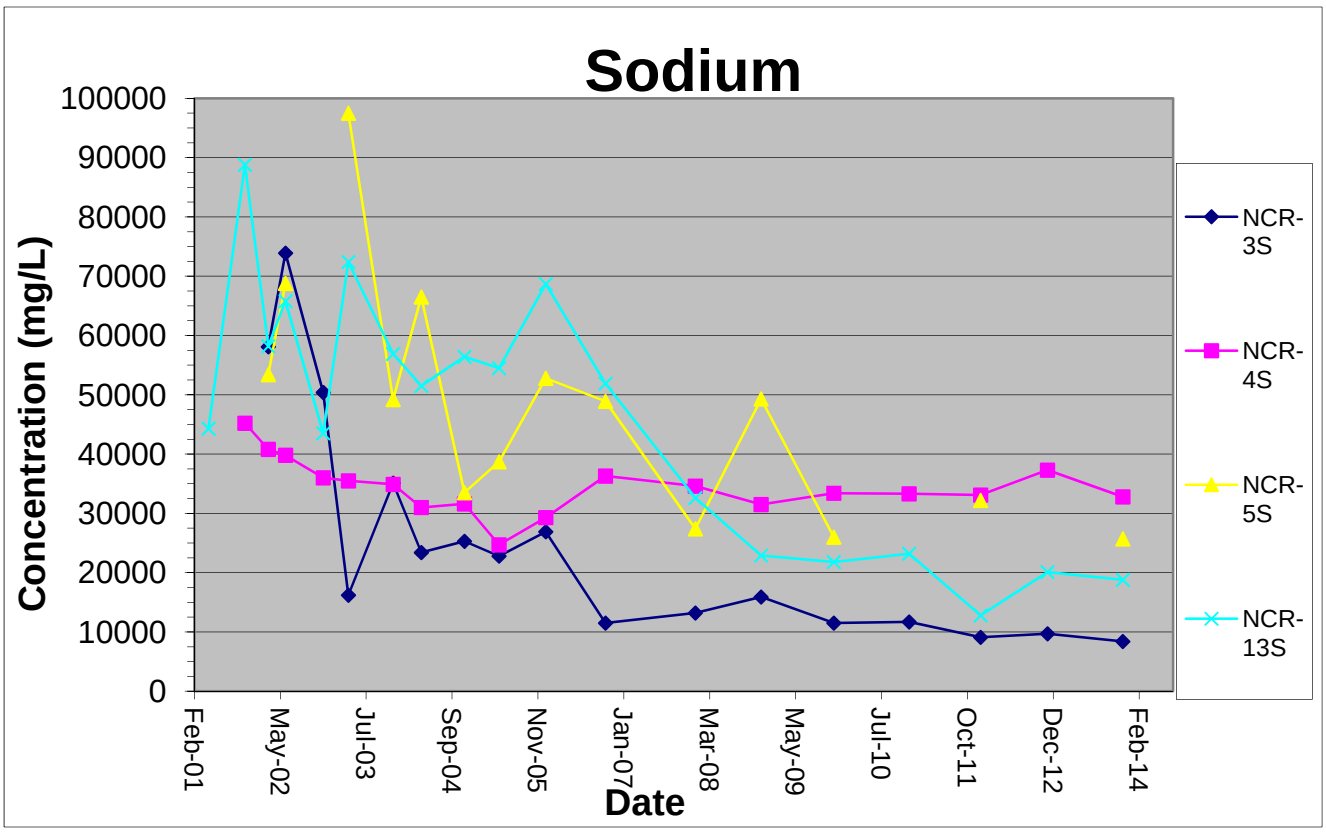


Figure 2.1J: Plot of Historical Sodium Concentration

SECTION 3
SUMMARY AND CONCLUSIONS

The following summary and conclusions were developed based on the data collected during this reporting period (January through December 2013):

- Volatile organic, semivolatile organic, and metals groundwater samples were collected in 2013. The analytical results were consistent with historical results. The annual groundwater samples scheduled for collection in November 2014 will be analyzed for metals only.
- One semivolatile compound and seventeen metals were identified in one or more of the groundwater samples. Eight of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs, which is consistent with previous sampling events. In general, detected values appeared to be consistent with ranges observed in previous sampling events.
- Two effluent samples were collected in 2013. The analytical results were found to be compliant with the discharge permit. During 2013, compliance with the discharge permit was maintained.
- The landfill was inspected monthly and was appropriately maintained. Needed repairs were addressed in a timely manner. Cover vegetation continues to be in good condition.
- Post-construction monitoring of the wetland replacement was performed annually between 2001 and 2005. Monitoring results indicated that the wetland creation was successful. Although the formal annual inspections are no longer required, monthly visual inspection of the wetlands will continue, to document general conditions. In 2013, the wetlands were documented to be in good condition.
- Water levels were collected from the wet wells, monitoring wells, and the locations on top of the landfill on a monthly basis in 2013. Water levels generally varied between 1.7 and 4.8 feet over the course of the year.
- The objectives of the groundwater monitoring program (to monitor the effectiveness of the perimeter collection system and the perimeter barrier system) have been met. The groundwater monitoring program provides data for demonstration of the effectiveness of the hydraulic containment, collection, and extraction of Site-related groundwater.

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, 2012, 2011 Annual Monitoring Report, Niagara County Refuse District Site; Parsons, February 2012.

APPENDIX A

CITY OF NORTH TONAWANDA INDUSTRIAL WASTEWATER DISCHARGE PERMIT AND COMPLIANCE SAMPLING RESULTS

CITY OF NORTH TONAWANDA
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

Permit Number: 2628010

In accordance with the provisions of the Clean Water Act as amended, all terms and conditions set forth in this permit, the City of North Tonawanda Local Sewer Use Ordinance and any applicable Federal, State or local laws or regulations, authorization is hereby granted to: Niagara County Department of Public Works
Engineering Department
59 Park Avenue
Lockport, NY 14094

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

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

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

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

Effective this 31st day of March, 2013

To expire the 1st day of April, 2016

David A. Scott

David A. Scott, Water Works Superintendent
Signed this 4th day of March, 2013

PERMIT NUMBER: 2628011

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.

PERMIT NUMBER: 2628011

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) Fequency of monitoring is to be re-evaluated yearly.

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

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

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

CITY OF NORTH TONAWANDA WATER WORKS
WASTEWATER DEPARTMENT
830 RIVER ROAD
NORTH TONAWANDA, NEW YORK 14120
PHONE: (716) 695 - 8560
FAX: (716) 695 - 8563

David A. Scott
Superintendent

John C. Maurer
Maintenance Supervisor

Dennis F. Molnar
Chief Operator

William M. Davignon
Lab Director/Chemist

CHAIN OF CUSTODY

Sampling Record
NIAGARA COUNTY REFUSE SITE

DATE: March 13 & 14, 2013

SITE NAME: **NIAGARA COUNTY REFUSE SITE**

NAME (*Signature*) Richard C Becker

NAME (Print) Richard C Becker

SPL #	SAMPLE NAME	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	#OF BTLS
01	31313RCBEFF	3/13-3/14/13	0800-0800	Wet Well A	wet chemistry	1
02	31313RCBEFF	3/13-3/14/13	0800-0800	wetwell A	volitiles	6

FLOWS:

FINAL METER READING 728,000

INITIAL METER READING 707,000

daily ~~MONTHLY~~ FLOW 21,000

RELINQUISHED BY: Richard C Becker

RECEIVED BY: Michael E J

DATE: 3/14/13

TIME: 3/14/13

CITY OF NORTH TONAWANDA WATER WORKS
WASTEWATER DEPARTMENT
830 RIVER ROAD
NORTH TONAWANDA, NEW YORK 14120
PHONE: (716) 695 - 8560
FAX: (716) 695 - 8563

David A. Scott
Superintendent

John C. Maurer
Maintenance Supervisor

Dennis F. Molnar
Chief Operator

William M. Davignon
Lab Director/Chemist

CHAIN OF CUSTODY

Sampling Record
NIAGARA COUNTY REFUSE SITE

DATE: September 11 & 12, 2013

SITE NAME: **~~NIAGARA~~ COUNTY REFUSE SITE**

NAME (*Signature*) Richard C Baker

NAME (Print) Richard C Baker

SPL #	SAMPLE NAME	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	#OF BTLS
01	91213 RCB FAF	9/12/13	0730	Wet Well A	volatiles	6
02	91213 RCB FAF	9/12/13	0730	Wet Well A	wet chemistry	1

FLOWS:

FINAL METER READING 20163900

INITIAL METER READING 20162900

MONTHLY FLOW 1000

RELINQUISHED BY: Richard C Baker

RECEIVED BY: William M. Davignon

DATE: 9/12/13

TIME: 8:00 AM

EFFLUENT SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME:	*NIAGARA COUNTY REFUSE SITE*		
SAMPLE LOCATION:	*WET WELL A*		
SAMPLING CREW MEMBERS:	R. Beckam		
DATE OF SAMPLE COLLECTION: (M M D D Y Y)	09 12 13		
Sample Time	0730	1500	0730
Sample ID Number	91213 RBEFF		
pH	7.7	7.3	7.25
Temperature	62.1°C	63.9°F	60.9°F
Conductivity	5.69	5.58	5.45
Turbidity	14	12	9
Instantaneous Flow Velocity			
Total Flow	1000		
Sample Description	Semi-annual outfall sampling		
Analysis Required	volatiles + wet chemistry		
Chain-of-Custody Number	Sept 11-12, 2013		
Shipping Manifest Number	none		

Additional Comments:

FP-7C

Analytical Results: NIAGARA COUNTY REFUSE SITE 2013

PARAMETER	RESULT mg/l	RESULT mg/l	COMPLIANCE
pH (COMP.)	8.16	7.01	YES
COD	21	126	YES
SUSPENDED SOLIDS	26	14	YES
BOD	28.00	100.60	YES
PO4	0.14	0.27	YES
PHENOLS	< 0.011	< 0.011	YES
METALS			
ALUMINUM	0.084	0.100	YES
CHROMIUM	< 0.024	< 0.025	YES
LEAD	< 0.022	< 0.030	YES
NICKEL	< 0.023	< 0.026	YES
ZINC	0.055	0.100	YES
IRON	2.099	0.415	YES
MAGNESIUM	102.0	182.0	YES
MANGANESE	0.13	0.37	YES
SODIUM	44.2	404.0	YES
PURGEABLES			
Benzene	< 0.005	< 0.005	YES
Toluene	< 0.005	< 0.005	YES
Chlorobenzene	< 0.005	< 0.005	YES
Ethylbenzene	< 0.005	< 0.006	YES
Total Xylenes	< 0.011	< 0.011	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	< 0.004	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	< 0.006	YES
1,1,1-Trichloroethane	< 0.005	< 0.005	YES
Trichloroethene	< 0.005	< 0.005	YES
TOTAL FLOW (gallons)	**21,000**	**1,000**	
SAMPLE DATE	**3/13/13 & 3/14/13**	**9/11/13 & 9/12/13**	

Report prepared by: Willaim M. Davignon, Lab Director / Chemist

APPENDIX B

CORRESPONDENCE

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

NOV 21 2005

BY FEDEX

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

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

Dear Mr. Felter:

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

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

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

Sincerely yours,

Michael J. Negrelli
Remedial Project Manager
New York Remediation Branch

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

APPENDIX C

ANALYTICAL DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

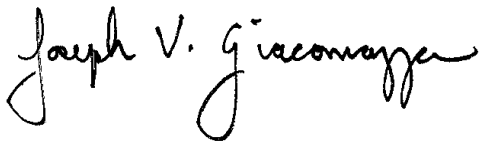
ANALYTICAL REPORT

Job Number: 480-50508-1

Job Description: City of North Tonawanda - NCRS

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

Attention: William Davignon



Approved for release.
Joe V Giacomazza
Project Management Assistant II
12/5/2013 5:58 PM

Designee for
Judy L Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
12/05/2013

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

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Job Narrative
480-50508-1

Receipt
The samples were received on 11/20/2013 1:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS VOA
Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 154726 was outside control limits for Chloromethane.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method(s) 8270D: The continuing calibration verification (CCV) for N-Nitrosodi-m-propylamine associated with batch 154514 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other analytical or quality issues were noted.

Metals
Method(s) 6010C: The Method Blank for batch 480-153572 contained total aluminum, barium, calcium, chromium, iron, and zinc above the method detection limits. These target analyte concentrations were less than the reporting limits (RLs); therefore, re-extraction and/or re-analysis of samples Field Duplicate (480-50508-5), NCR 13S (480-50508-4), NCR 3S (480-50508-1), NCR 4S (480-50508-2), NCR 5S (480-50508-3) was not performed.

Method(s) 6010C: The recoveries of Post Spike (480-50508-3 PDS) in batch 480-153572 exhibited results outside the quality control limits for total calcium and magnesium. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

Method(s) 6010C: The Matrix Spike/ Matrix Spike Duplicate (NCR 5S (480-50508-3 MS), NCR 5S (480-50508-3 MSD)) recoveries for total aluminum, iron, and potassium in batch 480-153572 were outside control limits. The Matrix Spike was also outside the control limits for total barium and manganese. Sample matrix is suspected. The associated Laboratory Control Sample (LCS) met acceptance criteria, therefore no corrective action was necessary.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-50508-1

SDG No.:

Instrument ID: HP5975D Analysis Batch Number: 149481

Lab Sample ID: IC 480-149481/3 Client Sample ID:

Date Analyzed: 11/04/13 10:03 Lab File ID: D7266.D GC Column: RTX-CLPII ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	1.83	Baseline	BrandtT	11/04/13 11:17

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-50508-1

SDG No.:

Instrument ID: HP5973W Analysis Batch Number: 153818

Lab Sample ID: IC 480-153818/2 Client Sample ID:

Date Analyzed: 11/22/13 07:38 Lab File ID: W02419.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzyl alcohol	5.61	Assign Peak	mckernar	11/22/13 09:21
2,4-Dichlorophenol	6.43	Assign Peak	mckernar	11/22/13 09:20
2,4,6-Trichlorophenol	7.33	Assign Peak	mckernar	11/22/13 09:20
2,4,5-Trichlorophenol	7.42	Assign Peak	mckernar	11/22/13 09:20
2-Nitroaniline	7.57	Assign Peak	mckernar	11/22/13 09:20
3-Nitroaniline	7.92	Assign Peak	mckernar	11/22/13 09:20
2,4-Dinitrotoluene	8.08	Assign Peak	mckernar	11/22/13 09:20
2,3,4,6-Tetrachlorophenol	8.21	Assign Peak	mckernar	11/22/13 09:20
4,6-Dinitro-2-methylphenol	8.43	Assign Peak	mckernar	11/22/13 09:20
4-Nitroaniline	8.47	Assign Peak	mckernar	11/22/13 09:20
Indeno(1,2,3-cd)pyrene	14.13	Assign Peak	mckernar	11/22/13 09:20
Dibenz(a,h)anthracene	14.17	Assign Peak	mckernar	11/22/13 09:20
Benzo(g,h,i)perylene	14.46	Assign Peak	mckernar	11/22/13 09:20

Lab Sample ID: IC 480-153818/3 Client Sample ID:

Date Analyzed: 11/22/13 08:02 Lab File ID: W02420.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzyl alcohol	5.55	Assign Peak	mckernar	11/22/13 09:21
3-Nitroaniline	7.92	Assign Peak	mckernar	11/22/13 09:23
2,4-Dinitrophenol	8.03	Assign Peak	mckernar	11/22/13 09:23
4-Nitrophenol	8.29	Assign Peak	mckernar	11/22/13 09:23
4,6-Dinitro-2-methylphenol	8.42	Assign Peak	mckernar	11/22/13 09:23
4-Nitroaniline	8.45	Assign Peak	mckernar	11/22/13 09:23
Pentachlorophenol	9.01	Assign Peak	mckernar	11/22/13 09:23
Indeno(1,2,3-cd)pyrene	14.13	Assign Peak	mckernar	11/22/13 09:23
Dibenz(a,h)anthracene	14.16	Assign Peak	mckernar	11/22/13 09:23
Benzo(g,h,i)perylene	14.45	Assign Peak	mckernar	11/22/13 09:23

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-50508-1

SDG No.:

Instrument ID: HP5973W Analysis Batch Number: 153818

Lab Sample ID: IC 480-153818/4 Client Sample ID:

Date Analyzed: 11/22/13 08:26 Lab File ID: W02421.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Pentachlorophenol	8.98	Assign Peak	mckernar	11/22/13 10:49

