2011 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 2012

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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 2011.

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 prevent offsite contaminant migration. 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 December 2011. These four wells are screened in the shallow overburden materials. Groundwater sampling on an annual schedule commenced in 2006. Annual groundwater sampling is scheduled to continue for an undetermined time period, assuming that water level conditions permit collection of groundwater samples.

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 complete the purging of 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 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 the sample containers.

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 December 2011 sampling event, however, each of the wells contained adequate water for sampling to be completed. Since 2006, VOCs and SVOCs samples have been collected every other year and metals samples have been collected annually.

1.2.2 Effluent Sampling

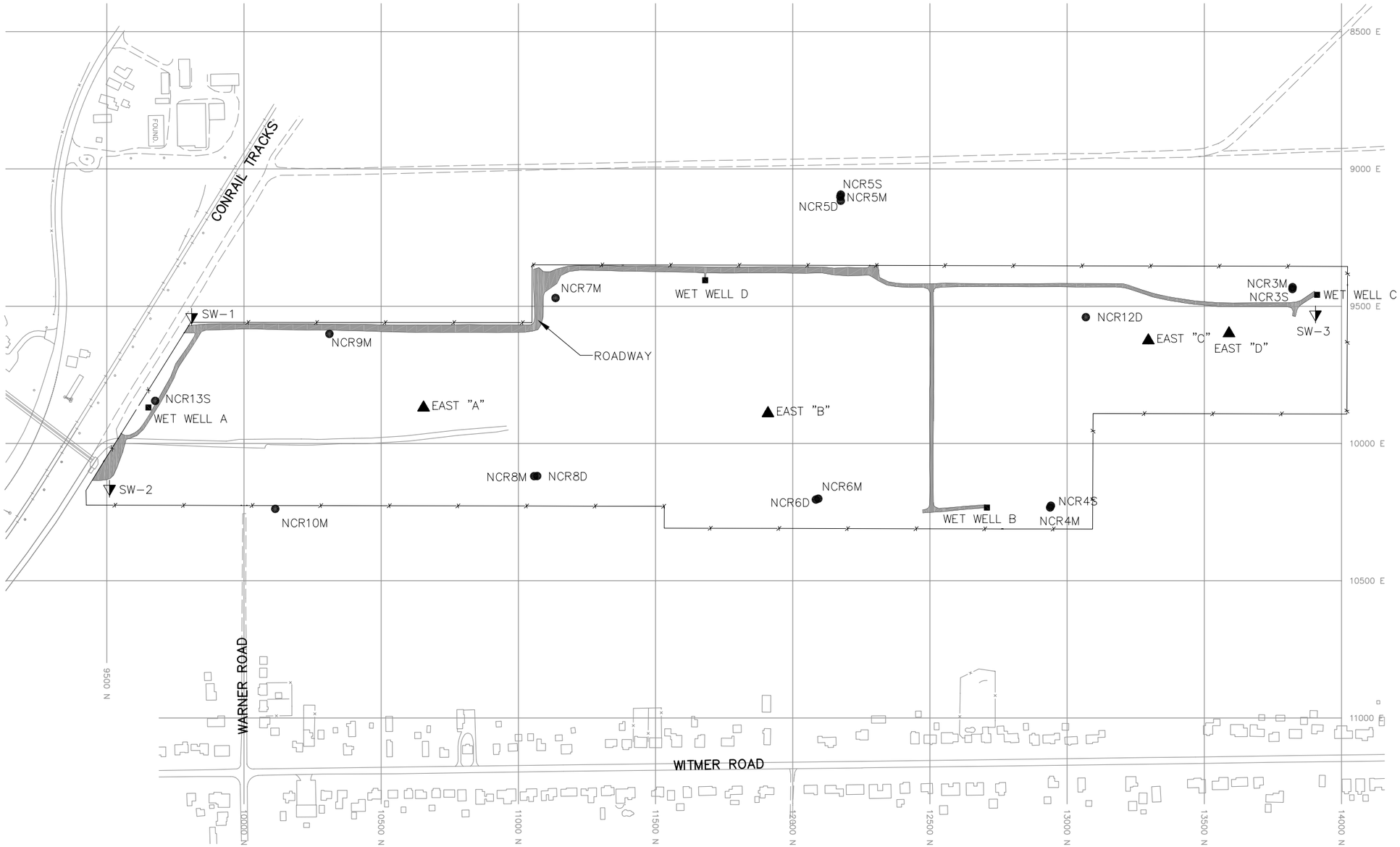
Groundwater from the perimeter collection system is discharged to the City of North Tonawanda treatment system without pre-treatment. A monitoring station in Wet Well A allows both the effluent water quality and the volume of effluent to be verified by the City of North Tonawanda. In compliance with 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 during the reporting period and is effective from March 31, 2010 through April 1, 2013. 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 2011. The effluent samples are collected in compliance with the permit using the procedures identified in the OM&M Manual (CRA, 2000). 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 four wet well locations. Water level measurements were collected monthly during 2011. 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 2011 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, 2010. Effluent analytical results for 2011 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 123 to 134, 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 (CRA, 2000). Annual collection of groundwater samples began in 2006. Groundwater sample analytes are currently scheduled to include metals annually, and volatile organic and semivolatile organic parameters every two years, as approved by the USEPA (see Appendix B). The groundwater samples collected during this reporting period were analyzed for volatile organics, semivolatile organics, and metals.

The analytical results received from the laboratory are presented in Appendix C, along with the chain-of-custody (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.

December 2011 Event

Monitoring wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S were sampled on December 9, 2011. The locations of the monitoring wells are provided in Figure 1.1. The data validation report is presented in Appendix D.

Fourteen metals were identified in one or more of the groundwater samples. Six 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 appeared to be consistent with ranges observed in previous sampling events. Two metals, barium and vanadium, have detections that are greater than their respective historical high values. Plots of historical select 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, these wells have been above the NYSDEC AWQS standard.
- Barium was found above the analytical detection limits in each of the four samples but was below the water quality standards. The concentration of barium in NCR-5S was 180 ug/L, which is higher than previously identified.
- Copper was identified in three of the four samples above the NYSDEC AWQS. Typically, copper has exceeded the NYSDEC AWQS in two or more of the groundwater samples.
- 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.
- Sodium was found above the NYSDEC AWQS, the NYSDOH MCL, and USEPA MCL in two of the four samples. The Record of Decision (ROD) (USEPA, 1993) identifies sodium as typically exceeding MCLs in the regional groundwater.
- Vanadium was identified in one of the four samples (NCR-5S, 15 ug/L) where it exceeded the NYSDEC AWQS of 14 ug/L. The concentration of vanadium was greater than previously identified.

No VOCs or SVOCs were detected in the groundwater samples. Vocs and SVOCs are not typically found above the analytical detection limits in the groundwater samples.

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.

Eight nondetected compounds in the volatile analysis had relative response factors that were greater than validation protocols in the continuing calibration associated with all project samples. Therefore, sample results for these eight compounds were considered estimated and qualified "UJ". All volatile sample results were considered usable following data validation. The validation of the semivolatile analyses found all items to be considered compliant and acceptable in accordance with the validation protocols.

Certain metals results were considered estimated, and flagged with a "J", due to noncompliant matrix spike recoveries and field duplicate precision. Metals sample results were considered usable following data validation. The metals results were 100% complete. Detected sodium and aluminum results were considered estimated due to noncompliant matrix spike recoveries. Manganese, iron, aluminum, zinc, and chromium results were considered estimated due to noncompliant field duplicate precision results.

2.2 SITE INSPECTIONS

Monthly Site inspections were conducted between January and December 2011. 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. 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 was noted to be covered with snow during the February site inspection and the cover vegetation was noted to be low during the January, March, April, and October site inspections. This is typical for the early and later parts of the year. Tall vegetation was noted on the cap during the May, June, July, and August site inspections. The landfill cap was mowed in September and the cover vegetation remained short for the remainder of 2011.

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.

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 slightly high in April, high in May, and slightly low in July, August, and September. Typical winter vegetative conditions were observed from January through April, and again in December, and conditions were noted as good during the May through November inspections.

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 this reporting period included:

- The sign at the entrance to the landfill off Witmer Road was removed. The section of fence that the sign was attached to was replaced along with the top and mid-rails and post. Additionally, the gates adjacent to the section of fence were re-hung. The sign at the entrance to the landfill off Witmer Road was re-installed and a new chain used to lock the gate was installed.
- The float switches in the wet wells were adjusted.

- Tall grass, brush, and weeds along the inside of the perimeter fence line and pathways to monitoring and observation wells was cut. Grass in roadways was cut.
- Landfill cap was mowed.
- Brush was cut near the fence line.

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

- Between February 24 and February 26, the pump and motor in Wet Well C was replaced with the spare pump and a section of riser was replaced. Repairs to the pump removed from Wet Well C were completed, the repaired pump was reinstalled in Wet Well C, and the spare pump was removed and stored.
- On November 30 and again on December 1, a leaking hose was replaced at wet well C and the autodialer was reset.

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 2011, water levels were collected from the monitoring wells on a monthly basis. Water levels generally varied between 0.8 and 4.0 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 830 River Road North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling December 2011		Sample ID: Lab ID: Source: SDG: Matrix: Sampled: Validated:	NYS DEC AWQS*	NYS DOH MCL	US EPA MCL	NCR-3S 480-13848-3 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-4S 480-13848-4 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-5S 480-13848-5 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-13S 480-13848-2 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011
CAS NO.	COMPOUND	UNITS:							
	METALS								
7429-90-5	Aluminum	ug/L	100	-	-	580 J	6100 J	8900 J	380 J
7440-39-3	Barium	ug/L	1000	2000	2000	49	93	180	59
7440-70-2	Calcium	ug/L	-	-	-	122000	142000	83800	164000
7440-47-3	Chromium	ug/L	50	100	100	18	5.6	24	4.6 J
7440-50-8	Copper	ug/L	5	-	-	10	10	24	1.5 U
7439-89-6	Iron	ug/L	300>	300>	-	**5300**	**18200**	**8300**	**540 J**
7439-92-1	Lead	ug/L	25	25	15	3 U	9.4	13	3 U
7439-95-4	Magnesium	ug/L	35000+	-	-	73400	44900	42700	49000
7439-96-5	Manganese	ug/L	300>	300>	-	200	150	220	4 J
7440-02-0	Nickel	ug/L	100	-	-	26	1.3 U	21	1.3 U
7440-09-7	Potassium	ug/L	-	-	-	2600	18500	3000	3100
7440-23-5	Sodium	ug/L	20000	20000	20000	9100 J	**33100 J**	**32200 J**	12800 J
7440-62-2	Vanadium	ug/L	14	-	-	1.1 U	1.1 U	15	1.1 U
7440-66-6	Zinc	ug/L	2000+	5000	-	340	400	88	47 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 slightly higher than normal water level was noted during the April and May inspections. A slightly lower water level was noted during the July, August, and September inspections. Normal winter conditions, expected for the time of year, were observed during the January through April and December inspections.
Perimeter Fence	X		No problems were noted in 2011.
Condition of Roads	X		No erosion or other problems. Covered in snow during the February inspection.
Integrity of the Cap	X		No problems were noted in 2011. Covered in snow in February.
Drainage Ditches/Swales	X		
Gas Venting System	X		
Wells	X		Water levels were measured monthly.
Culverts	X		
Vegetative Cover	X		The vegetative cover was covered in snow during the February inspection. Height of vegetation on the cap was noted as low during the January, March, April, and October inspections and noted as tall during the May, June, July, and August inspections. The cap was mowed in September 2011.

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

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

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

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

Notes:

- = measurment not collected.

dry = no water in well.