Lab Sample ID: IC 480-153818/7 Client Sample ID:

Date Analyzed: 11/22/13 09:39 Lab File ID: W02424.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Indeno(1,2,3-cd)pyrene	14.13	Assign Peak	mckernar	11/22/13 10:45

Lab Sample ID: IC 480-153818/8 Client Sample ID:

Date Analyzed: 11/22/13 10:04 Lab File ID: W02425.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Pyridine	2.91	Assign Peak	mckernar	11/22/13 10:52

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-50508-1

SDG No.:

Instrument ID: HP5973W Analysis Batch Number: 154514

Lab Sample ID: CCVIS 480-154514/2 Client Sample ID:

Date Analyzed: 11/26/13 16:03 Lab File ID: W02532.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Methylnaphthalene	7.02	Split Peak	mckernar	11/26/13 16:24
Pentachlorophenol	8.99	Peak Tail	mckernar	11/26/13 16:24

Lab Sample ID: CCV 480-154514/3 Client Sample ID:

Date Analyzed: 11/26/13 16:27 Lab File ID: W02533.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Naphthalene-d8	6.43	Assign Peak	rimmera	11/27/13 01:32

Lab Sample ID: 480-50508-3 Client Sample ID: NCR 5S

Date Analyzed: 11/26/13 20:27 Lab File ID: W02543.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Butyl benzyl phthalate	10.82	Assign Peak	rimmera	11/27/13 02:18

SAMPLE SUMMARY

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-50508-1	NCR 3S	Water	11/20/2013 1130	11/20/2013 1345
480-50508-2	NCR 4S	Water	11/20/2013 1045	11/20/2013 1345
480-50508-3	NCR 5S	Water	11/20/2013 0950	11/20/2013 1345
480-50508-3MS	NCR 5S	Water	11/20/2013 0950	11/20/2013 1345
480-50508-3MSD	NCR 5S	Water	11/20/2013 0950	11/20/2013 1345
480-50508-4	NCR 13S	Water	11/20/2013 0915	11/20/2013 1345
480-50508-5	Field Duplicate	Water	11/20/2013 0000	11/20/2013 1345
480-50508-6TB	TRIP BLANK	Water	11/20/2013 0000	11/20/2013 1345

EXECUTIVE SUMMARY - Detections

Client: N Tonawanda Water Works Job Number: 480-50508-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-50508-1	**NCR 3S**					
Di-n-butyl phthalate		0.35	J	3.8	ug/L	8270D
Aluminum		1.6	B	0.20	mg/L	6010C
Barium		0.057	B	0.0020	mg/L	6010C
Calcium		145	B	0.50	mg/L	6010C
Chromium		0.013	B	0.0040	mg/L	6010C
Cobalt		0.0020	J	0.0040	mg/L	6010C
Copper		0.010		0.010	mg/L	6010C
Iron		2.8	B	0.050	mg/L	6010C
Lead		0.0051		0.0050	mg/L	6010C
Magnesium		79.5		0.20	mg/L	6010C
Manganese		0.20		0.0030	mg/L	6010C
Nickel		0.025		0.010	mg/L	6010C
Potassium		3.1		0.50	mg/L	6010C
Sodium		8.4		1.0	mg/L	6010C
Vanadium		0.0035	J	0.0050	mg/L	6010C
Zinc		0.25	B	0.010	mg/L	6010C
480-50508-2	**NCR 4S**					
Di-n-butyl phthalate		0.32	J	3.8	ug/L	8270D
Aluminum		1.3	B	0.20	mg/L	6010C
Barium		0.078	B	0.0020	mg/L	6010C
Calcium		154	B	0.50	mg/L	6010C
Chromium		0.0020	J B	0.0040	mg/L	6010C
Copper		0.0019	J	0.010	mg/L	6010C
Iron		4.7	B	0.050	mg/L	6010C
Lead		0.0040	J	0.0050	mg/L	6010C
Magnesium		49.4		0.20	mg/L	6010C
Manganese		0.24		0.0030	mg/L	6010C
Nickel		0.0018	J	0.010	mg/L	6010C
Potassium		12.3		0.50	mg/L	6010C
Sodium		32.8		1.0	mg/L	6010C
Zinc		0.091	B	0.010	mg/L	6010C

EXECUTIVE SUMMARY - Detections

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-50508-3	**NCR 5S**					
Di-n-butyl phthalate		0.23	J	3.8	ug/L	8270D
Aluminum		12.6	B	0.20	mg/L	6010C
Barium		0.31	B	0.0020	mg/L	6010C
Beryllium		0.00046	J	0.0020	mg/L	6010C
Cadmium		0.0015		0.0010	mg/L	6010C
Calcium		174	B	0.50	mg/L	6010C
Chromium		0.030	B	0.0040	mg/L	6010C
Cobalt		0.0057		0.0040	mg/L	6010C
Copper		0.036		0.010	mg/L	6010C
Iron		14.2	B	0.050	mg/L	6010C
Lead		0.027		0.0050	mg/L	6010C
Magnesium		78.1		0.20	mg/L	6010C
Manganese		0.54		0.0030	mg/L	6010C
Nickel		0.029		0.010	mg/L	6010C
Potassium		3.9		0.50	mg/L	6010C
Sodium		25.7		1.0	mg/L	6010C
Vanadium		0.021		0.0050	mg/L	6010C
Zinc		0.19	B	0.010	mg/L	6010C
480-50508-4	**NCR 13S**					
Di-n-butyl phthalate		0.33	J	3.4	ug/L	8270D
Aluminum		5.4	B	0.20	mg/L	6010C
Barium		0.088	B	0.0020	mg/L	6010C
Cadmium		0.0015		0.0010	mg/L	6010C
Calcium		198	B	0.50	mg/L	6010C
Chromium		0.024	B	0.0040	mg/L	6010C
Cobalt		0.0014	J	0.0040	mg/L	6010C
Copper		0.012		0.010	mg/L	6010C
Iron		10.7	B	0.050	mg/L	6010C
Lead		0.0087		0.0050	mg/L	6010C
Magnesium		77.4		0.20	mg/L	6010C
Manganese		0.049		0.0030	mg/L	6010C
Nickel		0.013		0.010	mg/L	6010C
Potassium		2.2		0.50	mg/L	6010C
Sodium		18.8		1.0	mg/L	6010C
Vanadium		0.014		0.0050	mg/L	6010C
Zinc		0.41	B	0.010	mg/L	6010C

EXECUTIVE SUMMARY - Detections

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-50508-5	**FIELD DUPLICATE**					
Di-n-butyl phthalate		0.26	J	3.4	ug/L	8270D
Aluminum		0.80	B	0.20	mg/L	6010C
Barium		0.067	B	0.0020	mg/L	6010C
Cadmium		0.00074	J	0.0010	mg/L	6010C
Calcium		195	B	0.50	mg/L	6010C
Chromium		0.0046	B	0.0040	mg/L	6010C
Copper		0.0065	J	0.010	mg/L	6010C
Iron		1.3	B	0.050	mg/L	6010C
Lead		0.0035	J	0.0050	mg/L	6010C
Magnesium		71.0		0.20	mg/L	6010C
Manganese		0.0073		0.0030	mg/L	6010C
Nickel		0.0042	J	0.010	mg/L	6010C
Potassium		1.8		0.50	mg/L	6010C
Sodium		16.7		1.0	mg/L	6010C
Vanadium		0.0026	J	0.0050	mg/L	6010C
Zinc		0.030	B	0.010	mg/L	6010C

METHOD SUMMARY

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL BUF	SW846 8270D	
Liquid-Liquid Extraction (Separatory Funnel)	TAL BUF		SW846 3510C
Metals (ICP)	TAL BUF	SW846 6010C	
Preparation, Total Metals	TAL BUF		SW846 3005A
Mercury (CVAA)	TAL BUF	SW846 7470A	
Preparation, Mercury	TAL BUF		SW846 7470A

Lab References:

TAL BUF = TestAmerica Buffalo

Method References:

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

METHOD / ANALYST SUMMARY

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method	Analyst	Analyst ID
SW846 8260C	Dias, Nicole M	NMD1
SW846 8270D	McKernan, Ryan M	RMM
SW846 6010C	Hanks, Lisa M	LMH
SW846 7470A	Kacalski, Jason R	JRK

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-50508-1 | Date Sampled: 11/20/2013 1130
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8204.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1419			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1419				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-50508-1 | Date Sampled: 11/20/2013 1130
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8204.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1419			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1419				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
Toluene-d8 (Surr)	105		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-50508-2 | Date Sampled: 11/20/2013 1045
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8205.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1440			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-50508-2 | Date Sampled: 11/20/2013 1045
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8205.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1440			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1440				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
Toluene-d8 (Surr)	105		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-50508-3 | Date Sampled: 11/20/2013 0950
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8206.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1502			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1502				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-50508-3 | Date Sampled: 11/20/2013 0950
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8206.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1502			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1502				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
Toluene-d8 (Surr)	103		71 - 126
4-Bromofluorobenzene (Surr)	100		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-50508-4 | Date Sampled: 11/20/2013 0915
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8209.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1606			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1606				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-50508-4 | Date Sampled: 11/20/2013 0915
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8209.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1606			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1606				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 137
Toluene-d8 (Surr)	104		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **Field Duplicate**

Lab Sample ID: 480-50508-5 | Date Sampled: 11/20/2013 0000
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8210.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1627			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1627				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Client Sample ID: **Field Duplicate**

Lab Sample ID: 480-50508-5
Client Matrix: Water

Date Sampled: 11/20/2013 0000
Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8210.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1627			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1627				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
Toluene-d8 (Surr)	105		71 - 126
4-Bromofluorobenzene (Surr)	105		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-50508-6TB | Date Sampled: 11/20/2013 0000
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8211.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1648			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1648				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-50508-6TB | Date Sampled: 11/20/2013 0000
Client Matrix: Water | Date Received: 11/20/2013 1345

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	D8211.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1648			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1648				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
Toluene-d8 (Surr)	105		71 - 126
4-Bromofluorobenzene (Surr)	108		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-50508-1 | Date Sampled: 11/20/2013 1130
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02541.D
Dilution:	1.0			Initial Weight/Volume:	329.7 mL
Analysis Date:	11/26/2013 1939			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	ND		0.50	3.8
bis (2-chloroisopropyl) ether	ND		0.39	3.8
2,4,5-Trichlorophenol	ND		0.36	3.8
2,4,6-Trichlorophenol	ND		0.46	3.8
2,4-Dichlorophenol	ND		0.39	3.8
2,4-Dimethylphenol	ND		0.38	3.8
2,4-Dinitrophenol	ND		1.7	7.6
2,4-Dinitrotoluene	ND		0.34	3.8
2,6-Dinitrotoluene	ND		0.30	3.8
2-Chloronaphthalene	ND		0.35	3.8
2-Chlorophenol	ND		0.40	3.8
2-Methylnaphthalene	ND		0.45	3.8
2-Methylphenol	ND		0.30	3.8
2-Nitroaniline	ND		0.32	7.6
2-Nitrophenol	ND		0.36	3.8
3,3'-Dichlorobenzidine	ND		0.30	3.8
3-Nitroaniline	ND		0.36	7.6
4,6-Dinitro-2-methylphenol	ND		1.7	7.6
4-Bromophenyl phenyl ether	ND		0.34	3.8
4-Chloro-3-methylphenol	ND		0.34	3.8
4-Chloroaniline	ND		0.45	3.8
4-Chlorophenyl phenyl ether	ND		0.27	3.8
4-Methylphenol	ND		0.27	7.6
4-Nitroaniline	ND		0.19	7.6
4-Nitrophenol	ND		1.2	7.6
Acenaphthene	ND		0.31	3.8
Acenaphthylene	ND		0.29	3.8
Acetophenone	ND		0.41	3.8
Anthracene	ND		0.21	3.8
Atrazine	ND		0.35	3.8
Benzaldehyde	ND		0.20	3.8
Benzo(a)anthracene	ND		0.27	3.8
Benzo(a)pyrene	ND		0.36	3.8
Benzo(b)fluoranthene	ND		0.26	3.8
Benzo(g,h,i)perylene	ND		0.27	3.8
Benzo(k)fluoranthene	ND		0.55	3.8
Bis(2-chloroethoxy)methane	ND		0.27	3.8
Bis(2-chloroethyl)ether	ND		0.30	3.8
Bis(2-ethylhexyl) phthalate	ND		1.4	3.8
Butyl benzyl phthalate	ND		0.32	3.8
Caprolactam	ND		1.7	3.8
Carbazole	ND		0.23	3.8
Chrysene	ND		0.25	3.8
Di-n-butyl phthalate	0.35	J	0.24	3.8
Di-n-octyl phthalate	ND		0.36	3.8
Dibenz(a,h)anthracene	ND		0.32	3.8

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-50508-1 | Date Sampled: 11/20/2013 1130
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02541.D
Dilution:	1.0			Initial Weight/Volume:	329.7 mL
Analysis Date:	11/26/2013 1939			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	ND		0.39	7.6
Diethyl phthalate	ND		0.17	3.8
Dimethyl phthalate	ND		0.27	3.8
Fluoranthene	ND		0.30	3.8
Fluorene	ND		0.27	3.8
Hexachlorobenzene	ND		0.39	3.8
Hexachlorobutadiene	ND		0.52	3.8
Hexachlorocyclopentadiene	ND		0.45	3.8
Hexachloroethane	ND		0.45	3.8
Indeno(1,2,3-cd)pyrene	ND		0.36	3.8
Isophorone	ND		0.33	3.8
N-Nitrosodi-n-propylamine	ND		0.41	3.8
N-Nitrosodiphenylamine	ND		0.39	3.8
Naphthalene	ND		0.58	3.8
Nitrobenzene	ND		0.22	3.8
Pentachlorophenol	ND		1.7	7.6
Phenanthrene	ND		0.33	3.8
Phenol	ND		0.30	3.8
Pyrene	ND		0.26	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	93		52 - 132
2-Fluorobiphenyl	87		48 - 120
2-Fluorophenol	50		20 - 120
Nitrobenzene-d5	89		46 - 120
p-Terphenyl-d14	111		67 - 150
Phenol-d5	26		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-50508-2 | Date Sampled: 11/20/2013 1045
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02542.D
Dilution:	1.0			Initial Weight/Volume:	331.1 mL
Analysis Date:	11/26/2013 2003			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	ND		0.49	3.8
bis (2-chloroisopropyl) ether	ND		0.39	3.8
2,4,5-Trichlorophenol	ND		0.36	3.8
2,4,6-Trichlorophenol	ND		0.46	3.8
2,4-Dichlorophenol	ND		0.39	3.8
2,4-Dimethylphenol	ND		0.38	3.8
2,4-Dinitrophenol	ND		1.7	7.6
2,4-Dinitrotoluene	ND		0.34	3.8
2,6-Dinitrotoluene	ND		0.30	3.8
2-Chloronaphthalene	ND		0.35	3.8
2-Chlorophenol	ND		0.40	3.8
2-Methylnaphthalene	ND		0.45	3.8
2-Methylphenol	ND		0.30	3.8
2-Nitroaniline	ND		0.32	7.6
2-Nitrophenol	ND		0.36	3.8
3,3'-Dichlorobenzidine	ND		0.30	3.8
3-Nitroaniline	ND		0.36	7.6
4,6-Dinitro-2-methylphenol	ND		1.7	7.6
4-Bromophenyl phenyl ether	ND		0.34	3.8
4-Chloro-3-methylphenol	ND		0.34	3.8
4-Chloroaniline	ND		0.45	3.8
4-Chlorophenyl phenyl ether	ND		0.26	3.8
4-Methylphenol	ND		0.27	7.6
4-Nitroaniline	ND		0.19	7.6
4-Nitrophenol	ND		1.1	7.6
Acenaphthene	ND		0.31	3.8
Acenaphthylene	ND		0.29	3.8
Acetophenone	ND		0.41	3.8
Anthracene	ND		0.21	3.8
Atrazine	ND		0.35	3.8
Benzaldehyde	ND		0.20	3.8
Benzo(a)anthracene	ND		0.27	3.8
Benzo(a)pyrene	ND		0.35	3.8
Benzo(b)fluoranthene	ND		0.26	3.8
Benzo(g,h,i)perylene	ND		0.26	3.8
Benzo(k)fluoranthene	ND		0.55	3.8
Bis(2-chloroethoxy)methane	ND		0.26	3.8
Bis(2-chloroethyl)ether	ND		0.30	3.8
Bis(2-ethylhexyl) phthalate	ND		1.4	3.8
Butyl benzyl phthalate	ND		0.32	3.8
Caprolactam	ND		1.7	3.8
Carbazole	ND		0.23	3.8
Chrysene	ND		0.25	3.8
Di-n-butyl phthalate	0.32	J	0.23	3.8
Di-n-octyl phthalate	ND		0.35	3.8
Dibenz(a,h)anthracene	ND		0.32	3.8

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-50508-2 | Date Sampled: 11/20/2013 1045
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02542.D
Dilution:	1.0			Initial Weight/Volume:	331.1 mL
Analysis Date:	11/26/2013 2003			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	ND		0.39	7.6
Diethyl phthalate	ND		0.17	3.8
Dimethyl phthalate	ND		0.27	3.8
Fluoranthene	ND		0.30	3.8
Fluorene	ND		0.27	3.8
Hexachlorobenzene	ND		0.39	3.8
Hexachlorobutadiene	ND		0.51	3.8
Hexachlorocyclopentadiene	ND		0.45	3.8
Hexachloroethane	ND		0.45	3.8
Indeno(1,2,3-cd)pyrene	ND		0.35	3.8
Isophorone	ND		0.32	3.8
N-Nitrosodi-n-propylamine	ND		0.41	3.8
N-Nitrosodiphenylamine	ND		0.39	3.8
Naphthalene	ND		0.57	3.8
Nitrobenzene	ND		0.22	3.8
Pentachlorophenol	ND		1.7	7.6
Phenanthrene	ND		0.33	3.8
Phenol	ND		0.29	3.8
Pyrene	ND		0.26	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	69		52 - 132
2-Fluorobiphenyl	79		48 - 120
2-Fluorophenol	34		20 - 120
Nitrobenzene-d5	82		46 - 120
p-Terphenyl-d14	102		67 - 150
Phenol-d5	18		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-50508-3 | Date Sampled: 11/20/2013 0950
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02543.D
Dilution:	1.0			Initial Weight/Volume:	332.7 mL
Analysis Date:	11/26/2013 2027			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	ND		0.49	3.8
bis (2-chloroisopropyl) ether	ND		0.39	3.8
2,4,5-Trichlorophenol	ND		0.36	3.8
2,4,6-Trichlorophenol	ND		0.46	3.8
2,4-Dichlorophenol	ND		0.38	3.8
2,4-Dimethylphenol	ND		0.38	3.8
2,4-Dinitrophenol	ND		1.7	7.5
2,4-Dinitrotoluene	ND		0.34	3.8
2,6-Dinitrotoluene	ND		0.30	3.8
2-Chloronaphthalene	ND		0.35	3.8
2-Chlorophenol	ND		0.40	3.8
2-Methylnaphthalene	ND		0.45	3.8
2-Methylphenol	ND		0.30	3.8
2-Nitroaniline	ND		0.32	7.5
2-Nitrophenol	ND		0.36	3.8
3,3'-Dichlorobenzidine	ND		0.30	3.8
3-Nitroaniline	ND		0.36	7.5
4,6-Dinitro-2-methylphenol	ND		1.7	7.5
4-Bromophenyl phenyl ether	ND		0.34	3.8
4-Chloro-3-methylphenol	ND		0.34	3.8
4-Chloroaniline	ND		0.44	3.8
4-Chlorophenyl phenyl ether	ND		0.26	3.8
4-Methylphenol	ND		0.27	7.5
4-Nitroaniline	ND		0.19	7.5
4-Nitrophenol	ND		1.1	7.5
Acenaphthene	ND		0.31	3.8
Acenaphthylene	ND		0.29	3.8
Acetophenone	ND		0.41	3.8
Anthracene	ND		0.21	3.8
Atrazine	ND		0.35	3.8
Benzaldehyde	ND		0.20	3.8
Benzo(a)anthracene	ND		0.27	3.8
Benzo(a)pyrene	ND		0.35	3.8
Benzo(b)fluoranthene	ND		0.26	3.8
Benzo(g,h,i)perylene	ND		0.26	3.8
Benzo(k)fluoranthene	ND		0.55	3.8
Bis(2-chloroethoxy)methane	ND		0.26	3.8
Bis(2-chloroethyl)ether	ND		0.30	3.8
Bis(2-ethylhexyl) phthalate	ND		1.4	3.8
Butyl benzyl phthalate	ND		0.32	3.8
Caprolactam	ND		1.7	3.8
Carbazole	ND		0.23	3.8
Chrysene	ND		0.25	3.8
Di-n-butyl phthalate	0.23	J	0.23	3.8
Di-n-octyl phthalate	ND		0.35	3.8
Dibenz(a,h)anthracene	ND		0.32	3.8

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-50508-3 | Date Sampled: 11/20/2013 0950
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02543.D
Dilution:	1.0			Initial Weight/Volume:	332.7 mL
Analysis Date:	11/26/2013 2027			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	ND		0.38	7.5
Diethyl phthalate	ND		0.17	3.8
Dimethyl phthalate	ND		0.27	3.8
Fluoranthene	ND		0.30	3.8
Fluorene	ND		0.27	3.8
Hexachlorobenzene	ND		0.38	3.8
Hexachlorobutadiene	ND		0.51	3.8
Hexachlorocyclopentadiene	ND		0.44	3.8
Hexachloroethane	ND		0.44	3.8
Indeno(1,2,3-cd)pyrene	ND		0.35	3.8
Isophorone	ND		0.32	3.8
N-Nitrosodi-n-propylamine	ND		0.41	3.8
N-Nitrosodiphenylamine	ND		0.38	3.8
Naphthalene	ND		0.57	3.8
Nitrobenzene	ND		0.22	3.8
Pentachlorophenol	ND		1.7	7.5
Phenanthrene	ND		0.33	3.8
Phenol	ND		0.29	3.8
Pyrene	ND		0.26	3.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	91		52 - 132
2-Fluorobiphenyl	95		48 - 120
2-Fluorophenol	49		20 - 120
Nitrobenzene-d5	93		46 - 120
p-Terphenyl-d14	124		67 - 150
Phenol-d5	26		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-50508-4 | Date Sampled: 11/20/2013 0915
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02544.D
Dilution:	1.0			Initial Weight/Volume:	367.5 mL
Analysis Date:	11/26/2013 2051			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	ND		0.44	3.4
bis (2-chloroisopropyl) ether	ND		0.35	3.4
2,4,5-Trichlorophenol	ND		0.33	3.4
2,4,6-Trichlorophenol	ND		0.41	3.4
2,4-Dichlorophenol	ND		0.35	3.4
2,4-Dimethylphenol	ND		0.34	3.4
2,4-Dinitrophenol	ND		1.5	6.8
2,4-Dinitrotoluene	ND		0.30	3.4
2,6-Dinitrotoluene	ND		0.27	3.4
2-Chloronaphthalene	ND		0.31	3.4
2-Chlorophenol	ND		0.36	3.4
2-Methylnaphthalene	ND		0.41	3.4
2-Methylphenol	ND		0.27	3.4
2-Nitroaniline	ND		0.29	6.8
2-Nitrophenol	ND		0.33	3.4
3,3'-Dichlorobenzidine	ND		0.27	3.4
3-Nitroaniline	ND		0.33	6.8
4,6-Dinitro-2-methylphenol	ND		1.5	6.8
4-Bromophenyl phenyl ether	ND		0.31	3.4
4-Chloro-3-methylphenol	ND		0.31	3.4
4-Chloroaniline	ND		0.40	3.4
4-Chlorophenyl phenyl ether	ND		0.24	3.4
4-Methylphenol	ND		0.24	6.8
4-Nitroaniline	ND		0.17	6.8
4-Nitrophenol	ND		1.0	6.8
Acenaphthene	ND		0.28	3.4
Acenaphthylene	ND		0.26	3.4
Acetophenone	ND		0.37	3.4
Anthracene	ND		0.19	3.4
Atrazine	ND		0.31	3.4
Benzaldehyde	ND		0.18	3.4
Benzo(a)anthracene	ND		0.24	3.4
Benzo(a)pyrene	ND		0.32	3.4
Benzo(b)fluoranthene	ND		0.23	3.4
Benzo(g,h,i)perylene	ND		0.24	3.4
Benzo(k)fluoranthene	ND		0.50	3.4
Bis(2-chloroethoxy)methane	ND		0.24	3.4
Bis(2-chloroethyl)ether	ND		0.27	3.4
Bis(2-ethylhexyl) phthalate	ND		1.2	3.4
Butyl benzyl phthalate	ND		0.29	3.4
Caprolactam	ND		1.5	3.4
Carbazole	ND		0.20	3.4
Chrysene	ND		0.22	3.4
Di-n-butyl phthalate	0.33	J	0.21	3.4
Di-n-octyl phthalate	ND		0.32	3.4
Dibenz(a,h)anthracene	ND		0.29	3.4

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-50508-4 | Date Sampled: 11/20/2013 0915
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02544.D
Dilution:	1.0			Initial Weight/Volume:	367.5 mL
Analysis Date:	11/26/2013 2051			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	ND		0.35	6.8
Diethyl phthalate	ND		0.15	3.4
Dimethyl phthalate	ND		0.24	3.4
Fluoranthene	ND		0.27	3.4
Fluorene	ND		0.24	3.4
Hexachlorobenzene	ND		0.35	3.4
Hexachlorobutadiene	ND		0.46	3.4
Hexachlorocyclopentadiene	ND		0.40	3.4
Hexachloroethane	ND		0.40	3.4
Indeno(1,2,3-cd)pyrene	ND		0.32	3.4
Isophorone	ND		0.29	3.4
N-Nitrosodi-n-propylamine	ND		0.37	3.4
N-Nitrosodiphenylamine	ND		0.35	3.4
Naphthalene	ND		0.52	3.4
Nitrobenzene	ND		0.20	3.4
Pentachlorophenol	ND		1.5	6.8
Phenanthrene	ND		0.30	3.4
Phenol	ND		0.27	3.4
Pyrene	ND		0.23	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	87		52 - 132
2-Fluorobiphenyl	71		48 - 120
2-Fluorophenol	35		20 - 120
Nitrobenzene-d5	71		46 - 120
p-Terphenyl-d14	106		67 - 150
Phenol-d5	20		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **Field Duplicate**

Lab Sample ID: 480-50508-5 | Date Sampled: 11/20/2013 0000
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02545.D
Dilution:	1.0			Initial Weight/Volume:	364.8 mL
Analysis Date:	11/26/2013 2115			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Biphenyl	ND		0.45	3.4
bis (2-chloroisopropyl) ether	ND		0.36	3.4
2,4,5-Trichlorophenol	ND		0.33	3.4
2,4,6-Trichlorophenol	ND		0.42	3.4
2,4-Dichlorophenol	ND		0.35	3.4
2,4-Dimethylphenol	ND		0.34	3.4
2,4-Dinitrophenol	ND		1.5	6.9
2,4-Dinitrotoluene	ND		0.31	3.4
2,6-Dinitrotoluene	ND		0.27	3.4
2-Chloronaphthalene	ND		0.32	3.4
2-Chlorophenol	ND		0.36	3.4
2-Methylnaphthalene	ND		0.41	3.4
2-Methylphenol	ND		0.27	3.4
2-Nitroaniline	ND		0.29	6.9
2-Nitrophenol	ND		0.33	3.4
3,3'-Dichlorobenzidine	ND		0.27	3.4
3-Nitroaniline	ND		0.33	6.9
4,6-Dinitro-2-methylphenol	ND		1.5	6.9
4-Bromophenyl phenyl ether	ND		0.31	3.4
4-Chloro-3-methylphenol	ND		0.31	3.4
4-Chloroaniline	ND		0.40	3.4
4-Chlorophenyl phenyl ether	ND		0.24	3.4
4-Methylphenol	ND		0.25	6.9
4-Nitroaniline	ND		0.17	6.9
4-Nitrophenol	ND		1.0	6.9
Acenaphthene	ND		0.28	3.4
Acenaphthylene	ND		0.26	3.4
Acetophenone	ND		0.37	3.4
Anthracene	ND		0.19	3.4
Atrazine	ND		0.32	3.4
Benzaldehyde	ND		0.18	3.4
Benzo(a)anthracene	ND		0.25	3.4
Benzo(a)pyrene	ND		0.32	3.4
Benzo(b)fluoranthene	ND		0.23	3.4
Benzo(g,h,i)perylene	ND		0.24	3.4
Benzo(k)fluoranthene	ND		0.50	3.4
Bis(2-chloroethoxy)methane	ND		0.24	3.4
Bis(2-chloroethyl)ether	ND		0.27	3.4
Bis(2-ethylhexyl) phthalate	ND		1.2	3.4
Butyl benzyl phthalate	ND		0.29	3.4
Caprolactam	ND		1.5	3.4
Carbazole	ND		0.21	3.4
Chrysene	ND		0.23	3.4
Di-n-butyl phthalate	0.26	J	0.21	3.4
Di-n-octyl phthalate	ND		0.32	3.4
Dibenz(a,h)anthracene	ND		0.29	3.4

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **Field Duplicate**

Lab Sample ID: 480-50508-5 | Date Sampled: 11/20/2013 0000
Client Matrix: Water | Date Received: 11/20/2013 1345

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Prep Method:	3510C	Prep Batch:	480-154383	Lab File ID:	W02545.D
Dilution:	1.0			Initial Weight/Volume:	364.8 mL
Analysis Date:	11/26/2013 2115			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dibenzofuran	ND		0.35	6.9
Diethyl phthalate	ND		0.15	3.4
Dimethyl phthalate	ND		0.25	3.4
Fluoranthene	ND		0.27	3.4
Fluorene	ND		0.25	3.4
Hexachlorobenzene	ND		0.35	3.4
Hexachlorobutadiene	ND		0.47	3.4
Hexachlorocyclopentadiene	ND		0.40	3.4
Hexachloroethane	ND		0.40	3.4
Indeno(1,2,3-cd)pyrene	ND		0.32	3.4
Isophorone	ND		0.29	3.4
N-Nitrosodi-n-propylamine	ND		0.37	3.4
N-Nitrosodiphenylamine	ND		0.35	3.4
Naphthalene	ND		0.52	3.4
Nitrobenzene	ND		0.20	3.4
Pentachlorophenol	ND		1.5	6.9
Phenanthrene	ND		0.30	3.4
Phenol	ND		0.27	3.4
Pyrene	ND		0.23	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	91		52 - 132
2-Fluorobiphenyl	90		48 - 120
2-Fluorophenol	45		20 - 120
Nitrobenzene-d5	86		46 - 120
p-Terphenyl-d14	114		67 - 150
Phenol-d5	24		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-50508-1 | Date Sampled: 11/20/2013 1130
Client Matrix: Water | Date Received: 11/20/2013 1345

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Prep Method:	3005A	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1702			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	1.6	B	0.060	0.20
Antimony	ND		0.0068	0.020
Barium	0.057	B	0.00070	0.0020
Beryllium	ND		0.00030	0.0020
Cadmium	ND		0.00050	0.0010
Calcium	145	B	0.10	0.50
Chromium	0.013	B	0.0010	0.0040
Cobalt	0.0020	J	0.00063	0.0040
Copper	0.010		0.0016	0.010
Iron	2.8	B	0.019	0.050
Lead	0.0051		0.0030	0.0050
Magnesium	79.5		0.043	0.20
Manganese	0.20		0.00040	0.0030
Nickel	0.025		0.0013	0.010
Potassium	3.1		0.10	0.50
Selenium	ND		0.0087	0.015
Silver	ND		0.0017	0.0030
Sodium	8.4		0.32	1.0
Thallium	ND		0.010	0.020
Vanadium	0.0035	J	0.0015	0.0050
Zinc	0.25	B	0.0015	0.010

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1236			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.00012	0.00020

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-50508-2 | Date Sampled: 11/20/2013 1045
Client Matrix: Water | Date Received: 11/20/2013 1345

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Prep Method:	3005A	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1705			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	1.3	B	0.060	0.20
Antimony	ND		0.0068	0.020
Barium	0.078	B	0.00070	0.0020
Beryllium	ND		0.00030	0.0020
Cadmium	ND		0.00050	0.0010
Calcium	154	B	0.10	0.50
Chromium	0.0020	J B	0.0010	0.0040
Cobalt	ND		0.00063	0.0040
Copper	0.0019	J	0.0016	0.010
Iron	4.7	B	0.019	0.050
Lead	0.0040	J	0.0030	0.0050
Magnesium	49.4		0.043	0.20
Manganese	0.24		0.00040	0.0030
Nickel	0.0018	J	0.0013	0.010
Potassium	12.3		0.10	0.50
Selenium	ND		0.0087	0.015
Silver	ND		0.0017	0.0030
Sodium	32.8		0.32	1.0
Thallium	ND		0.010	0.020
Vanadium	ND		0.0015	0.0050
Zinc	0.091	B	0.0015	0.010