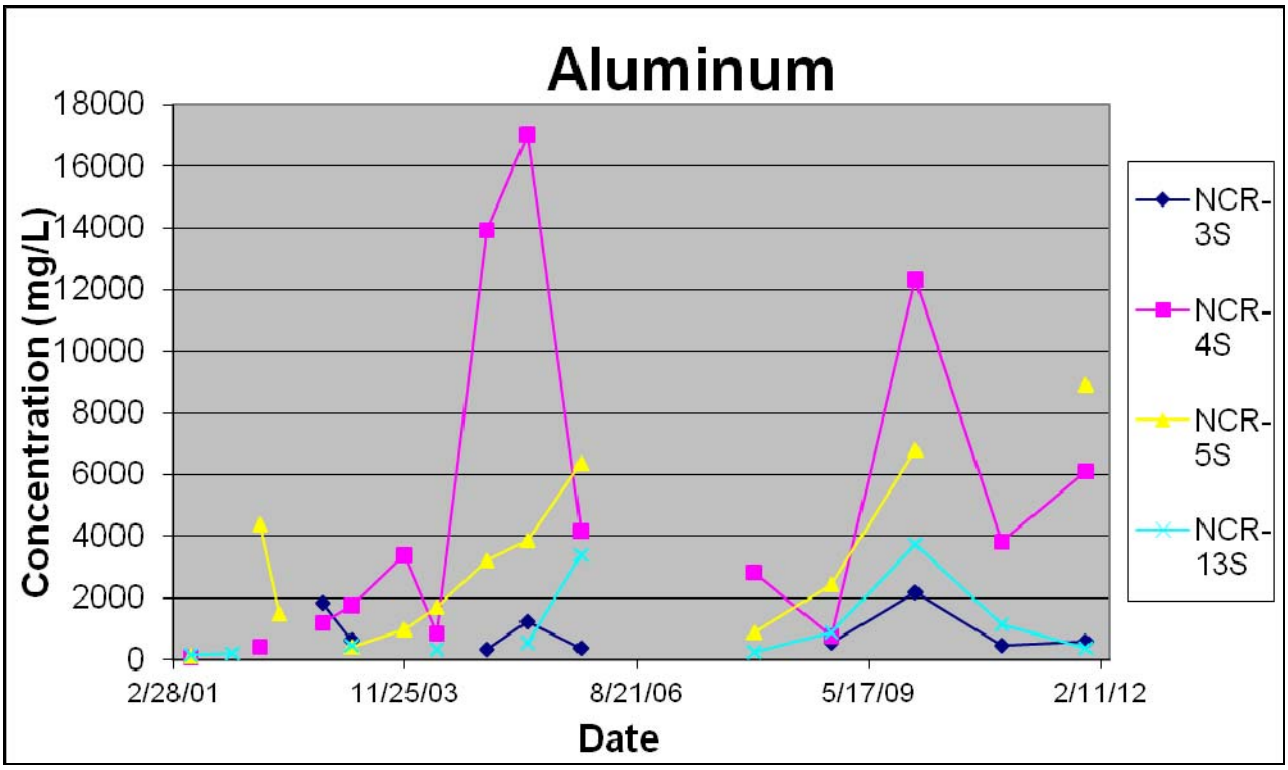

Figure 2.1A: Plot of Historical Aluminum Concentration

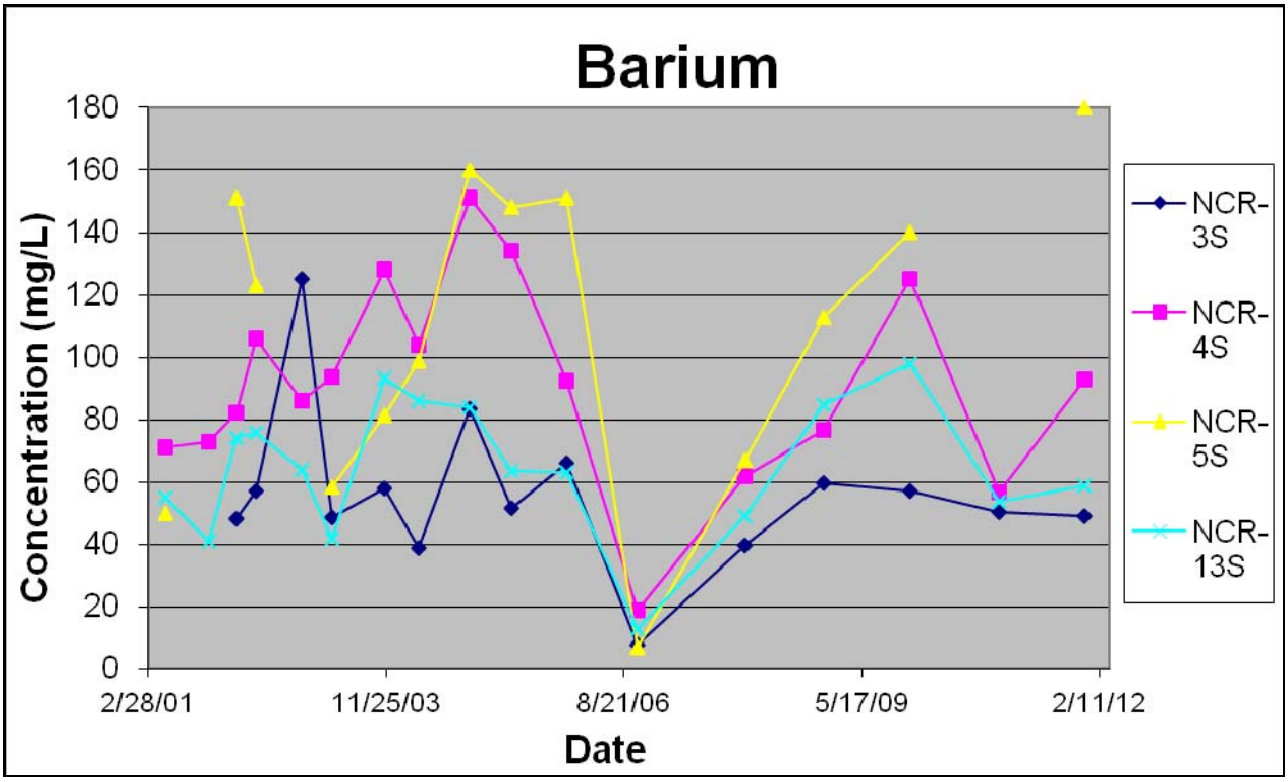

Figure 2.1B: Plot of Historical Barium Concentration

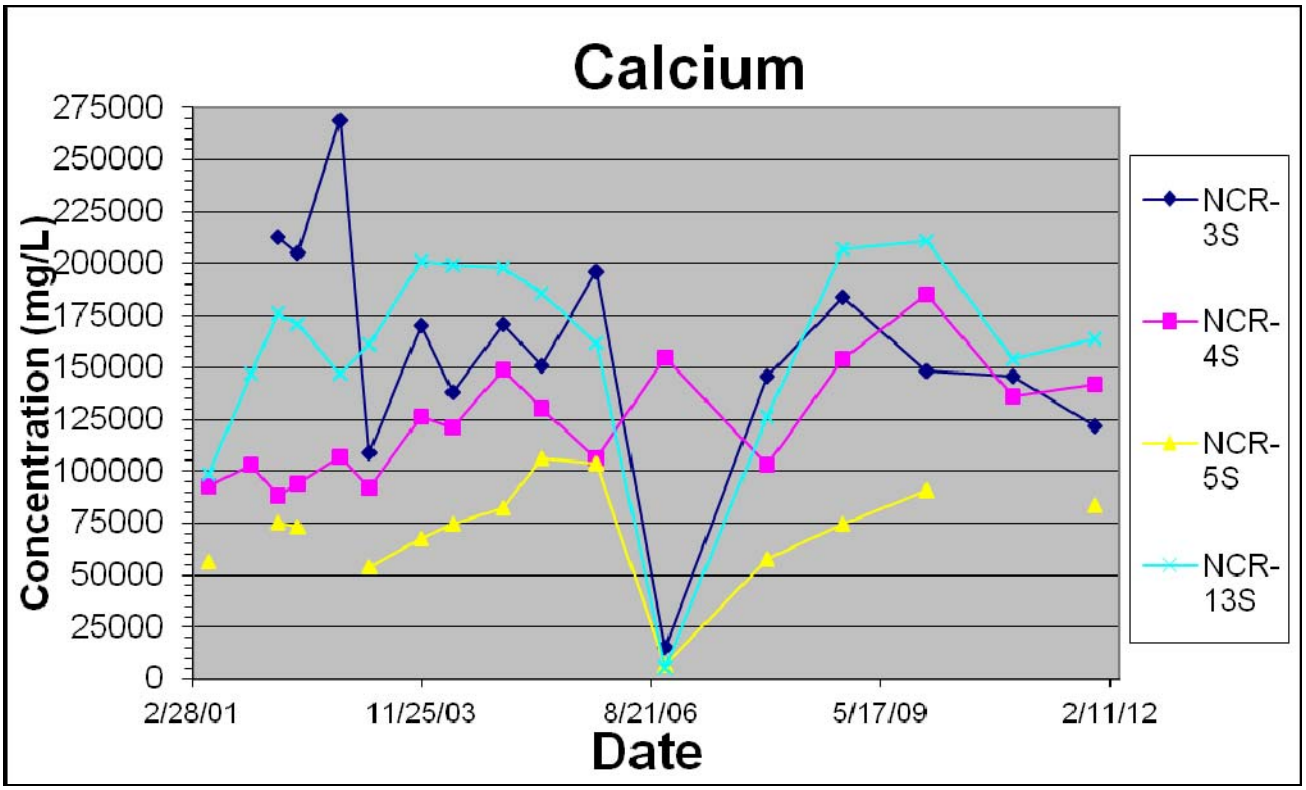

Figure 2.1C: Plot of Historical Calcium Concentration

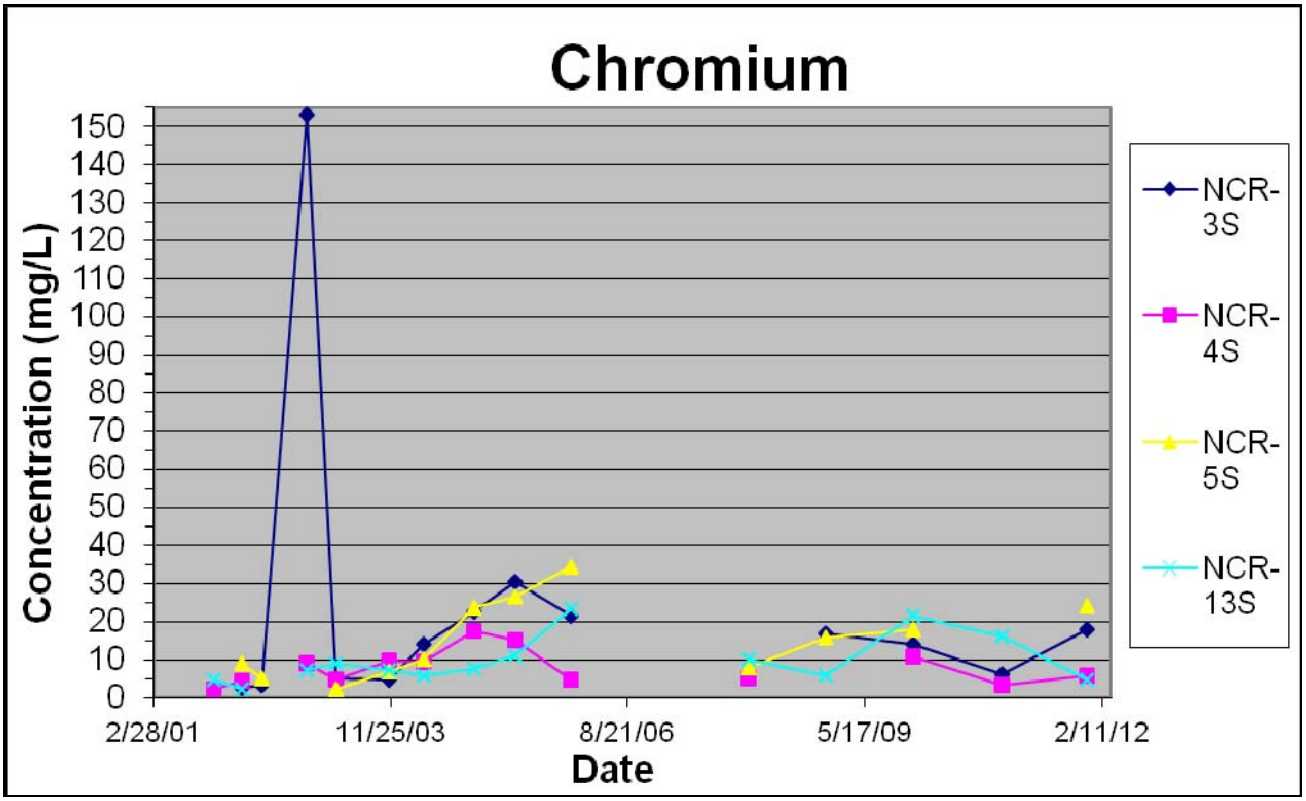

Figure 2.1D: Plot of Historical Chromium Concentration

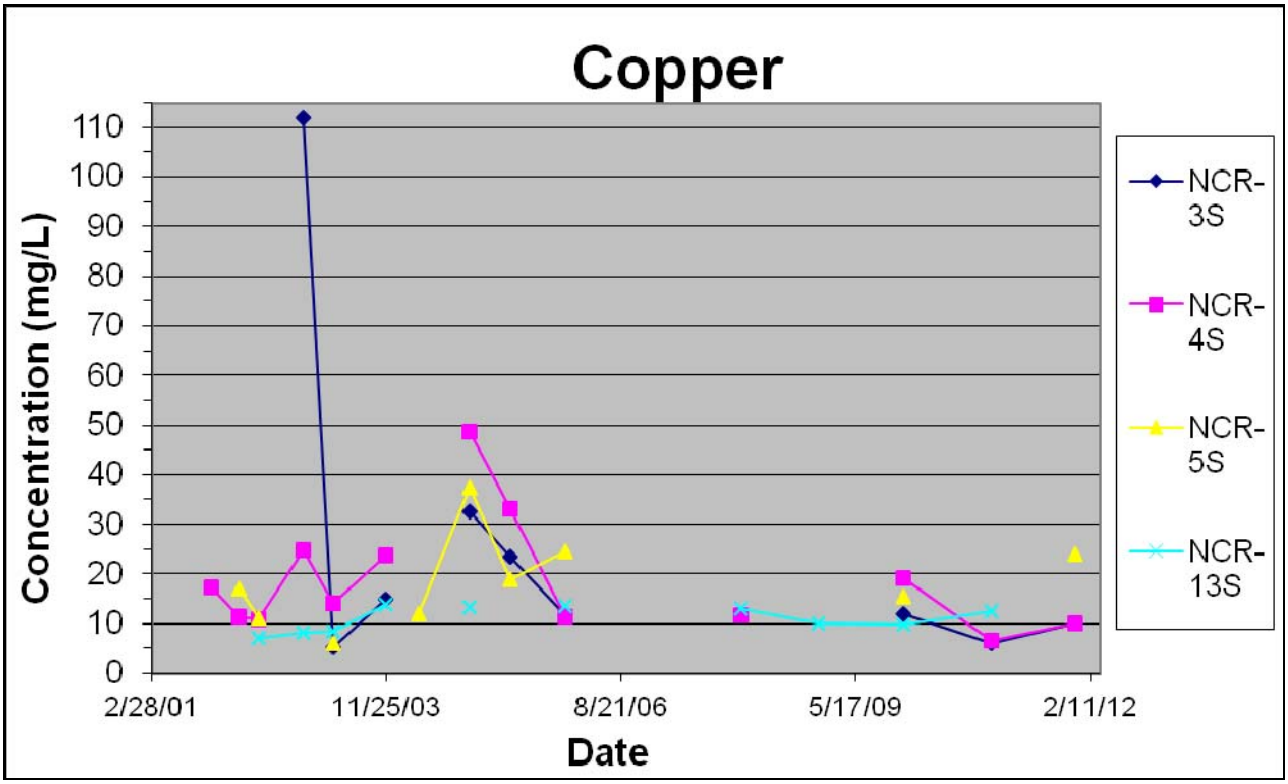

Figure 2.1E: Plot of Historical Copper Concentration

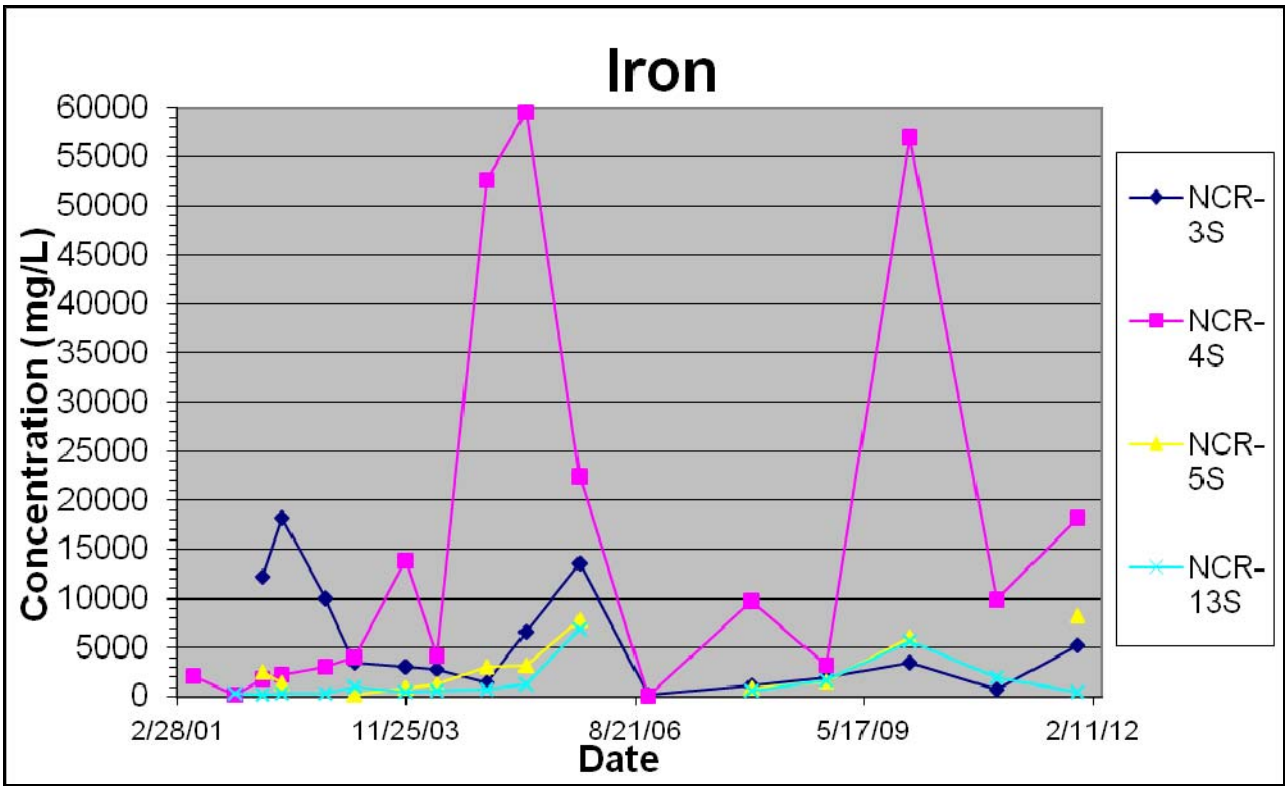

Figure 2.1F: Plot of Historical Iron Concentration

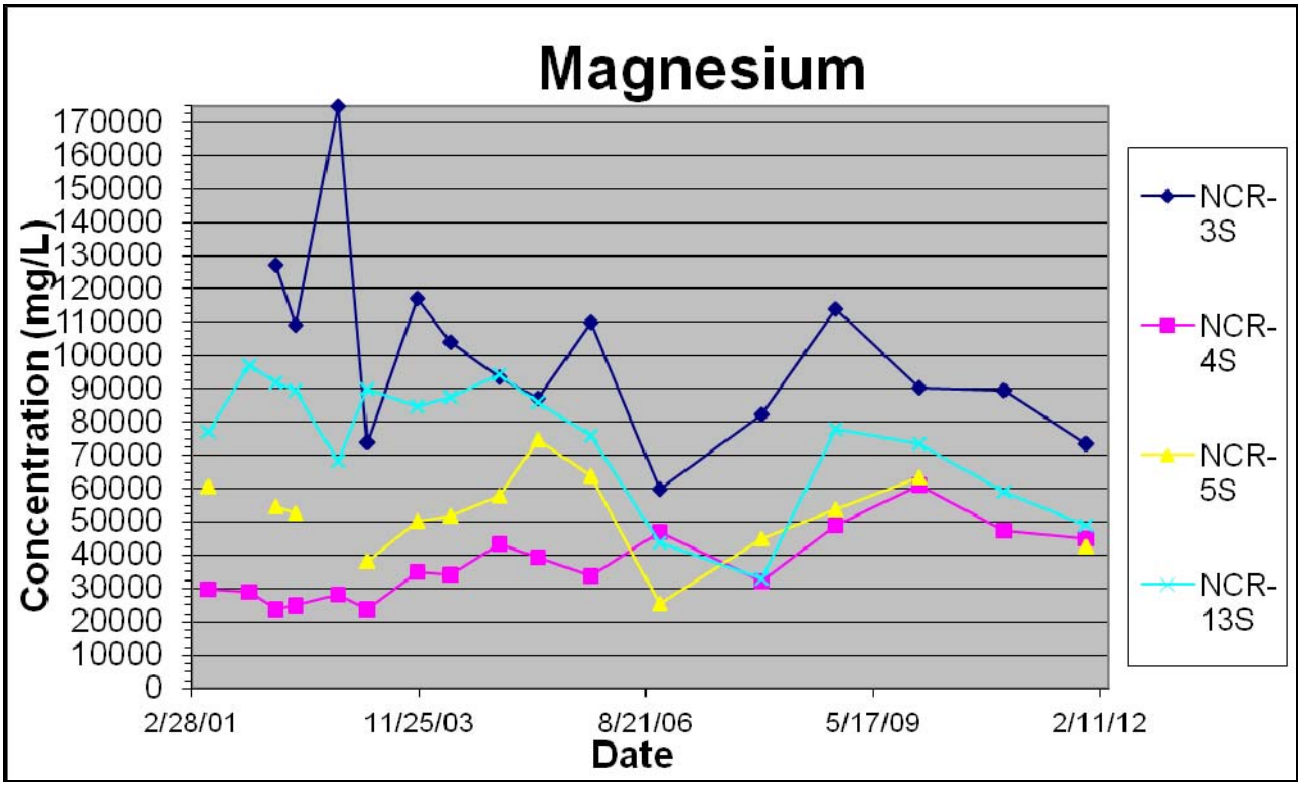

Figure 2.1G: Plot of Historical Magnesium Concentration

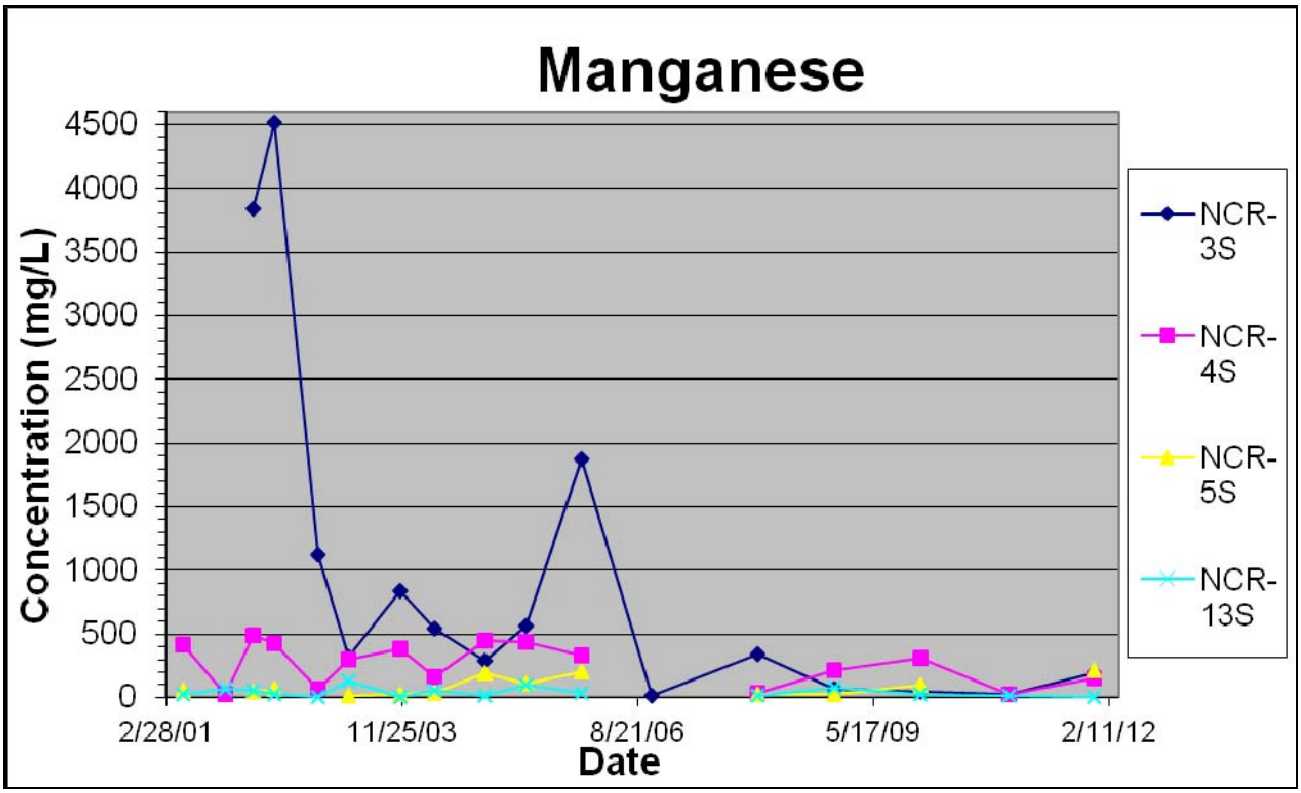

Figure 2.1H: Plot of Historical Manganese Concentration

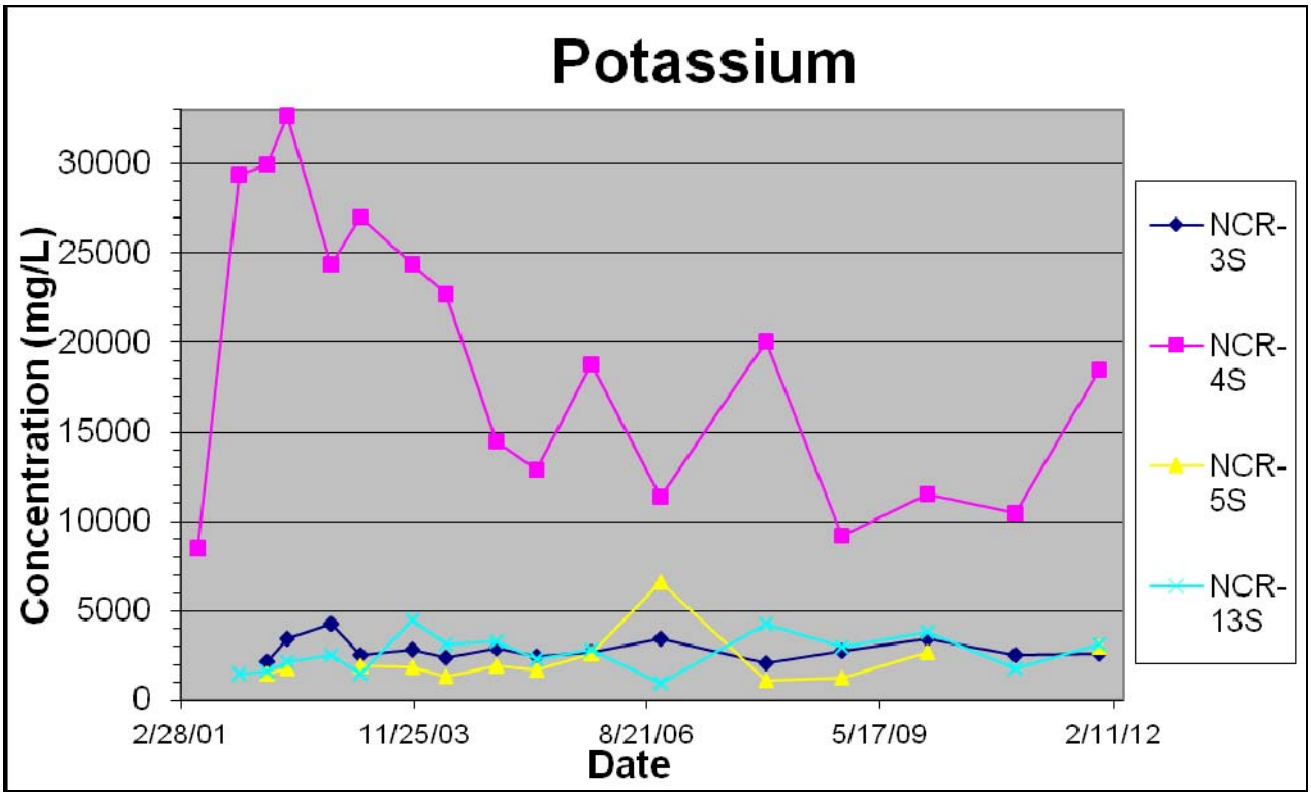

Figure 2.1I: Plot of Historical Potassium Concentration

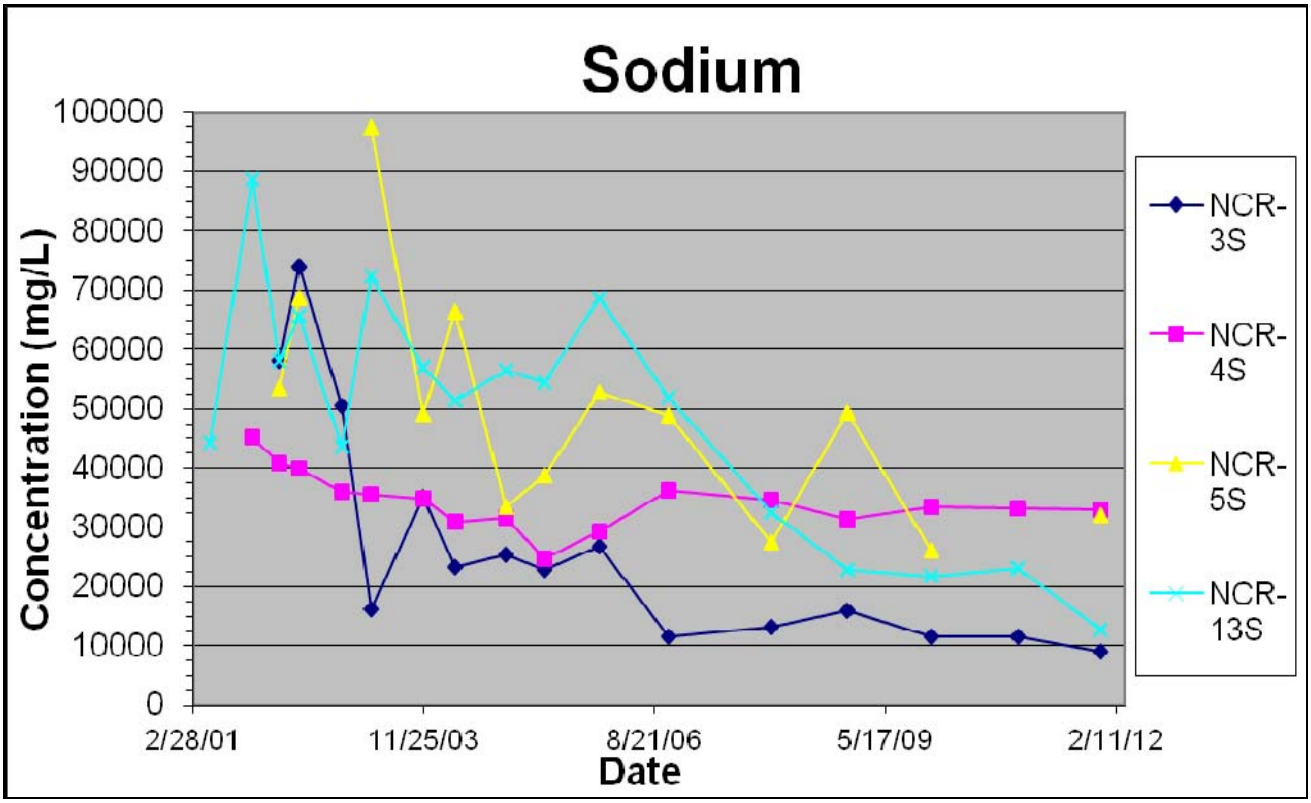

Figure 2.1J: Plot of Historical Potassium Concentration

SECTION 3
SUMMARY AND CONCLUSIONS

The following summary and conclusions were developed based on the data collected during this reporting period (January through December 2011):

- Volatile organics, semi-volatile organics, and metals groundwater samples were collected in 2011. The analytical results were consistent with historical results. The annual groundwater samples scheduled for collection in November 2012 will be analyzed for metals only.
- Fourteen metals were identified in one or more of the groundwater samples. Six 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.
- No VOCs or SVOCs were identified in the groundwater samples. This is consistent with previous sampling events.
- Two effluent samples were collected in 2011. All analytical results were found to be compliant with the discharge permit. During 2011, compliance with the discharge permit was maintained.
- The landfill was inspected monthly and was appropriately maintained. Any 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 2011, 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 2011. Water levels generally varied between 0.8 and 4.0 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, 2011, 2010 Annual Monitoring Report, Niagara County Refuse District Site; Parsons, February 2011.

APPENDIX A

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

CITY OF NORTH TONAWANDA
6/27/00
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, New York 14094

Classified by S.I.C. Number(s): _N/A_
for the discharge of: groundwater 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 Wastewater Treatment Plant 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, 2010

To expire the 1st day of April, 2013

Water Works Superintendent
Signed this 16 **day of** June **20**10

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
2/	Aluminum	2.0	1 Sample 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.
2/	Magnesium	Monitor Only	1 Sampling Day semi-annual	24 hr comp.
2/	Sodium	Monitor Only	1 Sampling Day semi-annual	24 hr comp.
	pH	Monitor Only	1 Sampling Day semi-annual	grab
2/	BOD	Monitor Only	1 Sampling Day semi-annual	24 hr comp.
2/	Total Suspended Solids	Monitor Only	1 Sampling Day semi-annual	24 hr comp.

PART I. SPECIFIC CONDITIONS

B. DISCHARGE 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 on the 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	January 31, 2007	semi-annual

PART I. SPECIFIC CONDITIONS

C. SPECIAL REQUIREMENTS

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

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

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

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

5) Analysts are required to use GC/MS method detection limits for most organics (if GC/MS is appropriate); GC/ECD for PCBS/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

Paula Sattelberg
Superintendent

John C. Maurer
Maintenance Supervisor

David A. Scott
Chief Operator

William M. Davignon
Lab Director/Chemist

CHAIN OF CUSTODY

Sampling Record

NIAGARA COUNTY REFUSE SITE

DATE: March 3 & 4, 2011

SAMPLES *SIGNATURE* [signature] SITE NAME: **NIAGARA COUNTY REFUSE SITE**

SPL #	SAMPLE NAME	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	#OF BTLS
01	30311RCBEFF	3/3/11	0800	Wet Well A	volitiles	2
02	"	3/3/11	1700	" " "	"	2
03	"	3/4/11	0730	" " "	"	2
04	"	3/3/11-3/4/11	0800-0800	" " "	wet chemistry	1

FLOWS: FINAL METER READING 53616420

INITIAL METER READING 53583165

MONTHLY FLOW 33,255

RELINQUISHED BY: [signature]

RECEIVED BY [signature]

DATE 3/4/11

TIME 8:07Am

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

Paula Sattelberg
Superintendent

David A. Scott
Chief Operator

John C. Maurer
Maintenance Supervisor

William M. Davignon
Lab Director/Chemist

CHAIN OF CUSTODY

Sampling Record

NIAGARA COUNTY REFUSE SITE

DATE: September 14 & 15, 2011

SAMPLES *SIGNATURE* Richard C Boden SITE NAME: NIAGARA COUNTY REFUSE SITE

SPL #	SAMPLE NAME	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	#OF BTLS
01	9/14/11 RCB EFF	9/14/11	0800	Wet Well A	volitiles	2
02	" " "	9/14/11	1715	" " "	"	2
03	" " "	9/15/11	0800	" " "	"	2
04	" " "	9/14/11 - 9/15/11	0800 - 0800	" " "	wet chem	1

FLOWS: FINAL METER READING 57212452

INITIAL METER READING 57211529

MONTHLY FLOW 923

RELINQUISHED BY: Richard C Boden

RECEIVED BY William M. Davignon

DATE 9/15/11

TIME 8:20 am

Analytical Results: NIAGARA COUNTY REFUSE SITE 2011

PARAMETER	RESULT mg/l	RESULT mg/l	COMP.
pH (COMP.)	7.18	7.19	YES
COD	19	77	YES
SUSPENDED SOLIDS	14	28	YES
BOD	20	20	YES
PO4	< 0.13	0.15	YES
PHENOLS	< 0.008	< 0.009	YES
METALS			