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1239			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.00012	0.00020

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-50508-3 | Date Sampled: 11/20/2013 0950
Client Matrix: Water | Date Received: 11/20/2013 1345

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Prep Method:	3005A	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1707			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	12.6	B	0.060	0.20
Antimony	ND		0.0068	0.020
Barium	0.31	B	0.00070	0.0020
Beryllium	0.00046	J	0.00030	0.0020
Cadmium	0.0015		0.00050	0.0010
Calcium	174	B	0.10	0.50
Chromium	0.030	B	0.0010	0.0040
Cobalt	0.0057		0.00063	0.0040
Copper	0.036		0.0016	0.010
Iron	14.2	B	0.019	0.050
Lead	0.027		0.0030	0.0050
Magnesium	78.1		0.043	0.20
Manganese	0.54		0.00040	0.0030
Nickel	0.029		0.0013	0.010
Potassium	3.9		0.10	0.50
Selenium	ND		0.0087	0.015
Silver	ND		0.0017	0.0030
Sodium	25.7		0.32	1.0
Thallium	ND		0.010	0.020
Vanadium	0.021		0.0015	0.0050
Zinc	0.19	B	0.0015	0.010

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1240			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.00012	0.00020

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-50508-4 | Date Sampled: 11/20/2013 0915
Client Matrix: Water | Date Received: 11/20/2013 1345

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Prep Method:	3005A	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1728			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	5.4	B	0.060	0.20
Antimony	ND		0.0068	0.020
Barium	0.088	B	0.00070	0.0020
Beryllium	ND		0.00030	0.0020
Cadmium	0.0015		0.00050	0.0010
Calcium	198	B	0.10	0.50
Chromium	0.024	B	0.0010	0.0040
Cobalt	0.0014	J	0.00063	0.0040
Copper	0.012		0.0016	0.010
Iron	10.7	B	0.019	0.050
Lead	0.0087		0.0030	0.0050
Magnesium	77.4		0.043	0.20
Manganese	0.049		0.00040	0.0030
Nickel	0.013		0.0013	0.010
Potassium	2.2		0.10	0.50
Selenium	ND		0.0087	0.015
Silver	ND		0.0017	0.0030
Sodium	18.8		0.32	1.0
Thallium	ND		0.010	0.020
Vanadium	0.014		0.0015	0.0050
Zinc	0.41	B	0.0015	0.010

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1251			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.00012	0.00020

Client: N Tonawanda Water Works | Job Number: 480-50508-1

Client Sample ID: **Field Duplicate**

Lab Sample ID: 480-50508-5 | Date Sampled: 11/20/2013 0000
Client Matrix: Water | Date Received: 11/20/2013 1345

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Prep Method:	3005A	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1731			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	0.80	B	0.060	0.20
Antimony	ND		0.0068	0.020
Barium	0.067	B	0.00070	0.0020
Beryllium	ND		0.00030	0.0020
Cadmium	0.00074	J	0.00050	0.0010
Calcium	195	B	0.10	0.50
Chromium	0.0046	B	0.0010	0.0040
Cobalt	ND		0.00063	0.0040
Copper	0.0065	J	0.0016	0.010
Iron	1.3	B	0.019	0.050
Lead	0.0035	J	0.0030	0.0050
Magnesium	71.0		0.043	0.20
Manganese	0.0073		0.00040	0.0030
Nickel	0.0042	J	0.0013	0.010
Potassium	1.8		0.10	0.50
Selenium	ND		0.0087	0.015
Silver	ND		0.0017	0.0030
Sodium	16.7		0.32	1.0
Thallium	ND		0.010	0.020
Vanadium	0.0026	J	0.0015	0.0050
Zinc	0.030	B	0.0015	0.010

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1253			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.00012	0.00020

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec
480-50508-1	NCR 3S	104	105	105
480-50508-2	NCR 4S	101	105	105
480-50508-3	NCR 5S	99	103	100
480-50508-4	NCR 13S	103	104	105
480-50508-5	Field Duplicate	102	105	105
480-50508-6	TRIP BLANK	104	105	108
MB 480-154726/6		105	103	109
LCS 480-154726/5		102	103	104
480-50508-3 MS	NCR 5S MS	100	103	100
480-50508-3 MSD	NCR 5S MSD	99	103	99

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
TOL = Toluene-d8 (Surr)	71-126
BFB = 4-Bromofluorobenzene (Surr)	73-120

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	2FP %Rec	PHL %Rec	NBZ %Rec	FBP %Rec	TBP %Rec	TPH %Rec
480-50508-1	NCR 3S	50	26	89	87	93	111
480-50508-2	NCR 4S	34	18	82	79	69	102
480-50508-3	NCR 5S	49	26	93	95	91	124
480-50508-4	NCR 13S	35	20	71	71	87	106
480-50508-5	Field Duplicate	45	24	86	90	91	114
MB 480-154383/1-A		63	38	95	93	85	118
LCS 480-154383/2-A		62	41	96	101	103	108
480-50508-3 MS	NCR 5S MS	44	26	78	87	94	95
480-50508-3 MSD	NCR 5S MSD	47	27	86	92	95	92

Surrogate	Acceptance Limits
2FP = 2-Fluorophenol	20-120
PHL = Phenol-d5	16-120
NBZ = Nitrobenzene-d5	46-120
FBP = 2-Fluorobiphenyl	48-120
TBP = 2,4,6-Tribromophenol	52-132
TPH = p-Terphenyl-d14	67-150

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method Blank - Batch: 480-154726

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-154726/6	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	D8203.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1341	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1341				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloropropane	ND		0.72	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
2-Hexanone	ND		1.2	5.0
2-Butanone (MEK)	ND		1.3	10
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Benzene	ND		0.41	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Dibromochloromethane	ND		0.32	1.0
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Ethylbenzene	ND		0.74	1.0
Isopropylbenzene	ND		0.79	1.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
Styrene	ND		0.73	1.0
Tetrachloroethene	ND		0.36	1.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
Trichloroethene	ND		0.46	1.0

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method Blank - Batch: 480-154726

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-154726/6	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	D8203.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1341	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1341				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Trichlorofluoromethane	ND		0.88	1.0
Vinyl chloride	ND		0.90	1.0
Xylenes, Total	ND		0.66	2.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105	66 - 137
Toluene-d8 (Surr)	103	71 - 126
4-Bromofluorobenzene (Surr)	109	73 - 120

Lab Control Sample - Batch: 480-154726

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-154726/5	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	D8202.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1320	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1320				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	27.7	111	71 - 129	
1,1-Dichloroethene	25.0	28.4	114	58 - 121	
1,2-Dichlorobenzene	25.0	27.1	108	80 - 124	
1,2-Dichloroethane	25.0	27.1	109	75 - 127	
Benzene	25.0	27.7	111	71 - 124	
Chlorobenzene	25.0	27.0	108	72 - 120	
cis-1,2-Dichloroethene	25.0	27.9	112	74 - 124	
Ethylbenzene	25.0	27.6	110	77 - 123	
Methyl tert-butyl ether	25.0	27.0	108	64 - 127	
Tetrachloroethene	25.0	27.2	109	74 - 122	
Toluene	25.0	27.0	108	80 - 122	
trans-1,2-Dichloroethene	25.0	28.5	114	73 - 127	
Trichloroethene	25.0	26.0	104	74 - 123	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	66 - 137
Toluene-d8 (Surr)	103	71 - 126
4-Bromofluorobenzene (Surr)	104	73 - 120

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-154726

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-50508-3	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	D8207.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1523			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1523				
Leach Date:	N/A				

MSD Lab Sample ID:	480-50508-3	Analysis Batch:	480-154726	Instrument ID:	HP5975D
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	D8208.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/27/2013 1544			Final Weight/Volume:	5 mL
Prep Date:	11/27/2013 1544				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1-Dichloroethane	108	107	71 - 129	1	20		
1,1-Dichloroethene	114	111	58 - 121	3	16		
1,2-Dichlorobenzene	106	105	80 - 124	0	20		
1,2-Dichloroethane	103	101	75 - 127	2	20		
Benzene	111	109	71 - 124	2	13		
Chlorobenzene	108	107	72 - 120	1	25		
cis-1,2-Dichloroethene	107	107	74 - 124	0	15		
Ethylbenzene	111	110	77 - 123	1	15		
Methyl tert-butyl ether	103	103	64 - 127	1	37		
Tetrachloroethene	111	111	74 - 122	0	20		
Toluene	110	109	80 - 122	1	15		
trans-1,2-Dichloroethene	112	110	73 - 127	2	20		
Trichloroethene	104	102	74 - 123	2	16		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100	99	66 - 137
Toluene-d8 (Surr)	103	103	71 - 126
4-Bromofluorobenzene (Surr)	100	99	73 - 120

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-154726

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-50508-3	Units: ug/L	MSD Lab Sample ID:	480-50508-3	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	11/27/2013 1523		Analysis Date:	11/27/2013 1544	
Prep Date:	11/27/2013 1523		Prep Date:	11/27/2013 1544	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,1-Dichloroethane	ND	25.0	25.0	27.1	26.8
1,1-Dichloroethene	ND	25.0	25.0	28.6	27.8
1,2-Dichlorobenzene	ND	25.0	25.0	26.4	26.3
1,2-Dichloroethane	ND	25.0	25.0	25.7	25.2
Benzene	ND	25.0	25.0	27.6	27.2
Chlorobenzene	ND	25.0	25.0	27.1	26.8
cis-1,2-Dichloroethene	ND	25.0	25.0	26.8	26.9
Ethylbenzene	ND	25.0	25.0	27.8	27.5
Methyl tert-butyl ether	ND	25.0	25.0	25.7	25.9
Tetrachloroethene	ND	25.0	25.0	27.8	27.8
Toluene	ND	25.0	25.0	27.6	27.2
trans-1,2-Dichloroethene	ND	25.0	25.0	28.1	27.6
Trichloroethene	ND	25.0	25.0	26.0	25.6

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method Blank - Batch: 480-154383

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 480-154383/1-A	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Client Matrix:	Water	Prep Batch:	480-154383	Lab File ID:	W02535.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/26/2013 1714	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Biphenyl	ND		0.65	5.0
bis (2-chloroisopropyl) ether	ND		0.52	5.0
2,4,5-Trichlorophenol	ND		0.48	5.0
2,4,6-Trichlorophenol	ND		0.61	5.0
2,4-Dichlorophenol	ND		0.51	5.0
2,4-Dimethylphenol	ND		0.50	5.0
2,4-Dinitrophenol	ND		2.2	10
2,4-Dinitrotoluene	ND		0.45	5.0
2,6-Dinitrotoluene	ND		0.40	5.0
2-Chloronaphthalene	ND		0.46	5.0
2-Chlorophenol	ND		0.53	5.0
2-Methylnaphthalene	ND		0.60	5.0
2-Methylphenol	ND		0.40	5.0
2-Nitroaniline	ND		0.42	10
2-Nitrophenol	ND		0.48	5.0
3,3'-Dichlorobenzidine	ND		0.40	5.0
3-Nitroaniline	ND		0.48	10
4,6-Dinitro-2-methylphenol	ND		2.2	10
4-Bromophenyl phenyl ether	ND		0.45	5.0
4-Chloro-3-methylphenol	ND		0.45	5.0
4-Chloroaniline	ND		0.59	5.0
4-Chlorophenyl phenyl ether	ND		0.35	5.0
4-Methylphenol	ND		0.36	10
4-Nitroaniline	ND		0.25	10
4-Nitrophenol	ND		1.5	10
Acenaphthene	ND		0.41	5.0
Acenaphthylene	ND		0.38	5.0
Acetophenone	ND		0.54	5.0
Anthracene	ND		0.28	5.0
Atrazine	ND		0.46	5.0
Benzaldehyde	ND		0.27	5.0
Benzo(a)anthracene	ND		0.36	5.0
Benzo(a)pyrene	ND		0.47	5.0
Benzo(b)fluoranthene	ND		0.34	5.0
Benzo(g,h,i)perylene	ND		0.35	5.0
Benzo(k)fluoranthene	ND		0.73	5.0
Bis(2-chloroethoxy)methane	ND		0.35	5.0
Bis(2-chloroethyl)ether	ND		0.40	5.0
Bis(2-ethylhexyl) phthalate	ND		1.8	5.0
Butyl benzyl phthalate	ND		0.42	5.0
Caprolactam	ND		2.2	5.0
Carbazole	ND		0.30	5.0
Chrysene	ND		0.33	5.0
Di-n-butyl phthalate	ND		0.31	5.0
Di-n-octyl phthalate	ND		0.47	5.0

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method Blank - Batch: 480-154383

Method: 8270D
Preparation: 3510C

Lab Sample ID:	MB 480-154383/1-A	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Client Matrix:	Water	Prep Batch:	480-154383	Lab File ID:	W02535.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/26/2013 1714	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dibenz(a,h)anthracene	ND		0.42	5.0
Dibenzofuran	ND		0.51	10
Diethyl phthalate	ND		0.22	5.0
Dimethyl phthalate	ND		0.36	5.0
Fluoranthene	ND		0.40	5.0
Fluorene	ND		0.36	5.0
Hexachlorobenzene	ND		0.51	5.0
Hexachlorobutadiene	ND		0.68	5.0
Hexachlorocyclopentadiene	ND		0.59	5.0
Hexachloroethane	ND		0.59	5.0
Indeno(1,2,3-cd)pyrene	ND		0.47	5.0
Isophorone	ND		0.43	5.0
N-Nitrosodi-n-propylamine	ND		0.54	5.0
N-Nitrosodiphenylamine	ND		0.51	5.0
Naphthalene	ND		0.76	5.0
Nitrobenzene	ND		0.29	5.0
Pentachlorophenol	ND		2.2	10
Phenanthrene	ND		0.44	5.0
Phenol	ND		0.39	5.0
Pyrene	ND		0.34	5.0

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	85	52 - 132
2-Fluorobiphenyl	93	48 - 120
2-Fluorophenol	63	20 - 120
Nitrobenzene-d5	95	46 - 120
p-Terphenyl-d14	118	67 - 150
Phenol-d5	38	16 - 120

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Lab Control Sample - Batch: 480-154383

Method: 8270D
Preparation: 3510C

Lab Sample ID:	LCS 480-154383/2-A	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Client Matrix:	Water	Prep Batch:	480-154383	Lab File ID:	W02536.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	11/26/2013 1738	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,4-Dinitrotoluene	32.0	33.5	105	65 - 154	
2-Chlorophenol	32.0	27.7	87	48 - 120	
4-Chloro-3-methylphenol	32.0	29.3	92	64 - 120	
4-Nitrophenol	64.0	32.6	51	16 - 120	
Acenaphthene	32.0	30.8	96	60 - 120	
Bis(2-ethylhexyl) phthalate	32.0	38.6	120	53 - 158	
Fluorene	32.0	33.3	104	55 - 143	
Hexachloroethane	32.0	28.4	89	14 - 101	
N-Nitrosodi-n-propylamine	32.0	35.4	111	56 - 120	
Pentachlorophenol	64.0	36.8	58	39 - 136	
Phenol	32.0	13.4	42	17 - 120	
Pyrene	32.0	33.6	105	58 - 136	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	103	52 - 132
2-Fluorobiphenyl	101	48 - 120
2-Fluorophenol	62	20 - 120
Nitrobenzene-d5	96	46 - 120
p-Terphenyl-d14	108	67 - 150
Phenol-d5	41	16 - 120