ALUMINUM	0.090	0.086	YES
CHROMIUM	< 0.026	< 0.025	YES
LEAD	< 0.027	< 0.027	YES
NICKEL	< 0.026	< 0.026	YES
ZINC	0.080	0.069	YES
IRON	0.396	6.854	YES
MAGNESIUM	118	206	YES
MANGANESE	0.12	2.30	YES
SODIUM	45	736	YES
PURGEABLES			
Benzene	< 0.005	< 0.006	YES
Toluene	< 0.005	< 0.006	YES
Chlorobenzene	< 0.006	< 0.006	YES
Ethylbenzene	< 0.005	< 0.006	YES
Total Xylenes	< 0.016	< 0.012	YES
1,3 - Dichlorobenzene	< 0.007	< 0.006	YES
1,4-Dichlorobenzene	< 0.006	< 0.006	YES
1,2 - Dichlorobenzene	< 0.005	< 0.006	YES
Vinyl Chloride	< 0.005	< 0.005	YES
1,1-Dichloroethene	< 0.005	< 0.005	YES
Methylene chloride	< 0.005	< 0.006	YES
trans-1,2 Dichloroethene	< 0.005	< 0.006	YES
1,1-Dichloroethane	< 0.005	< 0.006	YES
Chloroform	< 0.005	< 0.006	YES
1,1,1-Trichloroethane	< 0.005	< 0.005	YES
Trichloroethene	< 0.004	< 0.006	YES
TOTAL FLOW (gallons)	33,255	923	
SAMPLE DATE	3/3/11 & 3/4/11	9/14/11 & 9/15/11	
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: 480-13848-1

Job Description: City of North Tonawanda - NCRS

Sampling Event: Niagara County Refuse Site (11)

For:
N Tonawanda Water Works
City Hall, Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Attention: William Davignon

Approved for release.
Joe Giacomazza
Project Administrator
1/25/2012 5:18 PM

Designee for
Sally Hoffman
Project Manager II
sally.hoffman@testamericainc.com
01/25/2012
Revision: 1

cc: Mr. Eric Felter

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

TestAmerica Laboratories, Inc.
TestAmerica Buffalo 10 Hazelwood Drive, Amherst, NY 14228-2298
Tel (716) 691-2600 Fax (716) 691-7991 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

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Table of Contents

Table of Contents

Job Narrative
480-13848-1

Revision 1
This report is a revision. Additional metals have been reported.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method 8260B: The following compound was outside control limits in the continuing calibration verification (CCV) associated with analytical batch 45360: 1,1,2-Trichloro-1,2,2-trichlorofluoromethane. This compound is not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. Due to the large number of analytes contained in the CCV, the laboratory's SOP allows for 6 analytes to be outside limits; therefore, the data has been reported.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method 8270C: The following compound was outside control limits in the continuing calibration verification (CCV) associated with analytical batch 44598: 2,4,6-Tribromophenol. This compound is not classified as Calibration Check Compounds (CCC) in the reference method. Due to the large number of analytes contained in the CCV, the laboratory's SOP allows for four analytes to be outside limits; therefore, the data has been reported.

No other analytical or quality issues were noted.

Metals
Method 6010B: The matrix spike / matrix spike duplicate for preparation batch 43963 exhibited results outside the quality control limits for Sodium. However, the associated laboratory control sample (LCS) was compliant; therefore, no corrective action was necessary.

Method(s) 6010B: The recovery of Post Spike, (480-13848-5 PDS), in batch 480-43963 exhibited results below the quality control limits for total calcium. However, the Serial Dilution of this sample was compliant. Therefore, no corrective action was necessary.

Method(s) 6010B: The Matrix Spike/ Matrix Spike Duplicate (MS/MSD) NCR 5S (480-13848-5 MS), NCR 5S (480-13848-5 MSD) recoveries for total aluminum in batch 480-43963 were outside control limits. The associated Laboratory Control Sample (LCS) recovery 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.: 480-13848-1

SDG No.:

Instrument ID: HP5973S Analysis Batch Number: 42429

Lab Sample ID: STD 480-42429/4 IC Client Sample ID:

Date Analyzed: 12/01/11 12:00 Lab File ID: S9318.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloro-1,2,2-trifluoroethane	2.53	Split Peak	coderd	12/01/11 15:11

Lab Sample ID: STD 480-42429/5 IC Client Sample ID:

Date Analyzed: 12/01/11 12:22 Lab File ID: S9319.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloro-1,2,2-trifluoroethane	2.53	Assign Peak	coderd	12/01/11 15:11

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-13848-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 43924

Lab Sample ID: IC 480-43924/9 Client Sample ID:

Date Analyzed: 12/10/11 17:16 Lab File ID: X1688.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	8.10	Peak Tail	mckernar	12/12/11 10:50

SAMPLE SUMMARY

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-13848-1TB	TRIP BLANK	Water	12/09/2011 0000	12/09/2011 1400
480-13848-2	NCR 13S	Water	12/09/2011 1100	12/09/2011 1400
480-13848-3	NCR 3S	Water	12/09/2011 1020	12/09/2011 1400
480-13848-4	NCR 4S	Water	12/09/2011 0945	12/09/2011 1400
480-13848-5	NCR 5S	Water	12/09/2011 1205	12/09/2011 1400
480-13848-5MS	NCR 5S	Water	12/09/2011 1205	12/09/2011 1400
480-13848-5MSD	NCR 5S	Water	12/09/2011 1205	12/09/2011 1400
480-13848-6	Field Dup 1	Water	12/09/2011 0000	12/09/2011 1400

EXECUTIVE SUMMARY - Detections

Client: N Tonawanda Water Works Job Number: 480-13848-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-13848-2	**NCR 13S**					
Magnesium		49.0		0.20	mg/L	6010B
Manganese		0.0040		0.0030	mg/L	6010B
Sodium		12.8		1.0	mg/L	6010B
Potassium		3.1		0.50	mg/L	6010B
Barium		0.059		0.0020	mg/L	6010B
Calcium		164		0.50	mg/L	6010B
Iron		0.54		0.050	mg/L	6010B
Aluminum		0.38		0.20	mg/L	6010B
Zinc		0.047		0.010	mg/L	6010B
Chromium		0.0046		0.0040	mg/L	6010B
480-13848-3	**NCR 3S**					
Magnesium		73.4		0.20	mg/L	6010B
Manganese		0.20		0.0030	mg/L	6010B
Sodium		9.1		1.0	mg/L	6010B
Potassium		2.6		0.50	mg/L	6010B
Barium		0.049		0.0020	mg/L	6010B
Calcium		122		0.50	mg/L	6010B
Iron		5.3		0.050	mg/L	6010B
Nickel		0.026		0.010	mg/L	6010B
Copper		0.010		0.010	mg/L	6010B
Aluminum		0.58		0.20	mg/L	6010B
Zinc		0.34		0.010	mg/L	6010B
Chromium		0.018		0.0040	mg/L	6010B
480-13848-4	**NCR 4S**					
Magnesium		44.9		0.20	mg/L	6010B
Manganese		0.15		0.0030	mg/L	6010B
Sodium		33.1		1.0	mg/L	6010B
Potassium		18.5		0.50	mg/L	6010B
Barium		0.093		0.0020	mg/L	6010B
Calcium		142		0.50	mg/L	6010B
Iron		18.2		0.050	mg/L	6010B
Copper		0.010		0.010	mg/L	6010B
Aluminum		6.1		0.20	mg/L	6010B
Lead		0.0094		0.0050	mg/L	6010B
Zinc		0.40		0.010	mg/L	6010B
Chromium		0.0056		0.0040	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: N Tonawanda Water Works Job Number: 480-13848-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-13848-5	**NCR 5S**					
Magnesium		42.7		0.20	mg/L	6010B
Manganese		0.22		0.0030	mg/L	6010B
Sodium		32.2		1.0	mg/L	6010B
Potassium		3.0		0.50	mg/L	6010B
Barium		0.18		0.0020	mg/L	6010B
Calcium		83.8		0.50	mg/L	6010B
Iron		8.3		0.050	mg/L	6010B
Nickel		0.021		0.010	mg/L	6010B
Vanadium		0.015		0.0050	mg/L	6010B
Copper		0.024		0.010	mg/L	6010B
Aluminum		8.9		0.20	mg/L	6010B
Lead		0.013		0.0050	mg/L	6010B
Zinc		0.088		0.010	mg/L	6010B
Chromium		0.024		0.0040	mg/L	6010B
480-13848-6	**FIELD DUP 1**					
Magnesium		51.0		0.20	mg/L	6010B
Manganese		0.0079		0.0030	mg/L	6010B
Sodium		12.5		1.0	mg/L	6010B
Potassium		3.4		0.50	mg/L	6010B
Barium		0.061		0.0020	mg/L	6010B
Calcium		164		0.50	mg/L	6010B
Iron		1.7		0.050	mg/L	6010B
Aluminum		0.98		0.20	mg/L	6010B
Zinc		0.025		0.010	mg/L	6010B
Chromium		0.0095		0.0040	mg/L	6010B

METHOD SUMMARY

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B	
Purge and Trap	TAL BUF		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL BUF	SW846 8270C	
Liquid-Liquid Extraction (Separatory Funnel)			SW846 3510C
Metals (ICP)	TAL BUF	SW846 6010B	
Preparation, Total Metals			SW846 3005A
Mercury (CVAA)	TAL BUF	SW846 7470A	
Preparation, Mercury			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: 480-13848-1

Method	Analyst	Analyst ID
SW846 8260B	Coder, David	DC
SW846 8270C	McKernan, Ryan	RMM
SW846 6010B	Hanks, Lisa	LH
SW846 7470A	Mosscrop, Michael	MM

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-13848-1TB | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9833.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2246			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2246				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-13848-1TB | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9833.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2246			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2246				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
Toluene-d8 (Surr)	102		71 - 126
4-Bromofluorobenzene (Surr)	88		73 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-13848-2
Client Matrix: Water

Date Sampled: 12/09/2011 1100
Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9834.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2308			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2308				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-13848-2 | Date Sampled: 12/09/2011 1100
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9834.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2308			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2308				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
Toluene-d8 (Surr)	102		71 - 126
4-Bromofluorobenzene (Surr)	87		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-13848-3 | Date Sampled: 12/09/2011 1020
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9835.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2329			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2329				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-13848-3 | Date Sampled: 12/09/2011 1020
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9835.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2329			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2329				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		66 - 137
Toluene-d8 (Surr)	102		71 - 126
4-Bromofluorobenzene (Surr)	89		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-13848-4 | Date Sampled: 12/09/2011 0945
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9836.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2352			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2352				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-13848-4 | Date Sampled: 12/09/2011 0945
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9836.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2352			Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2352				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		66 - 137
Toluene-d8 (Surr)	101		71 - 126
4-Bromofluorobenzene (Surr)	90		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-13848-5 | Date Sampled: 12/09/2011 1205
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9837.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 0014			Final Weight/Volume:	5 mL
Prep Date:	12/21/2011 0014				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-13848-5 | Date Sampled: 12/09/2011 1205
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9837.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 0014			Final Weight/Volume:	5 mL
Prep Date:	12/21/2011 0014				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		66 - 137
Toluene-d8 (Surr)	101		71 - 126
4-Bromofluorobenzene (Surr)	88		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **Field Dup 1**

Lab Sample ID: 480-13848-6 | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9840.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 0120			Final Weight/Volume:	5 mL
Prep Date:	12/21/2011 0120				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **Field Dup 1**