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-154383

Method: 8270D
Preparation: 3510C

MS Lab Sample ID:	480-50508-3	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Client Matrix:	Water	Prep Batch:	480-154383	Lab File ID:	W02537.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	331.1 mL
Analysis Date:	11/26/2013 1802			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	480-50508-3	Analysis Batch:	480-154514	Instrument ID:	HP5973W
Client Matrix:	Water	Prep Batch:	480-154383	Lab File ID:	W02538.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	324.9 mL
Analysis Date:	11/26/2013 1826			Final Weight/Volume:	1 mL
Prep Date:	11/26/2013 0603			Injection Volume:	5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrotoluene	96	96	62 - 148	2	20		
2-Chlorophenol	68	74	48 - 120	9	25		
4-Chloro-3-methylphenol	85	84	64 - 120	0	27		
4-Nitrophenol	41	39	16 - 120	2	48		
Acenaphthene	83	86	60 - 120	5	24		
Bis(2-ethylhexyl) phthalate	94	92	53 - 158	0	15		
Fluorene	91	94	55 - 143	5	15		
Hexachloroethane	73	84	14 - 101	16	46		
N-Nitrosodi-n-propylamine	87	99	56 - 120	14	31		
Pentachlorophenol	48	47	39 - 136	1	37		
Phenol	27	29	17 - 120	9	34		
Pyrene	96	97	58 - 136	3	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	94	95	52 - 132
2-Fluorobiphenyl	87	92	48 - 120
2-Fluorophenol	44	47	20 - 120
Nitrobenzene-d5	78	86	46 - 120
p-Terphenyl-d14	95	92	67 - 150
Phenol-d5	26	27	16 - 120

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-154383

Method: 8270D
Preparation: 3510C

MS Lab Sample ID:	480-50508-3	Units: ug/L	MSD Lab Sample ID:	480-50508-3	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	11/26/2013 1802		Analysis Date:	11/26/2013 1826	
Prep Date:	11/26/2013 0603		Prep Date:	11/26/2013 0603	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
2,4-Dinitrotoluene	ND	24.2	24.6	23.3	23.7
2-Chlorophenol	ND	24.2	24.6	16.5	18.1
4-Chloro-3-methylphenol	ND	24.2	24.6	20.6	20.6
4-Nitrophenol	ND	48.3	49.2	19.6	19.1
Acenaphthene	ND	24.2	24.6	20.1	21.1
Bis(2-ethylhexyl) phthalate	ND	24.2	24.6	22.7	22.7
Fluorene	ND	24.2	24.6	22.0	23.1
Hexachloroethane	ND	24.2	24.6	17.7	20.8
N-Nitrosodi-n-propylamine	ND	24.2	24.6	21.0	24.3
Pentachlorophenol	ND	48.3	49.2	23.2	23.4
Phenol	ND	24.2	24.6	6.59	7.19
Pyrene	ND	24.2	24.6	23.2	23.8

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method Blank - Batch: 480-153572

Method: 6010C
Preparation: 3005A

Lab Sample ID:	MB 480-153572/1-A	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1657	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	0.0993	J	0.060	0.20
Antimony	ND		0.0068	0.020
Barium	0.000840	J	0.00070	0.0020
Beryllium	ND		0.00030	0.0020
Cadmium	ND		0.00050	0.0010
Calcium	0.280	J	0.10	0.50
Chromium	0.00323	J	0.0010	0.0040
Cobalt	ND		0.00063	0.0040
Copper	ND		0.0016	0.010
Magnesium	ND		0.043	0.20
Nickel	ND		0.0013	0.010
Potassium	ND		0.10	0.50
Selenium	ND		0.0087	0.015
Silver	ND		0.0017	0.0030
Sodium	ND		0.32	1.0
Thallium	ND		0.010	0.020
Vanadium	ND		0.0015	0.0050
Zinc	0.00242	J	0.0015	0.010

Method Blank - Batch: 480-153572

Method: 6010C
Preparation: 3005A

Lab Sample ID:	MB 480-153572/1-A	Analysis Batch:	480-155131	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I1112913A-13.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/29/2013 2028	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	0.0217	J	0.019	0.050
Lead	ND		0.0030	0.0050
Manganese	ND		0.00040	0.0030

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Lab Control Sample - Batch: 480-153572

Method: 6010C
Preparation: 3005A

Lab Sample ID:	LCS 480-153572/2-A	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1700	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	10.0	10.90	109	80 - 120	
Antimony	0.200	0.213	106	80 - 120	
Barium	0.200	0.213	107	80 - 120	
Beryllium	0.200	0.217	108	80 - 120	
Cadmium	0.200	0.214	107	80 - 120	
Calcium	10.0	10.50	105	80 - 120	
Chromium	0.200	0.212	106	80 - 120	
Cobalt	0.200	0.211	106	80 - 120	
Copper	0.200	0.202	101	80 - 120	
Iron	10.0	10.53	105	80 - 120	
Lead	0.200	0.217	109	80 - 120	
Magnesium	10.0	10.59	106	80 - 120	
Manganese	0.200	0.217	109	80 - 120	
Nickel	0.200	0.208	104	80 - 120	
Potassium	10.0	10.60	106	80 - 120	
Selenium	0.200	0.216	108	80 - 120	
Silver	0.0500	0.0512	102	80 - 120	
Sodium	10.0	10.42	104	80 - 120	
Thallium	0.200	0.209	105	80 - 120	
Vanadium	0.200	0.209	105	80 - 120	
Zinc	0.200	0.211	105	80 - 120	

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Post Digestion Spike - Batch: 480-153572

Method: 6010C
Preparation: 3005A

Lab Sample ID:	480-50508-3	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1720	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	12.6	20.0	31.24	93	75 - 125	
Antimony	ND	0.400	0.334	84	75 - 125	
Barium	0.31	0.400	0.629	80	75 - 125	
Beryllium	0.00046 J	0.400	0.337	84	75 - 125	
Cadmium	0.0015	0.400	0.343	85	75 - 125	
Calcium	174	20.0	183.4	49	75 - 125	W
Chromium	0.030	0.400	0.352	81	75 - 125	
Cobalt	0.0057	0.400	0.345	85	75 - 125	
Copper	0.036	0.400	0.352	79	75 - 125	
Iron	14.2	20.0	29.80	78	75 - 125	
Lead	0.027	0.400	0.372	86	75 - 125	
Magnesium	78.1	20.0	90.62	62	75 - 125	W
Manganese	0.54	0.400	0.843	75	75 - 125	
Nickel	0.029	0.400	0.359	82	75 - 125	
Potassium	3.9	20.0	21.16	86	75 - 125	
Selenium	ND	0.400	0.343	86	75 - 125	
Silver	ND	0.100	0.0785	79	75 - 125	
Sodium	25.7	20.0	41.21	78	75 - 125	
Thallium	ND	0.400	0.326	81	75 - 125	
Vanadium	0.021	0.400	0.346	81	75 - 125	
Zinc	0.19	0.400	0.492	75	75 - 125	

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-153572

Method: 6010C
Preparation: 3005A

MS Lab Sample ID:	480-50508-3	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1723			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

MSD Lab Sample ID:	480-50508-3	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1726			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	259	252	75 - 125	2	20	F	F
Antimony	104	104	75 - 125	0	20		
Barium	126	121	75 - 125	2	20	F	
Beryllium	107	107	75 - 125	0	20		
Cadmium	109	108	75 - 125	0	20		
Calcium	141	120	75 - 125	1	20	4	4
Chromium	110	108	75 - 125	2	20		
Cobalt	108	108	75 - 125	0	20		
Copper	108	105	75 - 125	2	20		
Iron	183	178	75 - 125	2	20	F	F
Lead	114	114	75 - 125	0	20		
Magnesium	126	110	75 - 125	2	20	4	4
Manganese	127	121	75 - 125	1	20	F	
Nickel	110	109	75 - 125	1	20		
Potassium	137	133	75 - 125	2	20	F	F
Selenium	108	108	75 - 125	0	20		
Silver	104	101	75 - 125	3	20		
Sodium	115	109	75 - 125	1	20		
Thallium	104	104	75 - 125	0	20		
Vanadium	111	109	75 - 125	2	20		
Zinc	120	122	75 - 125	1	20		

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-153572

Method: 6010C
Preparation: 3005A

MS Lab Sample ID:	480-50508-3	Units: mg/L	MSD Lab Sample ID:	480-50508-3	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	11/27/2013 1723		Analysis Date:	11/27/2013 1726	
Prep Date:	11/21/2013 0840		Prep Date:	11/21/2013 0840	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Aluminum	12.6		10.0	10.0	38.46	F	37.84	F
Antimony	ND		0.200	0.200	0.209		0.208	
Barium	0.31		0.200	0.200	0.561	F	0.551	
Beryllium	0.00046	J	0.200	0.200	0.215		0.215	
Cadmium	0.0015		0.200	0.200	0.219		0.218	
Calcium	174		10.0	10.0	187.7	4	185.6	4
Chromium	0.030		0.200	0.200	0.250		0.246	
Cobalt	0.0057		0.200	0.200	0.222		0.221	
Copper	0.036		0.200	0.200	0.251		0.246	
Iron	14.2		10.0	10.0	32.52	F	32.00	F
Lead	0.027		0.200	0.200	0.255		0.256	
Magnesium	78.1		10.0	10.0	90.73	4	89.11	4
Manganese	0.54		0.200	0.200	0.798	F	0.787	
Nickel	0.029		0.200	0.200	0.249		0.247	
Potassium	3.9		10.0	10.0	17.60	F	17.18	F
Selenium	ND		0.200	0.200	0.216		0.216	
Silver	ND		0.0500	0.0500	0.0518		0.0503	
Sodium	25.7		10.0	10.0	37.17		36.63	
Thallium	ND		0.200	0.200	0.207		0.207	
Vanadium	0.021		0.200	0.200	0.243		0.238	
Zinc	0.19		0.200	0.200	0.430		0.435	

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Serial Dilution - Batch: 480-153572

Method: 6010C
Preparation: 3005A

Lab Sample ID:	480-50508-3	Analysis Batch:	480-154877	Instrument ID:	ICAP2
Client Matrix:	Water	Prep Batch:	480-153572	Lab File ID:	I2112713B-3.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	11/27/2013 1710	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0840				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	%Diff	Limit	Qual
Aluminum	12.6		12.72	0.92	10	
Antimony	ND		ND	NC	10	
Barium	0.31		0.312	0.64	10	
Beryllium	0.00046	J	ND	NC	10	
Cadmium	0.0015		ND	NC	10	
Calcium	174		174.7	0.60	10	
Chromium	0.030		0.0276	7.9	10	
Cobalt	0.0057		0.00605	NC	10	J
Copper	0.036		0.0279	NC	10	J
Iron	14.2		14.45	1.4	10	
Lead	0.027		0.0288	NC	10	
Magnesium	78.1		77.75	0.51	10	
Manganese	0.54		0.568	4.3	10	
Nickel	0.029		0.0290	NC	10	J
Potassium	3.9		3.81	2.7	10	
Selenium	ND		ND	NC	10	
Silver	ND		ND	NC	10	
Sodium	25.7		25.58	0.37	10	
Thallium	ND		ND	NC	10	
Vanadium	0.021		0.0227	NC	10	J
Zinc	0.19		0.202	6.2	10	

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Method Blank - Batch: 480-153579

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 480-153579/1-A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1224	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.00012	0.00020

Lab Control Sample - Batch: 480-153579

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 480-153579/2-A	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1226	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00667	0.00653	98	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-153579

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	480-50508-3	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1248			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				
Leach Date:	N/A				

MSD Lab Sample ID:	480-50508-3	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1249			Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	99	98	75 - 125	1	20		

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-153579

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	480-50508-3	Units: mg/L	MSD Lab Sample ID:	480-50508-3	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	11/21/2013 1248		Analysis Date:	11/21/2013 1249	
Prep Date:	11/21/2013 0808		Prep Date:	11/21/2013 0808	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	ND	0.00667	0.00667	0.00660	0.00655

Serial Dilution - Batch: 480-153579

Method: 7470A
Preparation: 7470A

Lab Sample ID:	480-50508-3	Analysis Batch:	480-153727	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-153579	Lab File ID:	H11213W1.PRN
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	11/21/2013 1246	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	11/21/2013 0808				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Mercury	ND	ND	NC	10	

DATA REPORTING QUALIFIERS

Client: N Tonawanda Water Works Job Number: 480-50508-1

Lab Section	Qualifier	Description
GC/MS VOA		
	F	MS/MSD Recovery and/or RPD exceeds the control limits
GC/MS Semi VOA		
	F	MS/MSD Recovery and/or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	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.
	F	MS/MSD Recovery and/or RPD exceeds the control limits
	W	PS: Post-digestion spike was outside control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Client: N Tonawanda Water Works Job Number: 480-50508-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-154726					
LCS 480-154726/5	Lab Control Sample	T	Water	8260C	
MB 480-154726/6	Method Blank	T	Water	8260C	
480-50508-1	NCR 3S	T	Water	8260C	
480-50508-2	NCR 4S	T	Water	8260C	
480-50508-3	NCR 5S	T	Water	8260C	
480-50508-3MS	Matrix Spike	T	Water	8260C	
480-50508-3MSD	Matrix Spike Duplicate	T	Water	8260C	
480-50508-4	NCR 13S	T	Water	8260C	
480-50508-5	Field Duplicate	T	Water	8260C	
480-50508-6TB	TRIP BLANK	T	Water	8260C	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 480-154383					
LCS 480-154383/2-A	Lab Control Sample	T	Water	3510C	
MB 480-154383/1-A	Method Blank	T	Water	3510C	
480-50508-1	NCR 3S	T	Water	3510C	
480-50508-2	NCR 4S	T	Water	3510C	
480-50508-3	NCR 5S	T	Water	3510C	
480-50508-3MS	Matrix Spike	T	Water	3510C	
480-50508-3MSD	Matrix Spike Duplicate	T	Water	3510C	
480-50508-4	NCR 13S	T	Water	3510C	
480-50508-5	Field Duplicate	T	Water	3510C	
Analysis Batch:480-154514					
LCS 480-154383/2-A	Lab Control Sample	T	Water	8270D	480-154383
MB 480-154383/1-A	Method Blank	T	Water	8270D	480-154383
480-50508-1	NCR 3S	T	Water	8270D	480-154383
480-50508-2	NCR 4S	T	Water	8270D	480-154383
480-50508-3	NCR 5S	T	Water	8270D	480-154383
480-50508-3MS	Matrix Spike	T	Water	8270D	480-154383
480-50508-3MSD	Matrix Spike Duplicate	T	Water	8270D	480-154383
480-50508-4	NCR 13S	T	Water	8270D	480-154383
480-50508-5	Field Duplicate	T	Water	8270D	480-154383

Report Basis
T = Total

Client: N Tonawanda Water Works

Job Number: 480-50508-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 480-153572					
LCS 480-153572/2-A	Lab Control Sample	T	Water	3005A	
MB 480-153572/1-A	Method Blank	T	Water	3005A	
480-50508-1	NCR 3S	T	Water	3005A	
480-50508-2	NCR 4S	T	Water	3005A	
480-50508-3	NCR 5S	T	Water	3005A	
480-50508-3MS	Matrix Spike	T	Water	3005A	
480-50508-3MSD	Matrix Spike Duplicate	T	Water	3005A	
480-50508-4	NCR 13S	T	Water	3005A	
480-50508-5	Field Duplicate	T	Water	3005A	
Prep Batch: 480-153579					
LCS 480-153579/2-A	Lab Control Sample	T	Water	7470A	
MB 480-153579/1-A	Method Blank	T	Water	7470A	
480-50508-1	NCR 3S	T	Water	7470A	
480-50508-2	NCR 4S	T	Water	7470A	
480-50508-3	NCR 5S	T	Water	7470A	
480-50508-3MS	Matrix Spike	T	Water	7470A	
480-50508-3MSD	Matrix Spike Duplicate	T	Water	7470A	
480-50508-4	NCR 13S	T	Water	7470A	
480-50508-5	Field Duplicate	T	Water	7470A	
Analysis Batch:480-153727					
LCS 480-153579/2-A	Lab Control Sample	T	Water	7470A	480-153579
MB 480-153579/1-A	Method Blank	T	Water	7470A	480-153579
480-50508-1	NCR 3S	T	Water	7470A	480-153579
480-50508-2	NCR 4S	T	Water	7470A	480-153579
480-50508-3	NCR 5S	T	Water	7470A	480-153579
480-50508-3MS	Matrix Spike	T	Water	7470A	480-153579
480-50508-3MSD	Matrix Spike Duplicate	T	Water	7470A	480-153579
480-50508-4	NCR 13S	T	Water	7470A	480-153579
480-50508-5	Field Duplicate	T	Water	7470A	480-153579
Analysis Batch:480-154877					
LCS 480-153572/2-A	Lab Control Sample	T	Water	6010C	480-153572
MB 480-153572/1-A	Method Blank	T	Water	6010C	480-153572
480-50508-1	NCR 3S	T	Water	6010C	480-153572
480-50508-2	NCR 4S	T	Water	6010C	480-153572
480-50508-3	NCR 5S	T	Water	6010C	480-153572
480-50508-3MS	Matrix Spike	T	Water	6010C	480-153572
480-50508-3MSD	Matrix Spike Duplicate	T	Water	6010C	480-153572
480-50508-4	NCR 13S	T	Water	6010C	480-153572
480-50508-5	Field Duplicate	T	Water	6010C	480-153572
Analysis Batch:480-155131					
MB 480-153572/1-A	Method Blank	T	Water	6010C	480-153572

Client: N Tonawanda Water Works

Job Number: 480-50508-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: N Tonawanda Water Works Job Number: 480-50508-1

Laboratory Chronicle

Lab ID: 480-50508-1 **Client ID: NCR 3S**

Sample Date/Time: 11/20/2013 11:30 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-1		480-154726		11/27/2013 14:19	1	TAL BUF	NMD1
A:8260C	480-50508-D-1		480-154726		11/27/2013 14:19	1	TAL BUF	NMD1
P:3510C	480-50508-B-1-A		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-B-1-A		480-154514	480-154383	11/26/2013 19:39	1	TAL BUF	RMM
P:3005A	480-50508-C-1-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-1-A		480-154877	480-153572	11/27/2013 17:02	1	TAL BUF	LMH
P:7470A	480-50508-C-1-B		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-1-B		480-153727	480-153579	11/21/2013 12:36	1	TAL BUF	JRK

Lab ID: 480-50508-2 **Client ID: NCR 4S**

Sample Date/Time: 11/20/2013 10:45 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-2		480-154726		11/27/2013 14:40	1	TAL BUF	NMD1
A:8260C	480-50508-D-2		480-154726		11/27/2013 14:40	1	TAL BUF	NMD1
P:3510C	480-50508-A-2-A		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-A-2-A		480-154514	480-154383	11/26/2013 20:03	1	TAL BUF	RMM
P:3005A	480-50508-C-2-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-2-A		480-154877	480-153572	11/27/2013 17:05	1	TAL BUF	LMH
P:7470A	480-50508-C-2-B		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-2-B		480-153727	480-153579	11/21/2013 12:39	1	TAL BUF	JRK

Lab ID: 480-50508-3 **Client ID: NCR 5S**

Sample Date/Time: 11/20/2013 09:50 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-3		480-154726		11/27/2013 15:02	1	TAL BUF	NMD1
A:8260C	480-50508-D-3		480-154726		11/27/2013 15:02	1	TAL BUF	NMD1
P:3510C	480-50508-A-3-B		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-A-3-B		480-154514	480-154383	11/26/2013 20:27	1	TAL BUF	RMM
P:3005A	480-50508-C-3-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-3-A		480-154877	480-153572	11/27/2013 17:07	1	TAL BUF	LMH
P:7470A	480-50508-C-3-D		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-3-D		480-153727	480-153579	11/21/2013 12:40	1	TAL BUF	JRK

Client: N Tonawanda Water Works Job Number: 480-50508-1

Laboratory Chronicle

Lab ID: 480-50508-3 **Client ID:** NCR 5S

Sample Date/Time: 11/20/2013 09:50 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-3 MS		480-154726		11/27/2013 15:23	1	TAL BUF	NMD1
A:8260C	480-50508-D-3 MS		480-154726		11/27/2013 15:23	1	TAL BUF	NMD1
P:3510C	480-50508-A-3-A MS		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-A-3-A MS		480-154514	480-154383	11/26/2013 18:02	1	TAL BUF	RMM
P:3005A	480-50508-C-3-B MS		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-3-B MS		480-154877	480-153572	11/27/2013 17:23	1	TAL BUF	LMH
P:7470A	480-50508-C-3-E MS		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-3-E MS		480-153727	480-153579	11/21/2013 12:48	1	TAL BUF	JRK

Lab ID: 480-50508-3 **Client ID:** NCR 5S

Sample Date/Time: 11/20/2013 09:50 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-3 MSD		480-154726		11/27/2013 15:44	1	TAL BUF	NMD1
A:8260C	480-50508-D-3 MSD		480-154726		11/27/2013 15:44	1	TAL BUF	NMD1
P:3510C	480-50508-B-3-A MSD		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-B-3-A MSD		480-154514	480-154383	11/26/2013 18:26	1	TAL BUF	RMM
P:3005A	480-50508-C-3-C MSD		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-3-C MSD		480-154877	480-153572	11/27/2013 17:26	1	TAL BUF	LMH
P:7470A	480-50508-C-3-F MSD		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-3-F MSD		480-153727	480-153579	11/21/2013 12:49	1	TAL BUF	JRK

Lab ID: 480-50508-3 SD **Client ID:** NCR 5S

Sample Date/Time: 11/20/2013 09:50 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	480-50508-C-3-A SD ^5		480-154877	480-153572	11/21/2013 08:40	5	TAL BUF	NMD2
A:6010C	480-50508-C-3-A SD ^5		480-154877	480-153572	11/27/2013 17:10	5	TAL BUF	LMH
P:3005A	480-50508-C-3-A PDS		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-3-A PDS		480-154877	480-153572	11/27/2013 17:20	1	TAL BUF	LMH
P:7470A	480-50508-C-3-D SD ^5		480-153727	480-153579	11/21/2013 08:08	5	TAL BUF	JRK
A:7470A	480-50508-C-3-D SD ^5		480-153727	480-153579	11/21/2013 12:46	5	TAL BUF	JRK

Client: N Tonawanda Water Works Job Number: 480-50508-1

Laboratory Chronicle

Lab ID: 480-50508-4 **Client ID:** NCR 13S

Sample Date/Time: 11/20/2013 09:15 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-4		480-154726		11/27/2013 16:06	1	TAL BUF	NMD1
A:8260C	480-50508-D-4		480-154726		11/27/2013 16:06	1	TAL BUF	NMD1
P:3510C	480-50508-B-4-A		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-B-4-A		480-154514	480-154383	11/26/2013 20:51	1	TAL BUF	RMM
P:3005A	480-50508-C-4-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-4-A		480-154877	480-153572	11/27/2013 17:28	1	TAL BUF	LMH
P:7470A	480-50508-C-4-B		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-4-B		480-153727	480-153579	11/21/2013 12:51	1	TAL BUF	JRK

Lab ID: 480-50508-5 **Client ID:** Field Duplicate

Sample Date/Time: 11/20/2013 00:00 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-D-5		480-154726		11/27/2013 16:27	1	TAL BUF	NMD1
A:8260C	480-50508-D-5		480-154726		11/27/2013 16:27	1	TAL BUF	NMD1
P:3510C	480-50508-A-5-A		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	480-50508-A-5-A		480-154514	480-154383	11/26/2013 21:15	1	TAL BUF	RMM
P:3005A	480-50508-C-5-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	480-50508-C-5-A		480-154877	480-153572	11/27/2013 17:31	1	TAL BUF	LMH
P:7470A	480-50508-C-5-B		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	480-50508-C-5-B		480-153727	480-153579	11/21/2013 12:53	1	TAL BUF	JRK

Lab ID: 480-50508-6 **Client ID:** TRIP BLANK

Sample Date/Time: 11/20/2013 00:00 Received Date/Time: 11/20/2013 13:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-50508-A-6		480-154726		11/27/2013 16:48	1	TAL BUF	NMD1
A:8260C	480-50508-A-6		480-154726		11/27/2013 16:48	1	TAL BUF	NMD1

Client: N Tonawanda Water Works Job Number: 480-50508-1

Laboratory Chronicle

Lab ID: MB **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	MB 480-154726/6		480-154726		11/27/2013 13:41	1	TAL BUF	NMD1
A:8260C	MB 480-154726/6		480-154726		11/27/2013 13:41	1	TAL BUF	NMD1
P:3510C	MB 480-154383/1-A		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	MB 480-154383/1-A		480-154514	480-154383	11/26/2013 17:14	1	TAL BUF	RMM
P:3005A	MB 480-153572/1-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	MB 480-153572/1-A		480-154877	480-153572	11/27/2013 16:57	1	TAL BUF	LMH
P:3005A	MB 480-153572/1-A		480-155131	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	MB 480-153572/1-A		480-155131	480-153572	11/29/2013 20:28	1	TAL BUF	LMH
P:7470A	MB 480-153579/1-A		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	MB 480-153579/1-A		480-153727	480-153579	11/21/2013 12:24	1	TAL BUF	JRK

Lab ID: LCS **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	LCS 480-154726/5		480-154726		11/27/2013 13:20	1	TAL BUF	NMD1
A:8260C	LCS 480-154726/5		480-154726		11/27/2013 13:20	1	TAL BUF	NMD1
P:3510C	LCS 480-154383/2-A		480-154514	480-154383	11/26/2013 06:03	1	TAL BUF	KEB
A:8270D	LCS 480-154383/2-A		480-154514	480-154383	11/26/2013 17:38	1	TAL BUF	RMM
P:3005A	LCS 480-153572/2-A		480-154877	480-153572	11/21/2013 08:40	1	TAL BUF	NMD2
A:6010C	LCS 480-153572/2-A		480-154877	480-153572	11/27/2013 17:00	1	TAL BUF	LMH
P:7470A	LCS 480-153579/2-A		480-153727	480-153579	11/21/2013 08:08	1	TAL BUF	JRK
A:7470A	LCS 480-153579/2-A		480-153727	480-153579	11/21/2013 12:26	1	TAL BUF	JRK

Lab References:
TAL BUF = TestAmerica Buffalo

Certification Summary

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

TestAmerica Job ID: 480-50508-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas DEQ	State Program	6	88-0686
TestAmerica Buffalo	California	NELAP	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAP	4	E87672
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	N/A
TestAmerica Buffalo	Illinois	NELAP	5	200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAP	7	E-10187
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Kentucky (UST)	State Program	4	30
TestAmerica Buffalo	Louisiana	NELAP	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY00044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAP	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAP	1	2337
TestAmerica Buffalo	New Hampshire	NELAP	1	2973
TestAmerica Buffalo	New Jersey	NELAP	2	NY455
TestAmerica Buffalo	New York	NELAP	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAP	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAP	3	68-00281
TestAmerica Buffalo	Rhode Island	State Program	1	LAO00328
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAP	6	T104704412-11-2
TestAmerica Buffalo	USDA	Federal		P330-11-00386
TestAmerica Buffalo	Washington	State Program	10	C784
TestAmerica Buffalo	West Virginia DEP	State Program	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Shipping and Receiving Documents

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: RC Becker	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-41738-11261.1
Client Contact: William Davignon	Phone: (716) 435-8500	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 1
Company: N Tonawanda Water Works		Analysis Requested		Job #:
Address: 830 River Road	Due Date Requested: normal turnaround			Preservation Codes:
City: North Tonawanda	TAT Requested (days):			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 - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: NY, 14120				Other:
Phone:	PO #: Purchase Order not required			
Email: wmd_ntwwtp@live.com	WO #:			
Project Name: City of North Tonawanda - NCRS	Project #: 48002901			
Site: New York	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - TCL SVOA - OLM04.2	6010C, 7470A	8260C - TCL list OLM04.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A		
NCR 3S	11/20/13		G	Water	N		X	X	X		
NCR 4S	"		G	Water	N		X	X	X		
NCR 5S	"		G	Water	N	Y	X	X	X		
NCR 13S	"		G	Water	N		X	X	X		
Field Duplicate	"		G	Water	N		X	X	X		

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
1	RC Becker	11/20/13 1345	D&M Ent.	[signature]	11/20/13 1345	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: #1 2.4

12/05/2013

Login Sample Receipt Checklist

Client: N Tonawanda Water Works

Job Number: 480-50508-1

Login Number: 50508

List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: William Davignon
Company: N Tonawanda Water Works
Address: 830 River Road
City: North Tonawanda
State, Zip: NY, 14120
Phone:
Email: wmd_ntwwtp@live.com
Project Name: City of North Tonawanda - NCRS
Site: New York

Sampler: RC Backen
Phone: (716) 435-8500
Lab PM: Stone, Judy L
E-Mail: judy.stone@testamericainc.com
Carrier Tracking No(s):
COC No: 480-41738-11261.1
Page: Page 1 of 1
Job #:

Due Date Requested: normal turnaround
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 48002901
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - TCL SVOA - OLM04.2	6010C, 7470A	8260C - TCL list OLM04.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	A		
NCR 3S	11/20/13		G	Water	N		X	X	X		
NCR 4S	"		G	Water	N		X	X	X		
NCR 5S	"		G	Water	N	Y	X	X	X		
NCR 13S	"		G	Water	N		X	X	X		
Field Duplicate	"		G	Water	N		X	X	X		

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: RC Backen	Date/Time: 11/20/13 1345	Company: O&M Ext.	Received by:	Date/Time: 11/20/13 1345	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: Richard C. Becken

DATE OF SAMPLE COLLECTION: 1 1 2 6 1 3
(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 3S	0.35	0.75	1130	Annual monitoring well	8270D 8260C 2978A/Low	480-41735-1	none
NCR 4S	NCR 4S	0.332	0.73	1045				
NCR 5S	NCR 5S	0.7429	1.65	0950				
NCR 13S	NCR 13S	0.5066	1.4	0915				
NCR 5S MS/MSD	(MS/MSD) * NCR 5S	0.7429	1.65	0950				
	(Duplicate) * NCR 13S	0.5066	1.4	0915				
	(Rinse Blank) *							

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

Additional Comments: _____

_____

_____

FP-5A

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 11/19/13 (MM DD YY)

CREW MEMBERS: RC Borden

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR BS

ONE WELL VOLUME: ~0.5 gallons

FIVE WELL VOLUMES: 2.533 gallons

(See Section 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)	~0.5	~0.5	~0.4			1.4
pH	6.59	6.58	6.52			
TEMPERATURE	50.1	49.9	49.3			
CONDUCTIVITY	1.20	1.25	1.17			
TURBIDITY	46.1	34.3	29.7			
COLOR	clear	clear	clear			
ODOR	none	none	none			
COMMENTS		well dry	well dry			

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

11/19/13 — DATE

Richard C Borden — PRINT NAME

Richard C Borden — SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 11/19/13 (MM DD YY)

CREW MEMBERS: RC Barker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 45

ONE WELL VOLUME: 0.332 gallons

FIVE WELL VOLUMES: 1.66 gallons

(See Section 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)	~.35	~.3	~.1			0.73
pH	6.49	6.55	6.46			
TEMPERATURE	45.1	45.6	46.4			
CONDUCTIVITY	0.90	0.99	1.02			
TURBIDITY	1000+	1000+	931			
COLOR	dark	dark	light brown			
ODOR	none	none	none			
COMMENTS	well dry	well dry	well dry			

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

11/19/13 — DATE

Richard C Barker — PRINT NAME

Richard C Barker — SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 11/19/13 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 35

ONE WELL VOLUME: 0.3502 gallons

FIVE WELL VOLUMES: 1.751 gallons

(See Section 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)	~0.35	~0.5	0.1			0.75
pH	6.35	6.33	6.75			
TEMPERATURE	48.4	48.7	49.9			
CONDUCTIVITY	0.79	0.78	1.02			
TURBIDITY	756	335	145			
COLOR	light brown	slt brown	clear			
ODOR	none	none	none			
COMMENTS		well dry	well dry			

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

11/19/13 Richard C Becker

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 11/19/13 (MM DD YY)

CREW MEMBERS: RC Baker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: DCR 55

ONE WELL VOLUME: 0.7429 gallons

FIVE WELL VOLUMES: _____ gallons

(See Section 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)	~.75	~.5	~.90			1.65
pH	6.82	7.2	7.11			
TEMPERATURE	49.7	50.9	50.7			
CONDUCTIVITY	0.78	0.79	0.82			
TURBIDITY	97.0	100	92.4			
COLOR	slightly cloudy & clear	slightly cloudy	clear			
ODOR	none	None	none			
COMMENTS		well dry	well dry			

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

11/19/13 — DATE

Richard C Baker — PRINT NAME

Richard C Baker — SIGNATURE

FP-4C

APPENDIX D

DATA VALIDATION REPORT

DATA USABILITY SUMMARY REPORT
FOR
NIAGARA COUNTY REFUSE SITE

Prepared By:

PARSONS

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

JANUARY 2014

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SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected from the Niagara County Refuse site in North Tonawanda, New York on November 20, 2013. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

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

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

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 20 days on average for the groundwater samples.

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

1.2 SAMPLING AND CHAIN-OF-CUSTODY

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

1.3 LABORATORY ANALYTICAL METHODS

Groundwater samples were collected from the site and analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals. Summaries of issues concerning this laboratory analysis are presented in Subsections 1.3.1 through 1.3.3. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) 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,

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

"R" - unusable value.