Lab Sample ID: 480-13848-6 | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9840.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 0120			Final Weight/Volume:	5 mL
Prep Date:	12/21/2011 0120				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		66 - 137
Toluene-d8 (Surr)	100		71 - 126
4-Bromofluorobenzene (Surr)	86		73 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-13848-2 | Date Sampled: 12/09/2011 1100
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1872.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2307			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Biphenyl	ND		5.0
bis (2-chloroisopropyl) ether	ND		5.0
2,4,5-Trichlorophenol	ND		5.0
2,4,6-Trichlorophenol	ND		5.0
2,4-Dichlorophenol	ND		5.0
2,4-Dimethylphenol	ND		5.0
2,4-Dinitrophenol	ND		10
2,4-Dinitrotoluene	ND		5.0
2,6-Dinitrotoluene	ND		5.0
2-Chloronaphthalene	ND		5.0
2-Chlorophenol	ND		5.0
2-Methylnaphthalene	ND		5.0
2-Methylphenol	ND		5.0
2-Nitroaniline	ND		10
2-Nitrophenol	ND		5.0
3,3'-Dichlorobenzidine	ND		5.0
3-Nitroaniline	ND		10
4,6-Dinitro-2-methylphenol	ND		10
4-Bromophenyl phenyl ether	ND		5.0
4-Chloro-3-methylphenol	ND		5.0
4-Chloroaniline	ND		5.0
4-Chlorophenyl phenyl ether	ND		5.0
4-Methylphenol	ND		10
4-Nitroaniline	ND		10
4-Nitrophenol	ND		10
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Acetophenone	ND		5.0
Anthracene	ND		5.0
Atrazine	ND	*	5.0
Benzaldehyde	ND		5.0
Benzo(a)anthracene	ND		5.0
Benzo(a)pyrene	ND		5.0
Benzo(b)fluoranthene	ND		5.0
Benzo(g,h,i)perylene	ND		5.0
Benzo(k)fluoranthene	ND	*	5.0
Bis(2-chloroethoxy)methane	ND		5.0
Bis(2-chloroethyl)ether	ND		5.0
Bis(2-ethylhexyl) phthalate	ND		5.0
Butyl benzyl phthalate	ND		5.0
Caprolactam	ND		5.0
Carbazole	ND		5.0
Chrysene	ND		5.0
Di-n-butyl phthalate	ND		5.0
Di-n-octyl phthalate	ND		5.0
Dibenz(a,h)anthracene	ND		5.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-13848-2 | Date Sampled: 12/09/2011 1100
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1872.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2307			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Dibenzofuran	ND		10
Diethyl phthalate	ND		5.0
Dimethyl phthalate	ND		5.0
Fluoranthene	ND		5.0
Fluorene	ND		5.0
Hexachlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Hexachlorocyclopentadiene	ND		5.0
Hexachloroethane	ND		5.0
Indeno(1,2,3-cd)pyrene	ND		5.0
Isophorone	ND		5.0
N-Nitrosodi-n-propylamine	ND		5.0
N-Nitrosodiphenylamine	ND		5.0
Naphthalene	ND		5.0
Nitrobenzene	ND		5.0
Pentachlorophenol	ND		10
Phenanthrene	ND		5.0
Phenol	ND		5.0
Pyrene	ND		5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	113		52 - 132
2-Fluorobiphenyl	72		48 - 120
2-Fluorophenol	35		20 - 120
Nitrobenzene-d5	68		46 - 120
p-Terphenyl-d14	56		24 - 136
Phenol-d5	27		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-13848-3 | Date Sampled: 12/09/2011 1020
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1873.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2330			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Biphenyl	ND		5.0
bis (2-chloroisopropyl) ether	ND		5.0
2,4,5-Trichlorophenol	ND		5.0
2,4,6-Trichlorophenol	ND		5.0
2,4-Dichlorophenol	ND		5.0
2,4-Dimethylphenol	ND		5.0
2,4-Dinitrophenol	ND		10
2,4-Dinitrotoluene	ND		5.0
2,6-Dinitrotoluene	ND		5.0
2-Chloronaphthalene	ND		5.0
2-Chlorophenol	ND		5.0
2-Methylnaphthalene	ND		5.0
2-Methylphenol	ND		5.0
2-Nitroaniline	ND		10
2-Nitrophenol	ND		5.0
3,3'-Dichlorobenzidine	ND		5.0
3-Nitroaniline	ND		10
4,6-Dinitro-2-methylphenol	ND		10
4-Bromophenyl phenyl ether	ND		5.0
4-Chloro-3-methylphenol	ND		5.0
4-Chloroaniline	ND		5.0
4-Chlorophenyl phenyl ether	ND		5.0
4-Methylphenol	ND		10
4-Nitroaniline	ND		10
4-Nitrophenol	ND		10
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Acetophenone	ND		5.0
Anthracene	ND		5.0
Atrazine	ND	*	5.0
Benzaldehyde	ND		5.0
Benzo(a)anthracene	ND		5.0
Benzo(a)pyrene	ND		5.0
Benzo(b)fluoranthene	ND		5.0
Benzo(g,h,i)perylene	ND		5.0
Benzo(k)fluoranthene	ND	*	5.0
Bis(2-chloroethoxy)methane	ND		5.0
Bis(2-chloroethyl)ether	ND		5.0
Bis(2-ethylhexyl) phthalate	ND		5.0
Butyl benzyl phthalate	ND		5.0
Caprolactam	ND		5.0
Carbazole	ND		5.0
Chrysene	ND		5.0
Di-n-butyl phthalate	ND		5.0
Di-n-octyl phthalate	ND		5.0
Dibenz(a,h)anthracene	ND		5.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-13848-3 | Date Sampled: 12/09/2011 1020
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1873.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2330			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Dibenzofuran	ND		10
Diethyl phthalate	ND		5.0
Dimethyl phthalate	ND		5.0
Fluoranthene	ND		5.0
Fluorene	ND		5.0
Hexachlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Hexachlorocyclopentadiene	ND		5.0
Hexachloroethane	ND		5.0
Indeno(1,2,3-cd)pyrene	ND		5.0
Isophorone	ND		5.0
N-Nitrosodi-n-propylamine	ND		5.0
N-Nitrosodiphenylamine	ND		5.0
Naphthalene	ND		5.0
Nitrobenzene	ND		5.0
Pentachlorophenol	ND		10
Phenanthrene	ND		5.0
Phenol	ND		5.0
Pyrene	ND		5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	126		52 - 132
2-Fluorobiphenyl	82		48 - 120
2-Fluorophenol	36		20 - 120
Nitrobenzene-d5	75		46 - 120
p-Terphenyl-d14	64		24 - 136
Phenol-d5	28		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-13848-4 | Date Sampled: 12/09/2011 0945
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1874.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2353			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Biphenyl	ND		5.0
bis (2-chloroisopropyl) ether	ND		5.0
2,4,5-Trichlorophenol	ND		5.0
2,4,6-Trichlorophenol	ND		5.0
2,4-Dichlorophenol	ND		5.0
2,4-Dimethylphenol	ND		5.0
2,4-Dinitrophenol	ND		10
2,4-Dinitrotoluene	ND		5.0
2,6-Dinitrotoluene	ND		5.0
2-Chloronaphthalene	ND		5.0
2-Chlorophenol	ND		5.0
2-Methylnaphthalene	ND		5.0
2-Methylphenol	ND		5.0
2-Nitroaniline	ND		10
2-Nitrophenol	ND		5.0
3,3'-Dichlorobenzidine	ND		5.0
3-Nitroaniline	ND		10
4,6-Dinitro-2-methylphenol	ND		10
4-Bromophenyl phenyl ether	ND		5.0
4-Chloro-3-methylphenol	ND		5.0
4-Chloroaniline	ND		5.0
4-Chlorophenyl phenyl ether	ND		5.0
4-Methylphenol	ND		10
4-Nitroaniline	ND		10
4-Nitrophenol	ND		10
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Acetophenone	ND		5.0
Anthracene	ND		5.0
Atrazine	ND	*	5.0
Benzaldehyde	ND		5.0
Benzo(a)anthracene	ND		5.0
Benzo(a)pyrene	ND		5.0
Benzo(b)fluoranthene	ND		5.0
Benzo(g,h,i)perylene	ND		5.0
Benzo(k)fluoranthene	ND	*	5.0
Bis(2-chloroethoxy)methane	ND		5.0
Bis(2-chloroethyl)ether	ND		5.0
Bis(2-ethylhexyl) phthalate	ND		5.0
Butyl benzyl phthalate	ND		5.0
Caprolactam	ND		5.0
Carbazole	ND		5.0
Chrysene	ND		5.0
Di-n-butyl phthalate	ND		5.0
Di-n-octyl phthalate	ND		5.0
Dibenz(a,h)anthracene	ND		5.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-13848-4 | Date Sampled: 12/09/2011 0945
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1874.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2353			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Dibenzofuran	ND		10
Diethyl phthalate	ND		5.0
Dimethyl phthalate	ND		5.0
Fluoranthene	ND		5.0
Fluorene	ND		5.0
Hexachlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Hexachlorocyclopentadiene	ND		5.0
Hexachloroethane	ND		5.0
Indeno(1,2,3-cd)pyrene	ND		5.0
Isophorone	ND		5.0
N-Nitrosodi-n-propylamine	ND		5.0
N-Nitrosodiphenylamine	ND		5.0
Naphthalene	ND		5.0
Nitrobenzene	ND		5.0
Pentachlorophenol	ND		10
Phenanthrene	ND		5.0
Phenol	ND		5.0
Pyrene	ND		5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	104		52 - 132
2-Fluorobiphenyl	60		48 - 120
2-Fluorophenol	25		20 - 120
Nitrobenzene-d5	57		46 - 120
p-Terphenyl-d14	46		24 - 136
Phenol-d5	20		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-13848-5 | Date Sampled: 12/09/2011 1205
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1875.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/16/2011 0016			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Biphenyl	ND		5.0
bis (2-chloroisopropyl) ether	ND		5.0
2,4,5-Trichlorophenol	ND		5.0
2,4,6-Trichlorophenol	ND		5.0
2,4-Dichlorophenol	ND		5.0
2,4-Dimethylphenol	ND		5.0
2,4-Dinitrophenol	ND		10
2,4-Dinitrotoluene	ND		5.0
2,6-Dinitrotoluene	ND		5.0
2-Chloronaphthalene	ND		5.0
2-Chlorophenol	ND		5.0
2-Methylnaphthalene	ND		5.0
2-Methylphenol	ND		5.0
2-Nitroaniline	ND		10
2-Nitrophenol	ND		5.0
3,3'-Dichlorobenzidine	ND		5.0
3-Nitroaniline	ND		10
4,6-Dinitro-2-methylphenol	ND		10
4-Bromophenyl phenyl ether	ND		5.0
4-Chloro-3-methylphenol	ND		5.0
4-Chloroaniline	ND		5.0
4-Chlorophenyl phenyl ether	ND		5.0
4-Methylphenol	ND		10
4-Nitroaniline	ND		10
4-Nitrophenol	ND		10
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Acetophenone	ND		5.0
Anthracene	ND		5.0
Atrazine	ND	*	5.0
Benzaldehyde	ND		5.0
Benzo(a)anthracene	ND		5.0
Benzo(a)pyrene	ND		5.0
Benzo(b)fluoranthene	ND		5.0
Benzo(g,h,i)perylene	ND		5.0
Benzo(k)fluoranthene	ND	*	5.0
Bis(2-chloroethoxy)methane	ND		5.0
Bis(2-chloroethyl)ether	ND		5.0
Bis(2-ethylhexyl) phthalate	ND		5.0
Butyl benzyl phthalate	ND		5.0
Caprolactam	ND		5.0
Carbazole	ND		5.0
Chrysene	ND		5.0
Di-n-butyl phthalate	ND		5.0
Di-n-octyl phthalate	ND		5.0
Dibenz(a,h)anthracene	ND		5.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-13848-5 | Date Sampled: 12/09/2011 1205
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1875.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/16/2011 0016			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Dibenzofuran	ND		10
Diethyl phthalate	ND		5.0
Dimethyl phthalate	ND		5.0
Fluoranthene	ND		5.0
Fluorene	ND		5.0
Hexachlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Hexachlorocyclopentadiene	ND		5.0
Hexachloroethane	ND		5.0
Indeno(1,2,3-cd)pyrene	ND		5.0
Isophorone	ND		5.0
N-Nitrosodi-n-propylamine	ND		5.0
N-Nitrosodiphenylamine	ND		5.0
Naphthalene	ND		5.0
Nitrobenzene	ND		5.0
Pentachlorophenol	ND		10
Phenanthrene	ND		5.0
Phenol	ND		5.0
Pyrene	ND		5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	122		52 - 132
2-Fluorobiphenyl	73		48 - 120
2-Fluorophenol	35		20 - 120
Nitrobenzene-d5	74		46 - 120
p-Terphenyl-d14	57		24 - 136
Phenol-d5	28		16 - 120

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **Field Dup 1**

Lab Sample ID: 480-13848-6 | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1876.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/16/2011 0039			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Biphenyl	ND		5.0
bis (2-chloroisopropyl) ether	ND		5.0
2,4,5-Trichlorophenol	ND		5.0
2,4,6-Trichlorophenol	ND		5.0
2,4-Dichlorophenol	ND		5.0
2,4-Dimethylphenol	ND		5.0
2,4-Dinitrophenol	ND		10
2,4-Dinitrotoluene	ND		5.0
2,6-Dinitrotoluene	ND		5.0
2-Chloronaphthalene	ND		5.0
2-Chlorophenol	ND		5.0
2-Methylnaphthalene	ND		5.0
2-Methylphenol	ND		5.0
2-Nitroaniline	ND		10
2-Nitrophenol	ND		5.0
3,3'-Dichlorobenzidine	ND		5.0
3-Nitroaniline	ND		10
4,6-Dinitro-2-methylphenol	ND		10
4-Bromophenyl phenyl ether	ND		5.0
4-Chloro-3-methylphenol	ND		5.0
4-Chloroaniline	ND		5.0
4-Chlorophenyl phenyl ether	ND		5.0
4-Methylphenol	ND		10
4-Nitroaniline	ND		10
4-Nitrophenol	ND		10
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Acetophenone	ND		5.0
Anthracene	ND		5.0
Atrazine	ND	*	5.0
Benzaldehyde	ND		5.0
Benzo(a)anthracene	ND		5.0
Benzo(a)pyrene	ND		5.0
Benzo(b)fluoranthene	ND		5.0
Benzo(g,h,i)perylene	ND		5.0
Benzo(k)fluoranthene	ND	*	5.0
Bis(2-chloroethoxy)methane	ND		5.0
Bis(2-chloroethyl)ether	ND		5.0
Bis(2-ethylhexyl) phthalate	ND		5.0
Butyl benzyl phthalate	ND		5.0
Caprolactam	ND		5.0
Carbazole	ND		5.0
Chrysene	ND		5.0
Di-n-butyl phthalate	ND		5.0
Di-n-octyl phthalate	ND		5.0
Dibenz(a,h)anthracene	ND		5.0

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **Field Dup 1**

Lab Sample ID: 480-13848-6 | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-44050	Lab File ID:	X1876.D
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Analysis Date:	12/16/2011 0039			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Dibenzofuran	ND		10
Diethyl phthalate	ND		5.0
Dimethyl phthalate	ND		5.0
Fluoranthene	ND		5.0
Fluorene	ND		5.0
Hexachlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Hexachlorocyclopentadiene	ND		5.0
Hexachloroethane	ND		5.0
Indeno(1,2,3-cd)pyrene	ND		5.0
Isophorone	ND		5.0
N-Nitrosodi-n-propylamine	ND		5.0
N-Nitrosodiphenylamine	ND		5.0
Naphthalene	ND		5.0
Nitrobenzene	ND		5.0
Pentachlorophenol	ND		10
Phenanthrene	ND		5.0
Phenol	ND		5.0
Pyrene	ND		5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	122		52 - 132
2-Fluorobiphenyl	82		48 - 120
2-Fluorophenol	38		20 - 120
Nitrobenzene-d5	79		46 - 120
p-Terphenyl-d14	73		24 - 136
Phenol-d5	29		16 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Client Sample ID: **NCR 13S**

Lab Sample ID: 480-13848-2
Client Matrix: Water

Date Sampled: 12/09/2011 1100
Date Received: 12/09/2011 1400

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Prep Method:	3005A	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2213			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				

Analyte	Result (mg/L)	Qualifier	RL
Magnesium	49.0		0.20
Manganese	0.0040		0.0030
Sodium	12.8		1.0
Cadmium	ND		0.0010
Antimony	ND		0.020
Potassium	3.1		0.50
Beryllium	ND		0.0020
Barium	0.059		0.0020
Thallium	ND		0.020
Calcium	164		0.50
Iron	0.54		0.050
Nickel	ND		0.010
Vanadium	ND		0.0050
Silver	ND		0.0030
Copper	ND		0.010
Aluminum	0.38		0.20
Lead	ND		0.0050
Zinc	0.047		0.010
Selenium	ND		0.015
Chromium	0.0046		0.0040
Cobalt	ND		0.0040

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2051			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				

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

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 3S**

Lab Sample ID: 480-13848-3 | Date Sampled: 12/09/2011 1020
Client Matrix: Water | Date Received: 12/09/2011 1400

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Prep Method:	3005A	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2215			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				

Analyte	Result (mg/L)	Qualifier	RL
Magnesium	73.4		0.20
Manganese	0.20		0.0030
Sodium	9.1		1.0
Cadmium	ND		0.0010
Antimony	ND		0.020
Potassium	2.6		0.50
Beryllium	ND		0.0020
Barium	0.049		0.0020
Thallium	ND		0.020
Calcium	122		0.50
Iron	5.3		0.050
Nickel	0.026		0.010
Vanadium	ND		0.0050
Silver	ND		0.0030
Copper	0.010		0.010
Aluminum	0.58		0.20
Lead	ND		0.0050
Zinc	0.34		0.010
Selenium	ND		0.015
Chromium	0.018		0.0040
Cobalt	ND		0.0040

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2052			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				

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

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 4S**

Lab Sample ID: 480-13848-4 | Date Sampled: 12/09/2011 0945
Client Matrix: Water | Date Received: 12/09/2011 1400

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Prep Method:	3005A	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2218			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				

Analyte	Result (mg/L)	Qualifier	RL
Magnesium	44.9		0.20
Manganese	0.15		0.0030
Sodium	33.1		1.0
Cadmium	ND		0.0010
Antimony	ND		0.020
Potassium	18.5		0.50
Beryllium	ND		0.0020
Barium	0.093		0.0020
Thallium	ND		0.020
Calcium	142		0.50
Iron	18.2		0.050
Nickel	ND		0.010
Vanadium	ND		0.0050
Silver	ND		0.0030
Copper	0.010		0.010
Aluminum	6.1		0.20
Lead	0.0094		0.0050
Zinc	0.40		0.010
Selenium	ND		0.015
Chromium	0.0056		0.0040
Cobalt	ND		0.0040

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2054			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				

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

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **NCR 5S**

Lab Sample ID: 480-13848-5 | Date Sampled: 12/09/2011 1205
Client Matrix: Water | Date Received: 12/09/2011 1400

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Prep Method:	3005A	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2220			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				

Analyte	Result (mg/L)	Qualifier	RL
Magnesium	42.7		0.20
Manganese	0.22		0.0030
Sodium	32.2		1.0
Cadmium	ND		0.0010
Antimony	ND		0.020
Potassium	3.0		0.50
Beryllium	ND		0.0020
Barium	0.18		0.0020
Thallium	ND		0.020
Calcium	83.8		0.50
Iron	8.3		0.050
Nickel	0.021		0.010
Vanadium	0.015		0.0050
Silver	ND		0.0030
Copper	0.024		0.010
Aluminum	8.9		0.20
Lead	0.013		0.0050
Zinc	0.088		0.010
Selenium	ND		0.015
Chromium	0.024		0.0040
Cobalt	ND		0.0040

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2056			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				

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

Client: N Tonawanda Water Works | Job Number: 480-13848-1

Client Sample ID: **Field Dup 1**

Lab Sample ID: 480-13848-6 | Date Sampled: 12/09/2011 0000
Client Matrix: Water | Date Received: 12/09/2011 1400

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Prep Method:	3005A	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2235			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				

Analyte	Result (mg/L)	Qualifier	RL
Magnesium	51.0		0.20
Manganese	0.0079		0.0030
Sodium	12.5		1.0
Cadmium	ND		0.0010
Antimony	ND		0.020
Potassium	3.4		0.50
Beryllium	ND		0.0020
Barium	0.061		0.0020
Thallium	ND		0.020
Calcium	164		0.50
Iron	1.7		0.050
Nickel	ND		0.010
Vanadium	ND		0.0050
Silver	ND		0.0030
Copper	ND		0.010
Aluminum	0.98		0.20
Lead	ND		0.0050
Zinc	0.025		0.010
Selenium	ND		0.015
Chromium	0.0095		0.0040
Cobalt	ND		0.0040

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Prep Method:	7470A	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2106			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				

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

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec
480-13848-1	TRIP BLANK	102	102	88
480-13848-2	NCR 13S	104	102	87
480-13848-3	NCR 3S	107	102	89
480-13848-4	NCR 4S	106	101	90
480-13848-5	NCR 5S	110	101	88
480-13848-6	Field Dup 1	108	100	86
MB 480-45360/5		101	102	89
LCS 480-45360/4		99	102	92
480-13848-5 MS	NCR 5S MS	108	100	95
480-13848-5 MSD	NCR 5S MSD	108	101	93

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: 480-13848-1

Surrogate Recovery Report

8270C 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
480-13848-2	NCR 13S	35	27	68	72	113	56
480-13848-3	NCR 3S	36	28	75	82	126	64
480-13848-4	NCR 4S	25	20	57	60	104	46
480-13848-5	NCR 5S	35	28	74	73	122	57
480-13848-6	Field Dup 1	38	29	79	82	122	73
MB 480-44050/1-A		42	32	77	84	117	88
LCS 480-44050/2-A		57	41	95	107	127	113
480-13848-5 MS	NCR 5S MS	45	34	86	89	116	49
480-13848-5 MSD	NCR 5S MSD	47	35	90	97	123	54

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	24-136

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Method Blank - Batch: 480-45360

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-45360/5	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S9830.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2141	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2141				
Leach Date:	N/A				

Analyte	Result	Qual	RL
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloropropane	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
2-Hexanone	ND		5.0
2-Butanone (MEK)	ND		10
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Benzene	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Dibromochloromethane	ND		1.0
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Ethylbenzene	ND		1.0
Isopropylbenzene	ND		1.0
Methyl acetate	ND		1.0
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
Styrene	ND		1.0
Tetrachloroethene	ND		1.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
Trichloroethene	ND		1.0

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Method Blank - Batch: 480-45360

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-45360/5	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S9830.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2141	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2141				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Trichlorofluoromethane	ND		1.0
Vinyl chloride	ND		1.0
Xylenes, Total	ND		2.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	66 - 137
Toluene-d8 (Surr)	102	71 - 126
4-Bromofluorobenzene (Surr)	89	73 - 120

Lab Control Sample - Batch: 480-45360

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 480-45360/4	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S9829.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2011 2119	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/20/2011 2119				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	25.0	100	71 - 129	
1,1-Dichloroethene	25.0	23.0	92	65 - 138	
1,2-Dichlorobenzene	25.0	25.4	102	77 - 120	
1,2-Dichloroethane	25.0	25.8	103	75 - 127	
Benzene	25.0	24.6	98	71 - 124	
Chlorobenzene	25.0	25.6	102	72 - 120	
cis-1,2-Dichloroethene	25.0	24.1	96	74 - 124	
Ethylbenzene	25.0	27.1	108	77 - 123	
Methyl tert-butyl ether	25.0	27.2	109	64 - 127	
Tetrachloroethene	25.0	25.3	101	74 - 122	
Toluene	25.0	25.7	103	70 - 122	
trans-1,2-Dichloroethene	25.0	25.7	103	73 - 127	
Trichloroethene	25.0	25.2	101	74 - 123	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	66 - 137
Toluene-d8 (Surr)	102	71 - 126
4-Bromofluorobenzene (Surr)	92	73 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-45360

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	480-13848-5	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S9838.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 0036			Final Weight/Volume:	5 mL
Prep Date:	12/21/2011 0036				
Leach Date:	N/A				

MSD Lab Sample ID:	480-13848-5	Analysis Batch:	480-45360	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S9839.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 0058			Final Weight/Volume:	5 mL
Prep Date:	12/21/2011 0058				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1-Dichloroethane	102	100	71 - 129	1	20		
1,1-Dichloroethene	94	89	65 - 138	5	16		
1,2-Dichlorobenzene	100	98	77 - 120	2	20		
1,2-Dichloroethane	108	110	75 - 127	2	20		
Benzene	98	99	71 - 124	0	13		
Chlorobenzene	100	103	72 - 120	3	25		
cis-1,2-Dichloroethene	94	96	74 - 124	2	15		
Ethylbenzene	107	111	77 - 123	3	15		
Methyl tert-butyl ether	102	102	64 - 127	0	37		
Tetrachloroethene	102	106	74 - 122	3	20		
Toluene	100	103	70 - 122	3	15		
trans-1,2-Dichloroethene	103	101	73 - 127	2	20		
Trichloroethene	105	107	74 - 123	2	16		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	108	66 - 137
Toluene-d8 (Surr)	100	101	71 - 126
4-Bromofluorobenzene (Surr)	95	93	73 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-45360

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	480-13848-5	Units: ug/L	MSD Lab Sample ID:	480-13848-5	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	12/21/2011 0036		Analysis Date:	12/21/2011 0058	
Prep Date:	12/21/2011 0036		Prep Date:	12/21/2011 0058	
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	25.4	25.1
1,1-Dichloroethene	ND	25.0	25.0	23.5	22.3
1,2-Dichlorobenzene	ND	25.0	25.0	25.1	24.5
1,2-Dichloroethane	ND	25.0	25.0	26.9	27.4
Benzene	ND	25.0	25.0	24.6	24.7
Chlorobenzene	ND	25.0	25.0	25.0	25.7
cis-1,2-Dichloroethene	ND	25.0	25.0	23.5	24.0
Ethylbenzene	ND	25.0	25.0	26.8	27.7
Methyl tert-butyl ether	ND	25.0	25.0	25.4	25.4
Tetrachloroethene	ND	25.0	25.0	25.6	26.4
Toluene	ND	25.0	25.0	25.0	25.7
trans-1,2-Dichloroethene	ND	25.0	25.0	25.7	25.2
Trichloroethene	ND	25.0	25.0	26.3	26.7

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Method Blank - Batch: 480-44050

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 480-44050/1-A	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Client Matrix:	Water	Prep Batch:	480-44050	Lab File ID:	X1864.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/15/2011 2003	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Biphenyl	ND		5.0
bis (2-chloroisopropyl) ether	ND		5.0
2,4,5-Trichlorophenol	ND		5.0
2,4,6-Trichlorophenol	ND		5.0
2,4-Dichlorophenol	ND		5.0
2,4-Dimethylphenol	ND		5.0
2,4-Dinitrophenol	ND		10
2,4-Dinitrotoluene	ND		5.0
2,6-Dinitrotoluene	ND		5.0
2-Chloronaphthalene	ND		5.0
2-Chlorophenol	ND		5.0
2-Methylnaphthalene	ND		5.0
2-Methylphenol	ND		5.0
2-Nitroaniline	ND		10
2-Nitrophenol	ND		5.0
3,3'-Dichlorobenzidine	ND		5.0
3-Nitroaniline	ND		10
4,6-Dinitro-2-methylphenol	ND		10
4-Bromophenyl phenyl ether	ND		5.0
4-Chloro-3-methylphenol	ND		5.0
4-Chloroaniline	ND		5.0
4-Chlorophenyl phenyl ether	ND		5.0
4-Methylphenol	ND		10
4-Nitroaniline	ND		10
4-Nitrophenol	ND		10
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Acetophenone	ND		5.0
Anthracene	ND		5.0
Atrazine	ND		5.0
Benzaldehyde	ND		5.0
Benzo(a)anthracene	ND		5.0
Benzo(a)pyrene	ND		5.0
Benzo(b)fluoranthene	ND		5.0
Benzo(g,h,i)perylene	ND		5.0
Benzo(k)fluoranthene	ND		5.0
Bis(2-chloroethoxy)methane	ND		5.0
Bis(2-chloroethyl)ether	ND		5.0
Bis(2-ethylhexyl) phthalate	ND		5.0
Butyl benzyl phthalate	ND		5.0
Caprolactam	ND		5.0
Carbazole	ND		5.0
Chrysene	ND		5.0
Di-n-butyl phthalate	ND		5.0
Di-n-octyl phthalate	ND		5.0

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Method Blank - Batch: 480-44050

Method: 8270C
Preparation: 3510C

Lab Sample ID:	MB 480-44050/1-A	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Client Matrix:	Water	Prep Batch:	480-44050	Lab File ID:	X1864.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/15/2011 2003	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dibenz(a,h)anthracene	ND		5.0
Dibenzofuran	ND		10
Diethyl phthalate	ND		5.0
Dimethyl phthalate	ND		5.0
Fluoranthene	ND		5.0
Fluorene	ND		5.0
Hexachlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Hexachlorocyclopentadiene	ND		5.0
Hexachloroethane	ND		5.0
Indeno(1,2,3-cd)pyrene	ND		5.0
Isophorone	ND		5.0
N-Nitrosodi-n-propylamine	ND		5.0
N-Nitrosodiphenylamine	ND		5.0
Naphthalene	ND		5.0
Nitrobenzene	ND		5.0
Pentachlorophenol	ND		10
Phenanthrene	ND		5.0
Phenol	ND		5.0
Pyrene	ND		5.0

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	117	52 - 132
2-Fluorobiphenyl	84	48 - 120
2-Fluorophenol	42	20 - 120
Nitrobenzene-d5	77	46 - 120
p-Terphenyl-d14	88	24 - 136
Phenol-d5	32	16 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Lab Control Sample - Batch: 480-44050