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

1.3.1 Volatile Organic Analysis

Groundwater samples collected from the site were analyzed for target compound list (TCL) VOCs using the USEPA SW-846 8260C analytical method. The reported results for the TCL VOC samples did not require qualification based upon data validation. The reported TCL VOC analytical results were 100% complete (i.e., usable) for the groundwater data presented by TAL. PARCC requirements were met.

1.3.2 Semivolatile Organic Analysis

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

1.3.3 Metals Analysis

Groundwater samples collected from the site were analyzed for metals using the USEPA SW-846 6010C/7470A analytical methods. Certain metals results were considered estimated based upon matrix spike recoveries and field duplicate precision. All of the metals data were considered usable and 100% complete for the groundwater data presented by TAL. PARCC requirements were met.

SECTION 2

DATA VALIDATION REPORT

2.1 GROUNDWATER DATA

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

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

2.1.1 TCL Volatiles

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

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

These items were considered compliant and acceptable in accordance with the validation protocols.

Usability

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

Summary

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

2.1.2 TCL Semivolatiles

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

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

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

Continuing Calibrations

All continuing calibration compounds were considered acceptable with relative response factors (RRFs) greater than 0.05 and percent differences (%Ds) within ±20% with the exception of N-nitroso-di-n-propylamine (23%D) in the continuing calibration associated with all project samples. Therefore, sample results for this compound which were nondetects were considered estimated and qualified "UJ".

Usability

All semivolatile sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness and comparability. The semivolatile data

presented by TAL were 100% complete (i.e., usable). The validated semivolatile laboratory data are tabulated and presented in Attachment A.

2.1.3 Metals

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

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

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

Blank Contamination

The laboratory preparation blank associated with the project samples contained aluminum, barium, calcium, chromium, zinc, and iron at concentrations of 0.0993, 0.000840, 0.280, 0.00323, 0.00242, and 0.0217 mg/L, respectively. Validation qualification of the sample results was not required since samples were not affected by the contamination in this blank.

Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within the 75-125%R QC limit for all analytes with the exception of the high matrix spike recoveries for aluminum (259%R, 252%R), antimony (126%R), iron (183%R, 178%R), manganese (127%R), and potassium (137%R, 133%R) associated with all samples. Therefore, positive results for these analytes were considered estimated, possibly biased high, and qualified "J".

Field Duplicate Precision

All field duplicate precision results were considered acceptable for the field duplicate pair NCR-13S and FIELD DUPLICATE with the exception of the precision for aluminum

(148%RPD), iron (157%RPD), zinc (173%RPD), vanadium (137%RPD), nickel (102%RPD), and chromium (161%RPD). Therefore, the results for these analytes were considered estimated and qualified "J" for these samples.

Usability

All metals sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. 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.

TABLE 2.1-1

SUMMARY OF SAMPLE ANALYSES AND USABILITY

NIAGARA COUNTY REFUSE SITE

SAMPLE ID	MATRIX	SAMPLE DATE	VOCs	SVOCs	METALS
NCR-3S	Water	11/20/13	OK	OK	OK
NCR-4S	Water	11/20/13	OK	OK	OK
NCR-5S	Water	11/20/13	OK	OK	OK
NCR-13S	Water	11/20/13	OK	OK	OK
FIELD DUP	Water	11/20/13	OK	OK	OK
TRIP BLANK	Water	11/20/13	OK		
			6	5	5

NOTES: OK - Sample analysis considered valid and usable.

ATTACHMENT A

VALIDATED LABORATORY DATA

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event December 2013		Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR-3S 480-50508-1 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-4S 480-50508-2 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-5S 480-50508-3 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-13S 480-50508-4 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	Dup of NCR-13 Field Duplicate 480-50508-5 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	Trip Blank 480-50508-6TB TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
79-00-5	1,1,2-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
76-13-2	1,1,2-Trichloro-1,2,2-trifluoroethan	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-34-3	1,1-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-35-4	1,1-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
120-82-1	1,2,4-Trichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
96-12-8	1,2-Dibromo-3-chloropropane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
106-93-4	1,2-Dibromoethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
95-50-1	1,2-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
107-06-2	1,2-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
78-87-5	1,2-Dichloropropane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
541-73-1	1,3-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
106-46-7	1,4-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
591-78-6	2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
78-93-3	2-Butanone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U
108-10-1	4-Methyl-2-pentanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
67-64-1	Acetone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U
71-43-2	Benzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-27-4	Bromodichloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-25-2	Bromoform	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
74-83-9	Bromomethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-15-0	Carbon Disulfide	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
56-23-5	Carbon tetrachloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
108-90-7	Chlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
124-48-1	Dibromochloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-00-3	Chloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
67-66-3	Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
74-87-3	Chloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
156-59-2	cis-1,2-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
10061-01-5	cis-1,3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
110-82-7	Cyclohexane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-71-8	Dichlorodifluoromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
100-41-4	Ethylbenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
98-82-8	Isopropylbenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
79-20-9	Methyl acetate	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
1634-04-4	Methyl tert-butyl ether	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
108-87-2	Methylcyclohexane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-09-2	Methylene chloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
100-42-5	Styrene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
127-18-4	Tetrachloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
108-88-3	Toluene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
156-60-5	trans-1,2-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
10061-02-6	trans-1,3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
79-01-6	Trichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-69-4	Trichlorofluoromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-01-4	Vinyl chloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
1330-20-7	Total Xylenes	ug/L	2 U	2 U	2 U	2 U	2 U	2 U
	SEMIVOLATILES							
92-52-4	Biphenyl	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
108-60-1	bis (2-chloroisopropyl) ether	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
95-95-4	2,4,5-Trichlorophenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
88-06-2	2,4,6-Trichlorophenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
120-83-2	2,4-Dichlorophenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
105-67-9	2,4-Dimethylphenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
51-28-5	2,4-Dinitrophenol	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	7.6 U	
121-14-2	2,4-Dinitrotoluene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
606-20-2	2,6-Dinitrotoluene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
91-58-7	2-Chloronaphthalene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
95-57-8	2-Chlorophenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
91-57-6	2-Methylnapthalene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
95-48.7	2-Methylphenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
88-74-4	2-Nitroaniline	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	7.6 U	
88-75-5	2-Nitrophenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.8 U	
91-94-1	3,3'-Dichlorobenzidine	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
99-09-2	3-Nitroaniline	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	
534-521	4,6-Dinitro-2-methyphenol	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	
101-55-3	4-Bromophenyl phenyl ether	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
59-50-7	4-Chloro-3-methylphenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
106-47-8	4-Chloroaniline	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
7005-72-3	4-Chlorophenyl phenyl ether	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
106-44-5	4-Methylphenol	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	
100-01-6	4-Nitroaniline	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	

City of North Tonawanda NY1A8791 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling Event December 2013		Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR-3S 480-50508-1 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-4S 480-50508-2 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-5S 480-50508-3 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	NCR-13S 480-50508-4 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	Dup of NCR-13 Field Duplicate 480-50508-5 TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013	Trip Blank 480-50508-6TB TAL-Buffalo 480-50508 WATER 11/20/2013 12/31/2013
CAS NO.	COMPOUND	UNITS:						
	SEMIVOLATILES							
100-02-7	4-Nitrophenol	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	
83-32-9	Acenaphthene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
208-96-8	Acenaphthylene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
98-86-2	Acetophenone	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
120-12-7	Anthracene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
191224-9	Atrazine	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
100-52-7	Benzaldehyde	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
56-55-3	Benzo(a)anthracene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
50-32-8	Benzo(a)pyrene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
205-99-2	Benzo(b)fluoranthene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
191-24-2	Benzo(g,h,i)perylene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
207-08-9	Benzo(k)fluoranthene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
111-91-1	Bis (2-chlorothoxy)methane	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
111-44-4	Bis (2-chloroethyl)ether	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
117-81-7	Bis (2-ethylhexyl)phthalate	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
85-68-7	Butyl benzyl phthalate	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
105-60-2	Caprolactam	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
86-74-2	Carbazole	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
218-019	Chrysene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
84-74-2	Di-n-butyl phthalate	ug/L	0.35 J	0.32 J	0.23 J	0.33 J	0.26 J	
117-84-0	Di-n-octyl phthalate	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
53-70-3	Dibenz(a,h)anthracene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
132-64-9	Dibenzofuran	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	
84-55-2	Diethyl phthalate	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
131-11-3	Dimethyl phthalate	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
206-44-0	Fluoranthene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
86-73-7	Fluorene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
118-74-1	Hexachlorobenzene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
87-68-3	Hexachlorobutadiene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
77-47-4	Hexachlorocyclopentadiene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
67-72-1	Hexachloroethane	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
78-59-1	Isophorone	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
621-64-7	N-Nitrosodi-n-propylamine	ug/L	3.8 UJ	3.8 UJ	3.8 UJ	3.4 UJ	3.4 UJ	
86-30-6	N-Nitrosodiphenylamine	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
91-20-3	Naphthalene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
98-95-3	Nitrobenzene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
87-86-5	Pentachlorophenol	ug/L	7.6 U	7.6 U	7.5 U	6.8 U	6.9 U	
85-01-8	Phenanthrene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
108-95-2	Phenol	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
129-00-0	Pyrene	ug/L	3.8 U	3.8 U	3.8 U	3.4 U	3.4 U	
	METALS							
7429-90-5	Aluminum	ug/L	1600 J	1300 J	12600 J	5400 J	800 J	
7440-36-0	Antimony	ug/L	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	
7440-39-3	Barium	ug/L	57	78	310	88	67	
7440-41-7	Beryllium	ug/L	0.3 U	0.3 U	0.46 J	0.3 U	0.3 U	
7440-43-9	Cadmium	ug/L	0.5 U	0.5 U	1.5	1.5	0.74 J	
7440-70-2	Calcium	ug/L	145000	154000	174000	198000	195000	
7440-47-3	Chromium	ug/L	13	2 J	30	24 J	4.6 J	
7440-48-4	Cobalt	ug/L	2 J	0.63 U	5.7	1.4 J	0.63 U	
7440-50-8	Copper	ug/L	10	1.9 J	36	12	6.5 J	
7439-89-6	Iron	ug/L	2800 J	4700 J	14200 J	10700 J	1300 J	
7439-92-1	Lead	ug/L	5.1	4 J	27	8.7	3.5 J	
7439-95-4	Magnesium	ug/L	79500	49400	78100	77400	71000	
7439-96-5	Manganese	ug/L	200 J	240 J	540 J	49 J	7.3 J	
7440-02-0	Nickel	ug/L	25	1.8 J	29	13 J	4.2 J	
7440-09-7	Potassium	ug/L	3100 J	12300 J	3900 J	2200 J	1800 J	
	METALS							
7782-49-2	Selenium	ug/L	8.7 U	8.7 U	8.7 U	8.7 U	8.7 U	
7440-22-4	Silver	ug/L	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	
7439-97-6	Mercury	ug/L	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	
7440-23-5	Sodium	ug/L	8400	32800	25700	18800	16700	
7440-28-0	Thallium	ug/L	10 U	10 U	10 U	10 U	10 U	
7440-62-2	Vanadium	ug/L	3.5 J	1.5 U	21	14 J	2.6 J	
7440-66-6	Zinc	ug/L	250	91	190	410 J	30 J	

APPENDIX E
MONTHLY INSPECTION LOGS AND PHOTOGRAPHS

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 1/14/20123
(MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of manhole	none	good
		- flow conditions	none	no apparent flow
	Wet Wells	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of wet well	high levels in A and C	good
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	none
		- bare areas	none	no
		- washouts	none	none
		- leachate seeps	none	none
		- length of vegetation	none	normal winter
		- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 1/14/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- change in water budget	none	lower than normal
	- general conditions of wetlands	none	OK
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 1/14/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	normal for winter
	- cable concrete/gabion mats and riprap	none	good
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 2/4/2013
(MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of manhole	none	good
		- flow conditions	none	no flow
	Wet Wells	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of wet well	none	good
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	none
		- bare areas	none	none
		- washouts	none	none
		- leachate seeps	none	none
		- length of vegetation	none	snow covered
		- dead/dying vegetation	none	snow covered

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 2/4/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 2/4/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	snow
	- dead/dying vegetation	none	snow covered
	- cable concrete/gabion mats and riprap	none	good
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	snow
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 3/5/2013
(MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of manhole	none	good
		- flow conditions	none	no apparent flow
	Wet Wells	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of wet well	none	good
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	none
		- bare areas	none	snow covered
		- washouts	none	none
		- leachate seeps	none	none
		- length of vegetation	none	short
		- dead/dying vegetation	none	typical of winter conditions

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 3/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 3/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	typical of winter conditions
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 4/5/2013
(MM DD YY)

INSPECTOR(S): RC Becken

Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain		
	Manholes - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of manhole	none	good
	- flow conditions	none	no apparent flow
	Wet Wells - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of wet well	none	good
2	Landfill Cap		
	Vegetated Soil Cover - erosion	none	none
	- bare areas	none	none
	- washouts	none	none
	- leachate seeps	none	none
	- length of vegetation	none	short
	- dead/dying vegetation	none	typical for early April

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 4/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	typical for early April
	- change in water budget	none	normal
	- general conditions of wetlands	none	good
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 4/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	typical for early April
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intsct
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/7/2013
(MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of manhole	none	good
		- flow conditions	none	no apparent flow
	Wet Wells	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of wet well	none	good
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	none
		- bare areas	none	no
		- washouts	none	none
		- leachate seeps	none	none
		- length of vegetation	none	starting to grow
		- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/7/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	low
	- general conditions of wetlands	none	OK
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/7/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	none
	- cable concrete/gabion mats and riprap	none	good
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 6/5/2013
(MM DD YY)

INSPECTOR(S): RC Becken

Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain		
☐	Manholes - cover on securely	none	yes
☐	- condition of cover	none	good condition
☐	- condition of inside of manhole	none	good condition
☐	- flow conditions	none	no apparent flow
☐	Wet Wells - cover on securely	none	yes
☐	- condition of cover	none	good condition
☐	- condition of inside of wet well	none	good condition
2	Landfill Cap		
☐	Vegetated Soil Cover - erosion	none	none
☐	- bare areas	none	none
☐	- washouts	none	none
☐	- leachate seeps	none	none
☐	- length of vegetation	none	tall
☐	- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 6/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- general conditions of wetlands	none	good condition
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good condition
☐	- integrity of gates	none	good condition
☐	- integrity of locks	none	good condition
☐	- placement and condition of signs	none	good condition

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 6/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good condition
	- flow obstructions	none	none
	- dead/dying vegetation	none	none
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good condition
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 7/5/2013
(MM DD YY)

INSPECTOR(S): RC Becken

Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain		
	Manholes - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of manhole	none	good
	- flow conditions	none	no apparent flow
	Wet Wells - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of wet well	none	good
2	Landfill Cap		
	Vegetated Soil Cover - erosion	none	none
	- bare areas	none	none
	- washouts	none	none
	- leachate seeps	none	none
	- length of vegetation	none	tall
	- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 7/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- general conditions of wetlands	none	good
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 7/5/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	none
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 8/1/2013
(MM DD YY)

INSPECTOR(S): RC Becken

Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain		
	Manholes - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of manhole	none	good
	- flow conditions	none	no apparent flow
	Wet Wells - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of wet well	none	good
2	Landfill Cap		
	Vegetated Soil Cover - erosion	none	none
	- bare areas	none	none
	- washouts	none	none
	- leachate seeps	none	none
	- length of vegetation	none	tall / thick
	- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 8/1/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- general conditions of wetlands	none	good
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 8/1/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	none
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 9/3/2013
(MM DD YY)

INSPECTOR(S): RC Becken

Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain		
☐	Manholes - cover on securely	none	yes
☐	- condition of cover	none	good condition
☐	- condition of inside of manhole	none	good condition
☐	- flow conditions	none	no apparent flow
☐	Wet Wells - cover on securely	none	yes
☐	- condition of cover	none	good condition
☐	- condition of inside of wet well	none	good condition
2	Landfill Cap		
☐	Vegetated Soil Cover - erosion	none	none
☐	- bare areas	none	none
☐	- washouts	none	none
☐	- leachate seeps	none	none
☐	- length of vegetation	none	tall
☐	- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 9/3/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- general conditions of wetlands	none	good condition
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good condition
☐	- integrity of gates	none	good condition
☐	- integrity of locks	none	good condition
☐	- placement and condition of signs	none	good condition

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 9/3/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good condition
	- flow obstructions	none	none
	- dead/dying vegetation	none	none
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good condition
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/4/2013
(MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of manhole	none	good
		- flow conditions	none	no apparent flow
	Wet Wells	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of wet well	none	good
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	none
		- bare areas	none	none
		- washouts	none	none
		- leachate seeps	none	none
		- length of vegetation	none	short
		- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/4/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- general conditions of wetlands	none	good
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/4/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	none
	- cable concrete/gabion mats and riprap	none	good condition
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/15/2013
(MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of manhole	none	good
		- flow conditions	none	no apparent flow
	Wet Wells	- cover on securely	none	yes
		- condition of cover	none	good
		- condition of inside of wet well	none	good
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	none
		- bare areas	none	none
		- washouts	none	none
		- leachate seeps	none	none
		- length of vegetation	none	short
		- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/15/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	normal
	- general conditions of wetlands	none	good
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/15/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
☐	- flow obstructions	none	none
☐	- dead/dying vegetation	none	none
☐	- cable concrete/gabion mats and riprap	none	good condition
☐ Culverts	- sediment build-up	none	none
☐	- erosion	none	none
☐	- condition of erosion protection	none	good
☐	- flow obstructions	none	none
☐ Gas Vents	- intact/damage	none	intact
☐ Wells	- locks secure	none	yes

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/9/2013
(MM DD YY)

INSPECTOR(S): RC Becken

Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain		
	Manholes - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of manhole	none	good
	- flow conditions	none	no apparent flow
	Wet Wells - cover on securely	none	yes
	- condition of cover	none	good
	- condition of inside of wet well	none	good
2	Landfill Cap		
	Vegetated Soil Cover - erosion	none	none
	- bare areas	none	no
	- washouts	none	none
	- leachate seeps	none	none
	- length of vegetation	none	normal early winter
	- dead/dying vegetation	none	none

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/9/2013
(MM DD YY)

INSPECTOR(S): RC Becken

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	winter kill
	- change in water budget	none	normal
	- general conditions of wetlands	none	good
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	none	good
☐	- integrity of gates	none	good
☐	- integrity of locks	none	good
☐	- placement and condition of signs	none	good

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/9/2013 (MM DD YY)

INSPECTOR(S): RC Becken

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	good
	- flow obstructions	none	none
	- dead/dying vegetation	none	normal early winter
	- cable concrete/gabion mats and riprap	none	good
Culverts	- sediment build-up	none	none
	- erosion	none	none
	- condition of erosion protection	none	good
	- flow obstructions	none	none
Gas Vents	- intact/damage	none	intact
Wells	- locks secure	none	yes

APPENDIX F

MAINTENANCE RECORD LOGS

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date: Jan.1, 2, 3, 4, 5, 9, 10, 11, 12, and 13
   Time
   Scheduled/Unscheduled: unscheduled
   Type of Maintenance Performed: check pumps
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

drive to site then check to make certain pumps are operating

Description of Material Removed:

none

Problems/Comments:

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
1/14/2013	RC Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 1/26/2013
   Time 900
   Scheduled/Unscheduled: Unscheduled:
   Type of Maintenance Performed: high level WWD
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

pulled pump and motor and replaced with spare pump and new motor

Description of Material Removed:

old pump and motor	motor bad, pump needs cleaning and checked

Problems/Comments:

None

1/26/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 2/1/2013
   Time 9:00
   Scheduled/Unscheduled: Scheduled
   Type of Maintenance Performed: install new circuit breaker
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

removed old circuit break and install new breaker

Description of Material Removed:

old breaker

Problems/Comments:

none

2/1/2013	RC Becken	RC Becken
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 2/20/2013
   Time 900
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: change pump/motor in Wet Well A
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr
   N. Tonawanda NY 14120
   Contact Name: Rick Becken
3. Methods Used:

removed pump and motor and replaced with new 7.5 hp pump and motor

Description of Material Removed:

none

Problems/Comments:

none

2/20/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 2/26/2013
   Time 1100
   Scheduled/Unscheduled: unscheduled
   Type of Maintenance Performed: changed one float control WWA
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr
   N. Tonawanda NY 14120
   Contact Name: Rick Becken
3. Methods Used:

removed old float and replaced with new float control

Description of Material Removed:

none

Problems/Comments:

none

2/26/2013 RC Becken

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken Dave Carrier

1. Date 3/6/2013
   Time 9:00
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: repaired level control on wet well A
2. Company Performing Maintenance

Name:	O&M Enterprises, Inc.	Carrier Controls
Address:	7134 Marigold Dr	PO Box 275
	North Tonawanda, NY	Springville, NY
Contact Name:	Rick Becken	Dave Carrier

3. Methods Used:

checked and found found two wires connected wrong

Description of Material Removed:

none

Problems/Comments:

none

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
3/6/2013	RC Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 4/10/2013
   Time 1000
   Scheduled/Unscheduled: unscheduled
   Type of Maintenance Performed: repair dicharge hose on wet well A
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

pulled pump and repaired discharge hose then reinstalled pump

Description of Material Removed:

none

Problems/Comments:

None

4/10/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 4/15/2013
   Time 1030
   Scheduled/Unscheduled: Unscheduled
   Type of Maintenance Performed: change pump/motor in wwC
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr
   N. Tonawanda NY 14120
   Contact Name: Rick Becken
3. Methods Used:

removed old pump and motor and replaced with spare pump and motor

Description of Material Removed:

none

Problems/Comments:

none

4/15/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 4/16/2013
   Time 800
   Scheduled/Unscheduled: Scheduled
   Type of Maintenance Performed: change pump/motor in wwC
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr
   N. Tonawanda NY 14120
   Contact Name: Rick Becken
3. Methods Used:

Removed old pump and motor that was installed yesterday and installed a new pump and motor.

Description of Material Removed:

pump and motor

Problems/Comments:

none

4/16/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 5/21/2013
   Time
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: mowing
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

mowed around perimeter fence and wells

Description of Material Removed:

none

Problems/Comments:

none

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
5/21/2013	RC Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 5/22/2013
   Time 900
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: mow around perimeter fence and wells
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr
   N. Tonawanda NY 14120
   Contact Name: Rick Becken
3. Methods Used:

tractor and mower

Description of Material Removed:

none

Problems/Comments:

found three holes in fence

5/22/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 5/23/2013
   Time 915
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: repair three holes cut in perimeter fence
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr
   N. Tonawanda NY 14120
   Contact Name: Rick Becken
3. Methods Used:

hand tools

Description of Material Removed:

none

Problems/Comments:

none

5/23/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 6/25/2013
   Time 8:15
   Scheduled/Unscheduled: Scheduled
   Type of Maintenance Performed: mowing grass around perimeter and wells
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

tractor and mower

Description of Material Removed:

none

Problems/Comments:

none

6/25/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 7/19/2013
   Time
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: mow grass
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   N. Tonawanda, NY
   Contact Name: Richard Becken
3. Methods Used:

tractor and mower

Description of Material Removed:

none

Problems/Comments:

none

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
7/19/2013	RC Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 9/3/2013
   Time
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: mowing
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

annual mowing

Description of Material Removed:

none

Problems/Comments:

none

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
9/3/2013	RC Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 9/4/2013
   Time 800
   Scheduled/Unscheduled: Scheduled
   Type of Maintenance Performed: mowing landfill cap
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:
   Tractor and mower

Description of Material Removed:

none

Problems/Comments:

none

9/4/2013 Richard C. Becken

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 9/5/2013
   Time 815
   Scheduled/Unscheduled: Scheduled
   Type of Maintenance Performed: mowing landfill cap
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

Tractor and mower

Description of Material Removed:

none

Problems/Comments:

none

9/5/2013 Richard C. Becken

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 9/6/2013
   Time 820
   Scheduled/Unscheduled: Scheduled
   Type of Maintenance Performed: mowing landfill cap
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

Tractor and mower

Description of Material Removed:

none

Problems/Comments:

none

9/6/2013 Richard C. Becken

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 9/23/2013
   Time 1300
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: replace electrical transformer for alarm system
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

installed new transformer

Description of Material Removed:

none

Problems/Comments:

None

9/23/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 9/24/2013
   Time 1315
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: purchased and installed new battery for alarm system
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

pluged in battery

Description of Material Removed:

none

Problems/Comments:

None

9/24/2013	RC Becken	
DATE	INSPECTOR	INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS:

1. Date 11/10/2013
   Time 0830
   Scheduled/Unscheduled: unscheduled
   Type of Maintenance Performed: repaired discharge hose on wet well A
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

repaired discharge hose at cam lock fitting

Description of Material Removed:

none

Problems/Comments:

none

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
11/10/2013	Richard C. Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 11/25/2013
   Time 930
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: repair discharge hose on Wet Well C
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

pull pump repair hose

Description of Material Removed:

none

Problems/Comments:

none

11/25/2013 Richard C. Becken

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 12/11/2013
   Time 1100
   Scheduled/Unscheduled:
   Type of Maintenance Performed: repair discharge hose on wet well A
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

cut end off hose and reinstall cam lock fitting

Description of Material Removed:

none

Problems/Comments:

None

12/11/2013 RC Becken

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: 1/14/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:40	598.93	26.47	572.46
EAST "B"	12:25	596.23	16.05	580.18
EAST "C"	12:15	598.69	20.91	577.78
EAST "D"	11:50	593.20	15.5	577.70
NCR-3S	10:55	579.60	3.06	576.54
NCR-4S	11:30	577.88	2.51	575.37
NCR-5S	10:15	579.34	5.55	573.79
NCR-13S	8:55	577.15	4.01	573.14

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:45		~7'
WW B	10:55		~6"
WW C	11:40		~4'
WW D	9:20		~10"

Total System Flow	Time of Measurement
65471470	8:45

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 2/4/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	11:55	598.93	26.51	572.42
EAST "B"	12:10	596.23	20.05	576.18
EAST "C"	12:25	598.69	20.69	578.00
EAST "D"	12:45	593.20	15.66	577.54
NCR-3S	10:25	579.60	3.8	575.80
NCR-4S	11:00	577.88	2.95	574.93
NCR-5S	11:30	579.34	6.65	572.69
NCR-13S	9:40	577.15	4.94	572.21

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:30		~6"
WW B	10:55		~5"
WW C	10:20		~8"
WW D	11:15		~5"

Total System Flow	Time of Measurement
66182630	9:30

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 3/5/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:00	598.93	26.61	572.32
EAST "B"	11:45	596.23	15.83	580.4
EAST "C"	11:25	598.69	20.84	577.85
EAST "D"	11:05	593.20	15.81	577.39
NCR-3S	10:25	579.60	3.75	575.85
NCR-4S	9:45	577.88	dry	
NCR-5S	10:50	579.34	6.58	572.76
NCR-13S	8:35	577.15	5.06	572.09

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:45		~10"
WW B	9:55		~5"
WW C	10:15		~9"
WW D	9:15		~7"

Total System Flow	Time of Measurement
66207320 old meter	8:45

561000 new meter

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 4/5/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:00	598.93	26.64	572.29
EAST "B"	11:45	596.23	15.82	580.41
EAST "C"	11:25	598.69	20.79	577.9
EAST "D"	11:05	593.20	15.85	577.35
NCR-3S	10:25	579.60	4.25	575.35
NCR-4S	9:45	577.88	3.16	574.72
NCR-5S	10:50	579.34	7.25	572.09
NCR-13S	8:35	577.15	5.81	571.34

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:45		~12"
WW B	9:55		~6"
WW C	10:15		~8"
WW D	9:15		~6"

Total System Flow	Time of Measurement
919000	8:45

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 5/7/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	11:10	598.93	26.65	572.28
EAST "B"	11:30	596.23	16.06	580.17
EAST "C"	11:45	598.69	20.84	577.85
EAST "D"	12:05	593.20	16.09	577.11
NCR-3S	10:15	579.60	5.1	574.50
NCR-4S	10:45	577.88	3.75	574.13
NCR-5S	10:50	579.34	7.65	571.69
NCR-13S	14:00	577.15	6.78	570.37

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	13:55		~6"
WW B	10:55		~5"
WW C	10:20		~5"
WW D	14:20		~5"

Total System Flow	Time of Measurement
1022	13:55

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 6/5/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	11:10	598.93	26.65	572.28
EAST "B"	11:25	596.23	18.99	577.24
EAST "C"	11:50	598.69	20.98	577.71
EAST "D"	12:10	593.20	16.11	577.09
NCR-3S	9:50	579.60	4.21	575.39
NCR-4S	10:10	577.88	3.14	574.74
NCR-5S	10:50	579.34	7.63	571.71
NCR-13S	8:55	577.15	5.33	571.82

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:50		~10"
WW B	10:25		~4"
WW C	9:35		~6"
WW D	9:10		~4"

Total System Flow	Time of Measurement
11415	8:50

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 7/5/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:05	598.93	26.61	572.32
EAST "B"	11:50	596.23	15.85	580.38
EAST "C"	11:30	598.69	20.92	577.77
EAST "D"	11:10	593.20	16.19	577.01
NCR-3S	10:25	579.60	5.18	574.42
NCR-4S	9:55	577.88	3.4	574.48
NCR-5S	10:55	579.34	8.58	570.76
NCR-13S	8:30	577.15	7.34	569.81

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:40		~12"
WW B	9:50		~5"
WW C	10:15		~5"
WW D	9:20		~6"

Total System Flow	Time of Measurement
1417000	8:40

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 8/1/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	11:55	598.93	26.42	572.32
EAST "B"	11:45	596.23	15.85	580.38
EAST "C"	11:25	598.69	20.51	577.77
EAST "D"	11:10	593.20	16.1	577.01
NCR-3S	10:00	579.60	dry	
NCR-4S	10:25	577.88	3.31	574.57
NCR-5S	10:55	579.34	9.42	569.92
NCR-13S	8:20	577.15	7.2	569.95

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:00		~13"
WW B	10:35		~5"
WW C	10:15		~7"
WW D	9:20		~5"

Total System Flow	Time of Measurement
154700	8:00

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 9/3/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	11:10	598.93	26.32	572.61
EAST "B"	11:25	596.23	18.99	577.24
EAST "C"	11:50	598.69	20.59	578.1
EAST "D"	12:10	593.20	15.9	577.3
NCR-3S	9:50	579.60	dry	
NCR-4S	10:10	577.88	4.2	573.68
NCR-5S	10:50	579.34	10.37	568.97
NCR-13S	8:55	577.13	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:50		~12"
WW B	10:25		~4"
WW C	9:35		~4"
WW D	9:10		~4"

Total System Flow	Time of Measurement
1629000	8:50

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 10/4/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:00	598.93	26.36	572.57
EAST "B"	11:45	596.23	15.93	580.3
EAST "C"	11:25	598.69	20.68	578.01
EAST "D"	11:05	593.20	16.01	577.19
NCR-3S	10:25	579.60	dry	
NCR-4S	9:45	577.88	dry	
NCR-5S	10:50	579.34	dry	
NCR-13S	8:35	577.15	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:45		~9"
WW B	9:55		~6"
WW C	10:15		~5"
WW D	9:15		~5"

Total System Flow	Time of Measurement
1667000	8:45

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 11/15/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:00	598.93	26.37	572.56
EAST "B"	11:45	596.23	15.88	580.35
EAST "C"	11:25	598.69	20.65	578.04
EAST "D"	11:05	593.20	15.98	577.22
NCR-3S	10:25	579.60	3.69	575.91
NCR-4S	9:45	577.88	3.00	574.88
NCR-5S	10:50	579.34	6.46	572.88
NCR-13S	8:35	577.15	4.76	572.39

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:30		~12"
WW B	9:55		~6"
WW C	10:15		~6"
WW D	9:15		~12"

Total System Flow	Time of Measurement
2579000	8:30

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 12/9/2013 (MM DD YY)

CREW MEMBERS: RC Becken

Observation Well	Time of Measurement	Top of Casing Elevation A	Depth to Water B	Water Level Elevation A-B
		feet	feet	feet
EAST "A"	12:00	598.93	26.54	572.39
EAST "B"	11:45	596.23	16.1	580.13
EAST "C"	11:25	598.69	21.21	577.48
EAST "D"	11:05	593.20	16.11	577.09
NCR-3S	10:15	579.60	3.8	575.80
NCR-4S	10:45	577.88	3.05	574.83
NCR-5S	10:50	579.34	6.58	572.76
NCR-13S	8:35	577.13	4.81	572.32

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:55		~11"
WW B	10:55		~6"
WW C	10:20		~8"
WW D	9:25		~6"

Total System Flow	Time of Measurement
25796000	8:55

FP-3D

APPENDIX H
COMPACT DISK CONTAINING REPORT