Method: 8270C
Preparation: 3510C

Lab Sample ID:	LCS 480-44050/2-A	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Client Matrix:	Water	Prep Batch:	480-44050	Lab File ID:	X1865.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/15/2011 2026	Units:	ug/L	Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,4-Dinitrotoluene	100	113	113	59 - 125	
2-Chlorophenol	100	86.8	87	48 - 120	
4-Chloro-3-methylphenol	100	100	100	64 - 120	
4-Nitrophenol	100	57.7	58	16 - 120	
Acenaphthene	100	110	110	60 - 120	
Bis(2-ethylhexyl) phthalate	100	130	130	69 - 136	
Fluorene	100	115	115	66 - 129	
Hexachloroethane	100	74.2	74	25 - 120	
N-Nitrosodi-n-propylamine	100	94.2	94	56 - 120	
Pentachlorophenol	100	99.8	100	39 - 136	
Phenol	100	44.1	44	17 - 120	
Pyrene	100	126	126	58 - 136	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	127	52 - 132
2-Fluorobiphenyl	107	48 - 120
2-Fluorophenol	57	20 - 120
Nitrobenzene-d5	95	46 - 120
p-Terphenyl-d14	113	24 - 136
Phenol-d5	41	16 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-44050

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	480-13848-5	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Client Matrix:	Water	Prep Batch:	480-44050	Lab File ID:	X1866.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2049			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	480-13848-5	Analysis Batch:	480-44598	Instrument ID:	HP5973X
Client Matrix:	Water	Prep Batch:	480-44050	Lab File ID:	X1867.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1060 mL
Analysis Date:	12/15/2011 2112			Final Weight/Volume:	1 mL
Prep Date:	12/12/2011 1357			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrotoluene	108	115	59 - 125	6	20		
2-Chlorophenol	70	76	48 - 120	8	25		
4-Chloro-3-methylphenol	90	98	64 - 120	9	27		
4-Nitrophenol	52	57	16 - 120	9	48		
Acenaphthene	102	108	60 - 120	6	24		
Bis(2-ethylhexyl) phthalate	115	120	69 - 136	4	15		
Fluorene	104	110	66 - 129	5	15		
Hexachloroethane	76	79	25 - 120	3	46		
N-Nitrosodi-n-propylamine	85	88	56 - 120	3	31		
Pentachlorophenol	92	100	39 - 136	8	37		
Phenol	36	38	17 - 120	4	34		
Pyrene	110	116	58 - 136	6	19		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	116	123	52 - 132
2-Fluorobiphenyl	89	97	48 - 120
2-Fluorophenol	45	47	20 - 120
Nitrobenzene-d5	86	90	46 - 120
p-Terphenyl-d14	49	54	24 - 136
Phenol-d5	34	35	16 - 120

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-44050

Method: 8270C
Preparation: 3510C

MS Lab Sample ID:	480-13848-5	Units: ug/L	MSD Lab Sample ID:	480-13848-5	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	12/15/2011 2049		Analysis Date:	12/15/2011 2112	
Prep Date:	12/12/2011 1357		Prep Date:	12/12/2011 1357	
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	94.3	94.3	102	108
2-Chlorophenol	ND	94.3	94.3	66.4	72.0
4-Chloro-3-methylphenol	ND	94.3	94.3	84.7	92.5
4-Nitrophenol	ND	94.3	94.3	49.5	54.0
Acenaphthene	ND	94.3	94.3	96.1	102
Bis(2-ethylhexyl) phthalate	ND	94.3	94.3	109	113
Fluorene	ND	94.3	94.3	98.3	104
Hexachloroethane	ND	94.3	94.3	72.2	74.6
N-Nitrosodi-n-propylamine	ND	94.3	94.3	80.5	83.3
Pentachlorophenol	ND	94.3	94.3	87.3	94.8
Phenol	ND	94.3	94.3	34.2	35.5
Pyrene	ND	94.3	94.3	103	110

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Method Blank - Batch: 480-43963

Method: 6010B
Preparation: 3005A

Lab Sample ID:	MB 480-43963/1-A	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2137	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Magnesium	ND		0.20
Manganese	ND		0.0030
Sodium	ND		1.0
Cadmium	ND		0.0010
Antimony	ND		0.020
Potassium	ND		0.50
Beryllium	ND		0.0020
Barium	ND		0.0020
Thallium	ND		0.020
Calcium	ND		0.50
Iron	ND		0.050
Nickel	ND		0.010
Vanadium	ND		0.0050
Silver	ND		0.0030
Copper	ND		0.010
Aluminum	ND		0.20
Lead	ND		0.0050
Zinc	ND		0.010
Selenium	ND		0.015
Chromium	ND		0.0040
Cobalt	ND		0.0040

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Lab Control Sample - Batch: 480-43963

Method: 6010B
Preparation: 3005A

Lab Sample ID:	LCS 480-43963/2-A	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2140	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Magnesium	10.0	9.35	94	80 - 120	
Manganese	0.200	0.192	96	80 - 120	
Sodium	10.0	9.43	94	80 - 120	
Cadmium	0.200	0.190	95	80 - 120	
Antimony	0.200	0.190	95	80 - 120	
Potassium	10.0	9.43	94	80 - 120	
Beryllium	0.200	0.189	95	80 - 120	
Barium	0.200	0.197	98	80 - 120	
Thallium	0.200	0.188	94	80 - 120	
Calcium	10.0	9.30	93	80 - 120	
Iron	10.0	9.22	92	80 - 120	
Nickel	0.200	0.195	98	80 - 120	
Vanadium	0.200	0.188	94	80 - 120	
Silver	0.0500	0.0484	97	80 - 120	
Copper	0.200	0.190	95	80 - 120	
Aluminum	10.0	9.68	97	80 - 120	
Lead	0.200	0.191	95	80 - 120	
Zinc	0.200	0.188	94	80 - 120	
Selenium	0.200	0.189	95	80 - 120	
Chromium	0.200	0.189	95	80 - 120	
Cobalt	0.200	0.177	88	80 - 120	

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Post Digestion Spike - Batch: 480-43963

Method: 6010B
Preparation: 3005A

Lab Sample ID:	480-13848-5	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2229	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Magnesium	42.7	10.0	51.76	91	75 - 125	
Manganese	0.22	0.200	0.412	97	75 - 125	
Sodium	32.2	10.0	39.86	76	75 - 125	
Cadmium	ND	0.200	0.203	101	75 - 125	
Antimony	ND	0.200	0.205	103	75 - 125	
Potassium	3.0	10.0	12.68	97	75 - 125	
Beryllium	ND	0.200	0.202	101	75 - 125	
Barium	0.18	0.200	0.365	92	75 - 125	
Thallium	ND	0.200	0.207	104	75 - 125	
Calcium	83.8	10.0	85.65	18	75 - 125	W
Iron	8.3	10.0	17.97	97	75 - 125	
Nickel	0.021	0.200	0.221	100	75 - 125	
Vanadium	0.015	0.200	0.204	94	75 - 125	
Silver	ND	0.0500	0.0459	92	75 - 125	
Copper	0.024	0.200	0.219	97	75 - 125	
Aluminum	8.9	10.0	17.55	87	75 - 125	
Lead	0.013	0.200	0.214	101	75 - 125	
Zinc	0.088	0.200	0.277	95	75 - 125	
Selenium	ND	0.200	0.213	107	75 - 125	
Chromium	0.024	0.200	0.214	95	75 - 125	
Cobalt	ND	0.200	0.192	95	75 - 125	

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-43963

Method: 6010B
Preparation: 3005A

MS Lab Sample ID:	480-13848-5	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2231			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				
Leach Date:	N/A				

MSD Lab Sample ID:	480-13848-5	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2233			Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Magnesium	95	86	75 - 125	2	20	4	4
Manganese	98	96	75 - 125	1	20		
Sodium	74	61	75 - 125	3	20	F	F
Cadmium	96	94	75 - 125	2	20		
Antimony	98	98	75 - 125	0	20		
Potassium	99	97	75 - 125	2	20		
Beryllium	97	96	75 - 125	0	20		
Barium	89	84	75 - 125	3	20		
Thallium	97	96	75 - 125	1	20		
Calcium	14	-2	75 - 125	2	20	4	4
Iron	110	111	75 - 125	1	20		
Nickel	99	96	75 - 125	3	20		
Vanadium	91	89	75 - 125	2	20		
Silver	90	87	75 - 125	3	20		
Copper	92	88	75 - 125	4	20		
Aluminum	133	130	75 - 125	1	20	F	F
Lead	96	93	75 - 125	3	20		
Zinc	93	91	75 - 125	1	20		
Selenium	95	94	75 - 125	2	20		
Chromium	92	90	75 - 125	2	20		
Cobalt	89	87	75 - 125	2	20		

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-43963

Method: 6010B
Preparation: 3005A

MS Lab Sample ID:	480-13848-5	Units: mg/L	MSD Lab Sample ID:	480-13848-5	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	12/12/2011 2231		Analysis Date:	12/12/2011 2233	
Prep Date:	12/12/2011 0830		Prep Date:	12/12/2011 0830	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Magnesium	42.7	10.0	10.0	52.22	4	51.33	4
Manganese	0.22	0.200	0.200	0.414		0.409	
Sodium	32.2	10.0	10.0	39.64	F	38.36	F
Cadmium	ND	0.200	0.200	0.192		0.188	
Antimony	ND	0.200	0.200	0.196		0.197	
Potassium	3.0	10.0	10.0	12.88		12.68	
Beryllium	ND	0.200	0.200	0.194		0.193	
Barium	0.18	0.200	0.200	0.360		0.349	
Thallium	ND	0.200	0.200	0.193		0.191	
Calcium	83.8	10.0	10.0	85.21	4	83.63	4
Iron	8.3	10.0	10.0	19.33		19.45	
Nickel	0.021	0.200	0.200	0.219		0.213	
Vanadium	0.015	0.200	0.200	0.197		0.193	
Silver	ND	0.0500	0.0500	0.0452		0.0437	
Copper	0.024	0.200	0.200	0.208		0.200	
Aluminum	8.9	10.0	10.0	22.21	F	21.91	F
Lead	0.013	0.200	0.200	0.204		0.199	
Zinc	0.088	0.200	0.200	0.274		0.270	
Selenium	ND	0.200	0.200	0.191		0.187	
Chromium	0.024	0.200	0.200	0.207		0.203	
Cobalt	ND	0.200	0.200	0.181		0.177	

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Serial Dilution - Batch: 480-43963

Method: 6010B
Preparation: 3005A

Lab Sample ID:	480-13848-5	Analysis Batch:	480-44153	Instrument ID:	ICAP1
Client Matrix:	Water	Prep Batch:	480-43963	Lab File ID:	i1121211b-7.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2011 2222	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/12/2011 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Magnesium	42.7	42.93	0.55	10	
Manganese	0.22	0.224	3.0	10	
Sodium	32.2	31.80	1.4	10	
Cadmium	ND	ND	NC	10	
Antimony	ND	ND	NC	10	
Potassium	3.0	2.90	NC	10	
Beryllium	ND	ND	NC	10	
Barium	0.18	0.183	1.2	10	
Thallium	ND	ND	NC	10	
Calcium	83.8	84.53	0.81	10	
Iron	8.3	8.46	1.9	10	
Nickel	0.021	0.0208	NC	10	
Vanadium	0.015	0.0160	NC	10	
Silver	ND	ND	NC	10	
Copper	0.024	0.0214	NC	10	
Aluminum	8.9	8.87	0.18	10	
Lead	0.013	ND	NC	10	
Zinc	0.088	0.0830	5.6	10	
Selenium	ND	ND	NC	10	
Chromium	0.024	0.0233	2.1	10	
Cobalt	ND	ND	NC	10	

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Method Blank - Batch: 480-44694

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 480-44694/25-A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2119	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Mercury	ND		0.00020

Lab Control Sample - Batch: 480-44694

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 480-44694/24-A	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2117	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00667	0.00692	104	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-44694

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	480-13848-5	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2102			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				
Leach Date:	N/A				

MSD Lab Sample ID:	480-13848-5	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2104			Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	104	103	75 - 125	1	20		

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-44694

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	480-13848-5	Units: mg/L	MSD Lab Sample ID:	480-13848-5	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	12/15/2011 2102		Analysis Date:	12/15/2011 2104	
Prep Date:	12/15/2011 1555		Prep Date:	12/15/2011 1555	
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	0.00692	0.00687

Serial Dilution - Batch: 480-44694

Method: 7470A
Preparation: 7470A

Lab Sample ID:	480-13848-5	Analysis Batch:	480-44852	Instrument ID:	LEEMAN2
Client Matrix:	Water	Prep Batch:	480-44694	Lab File ID:	H12151W1.PRN
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/15/2011 2057	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/15/2011 1555				
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: 480-13848-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	LCS or LCSD exceeds the control limits
	E	Result exceeded calibration range.
	F	RPD of the MS and MSD exceeds the control limits
Metals		
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	W	PS: Post-digestion spike was outside control limits

Client: N Tonawanda Water Works

Job Number: 480-13848-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-45360					
LCS 480-45360/4	Lab Control Sample	T	Water	8260B	
MB 480-45360/5	Method Blank	T	Water	8260B	
480-13848-1TB	TRIP BLANK	T	Water	8260B	
480-13848-2	NCR 13S	T	Water	8260B	
480-13848-3	NCR 3S	T	Water	8260B	
480-13848-4	NCR 4S	T	Water	8260B	
480-13848-5	NCR 5S	T	Water	8260B	
480-13848-5MS	Matrix Spike	T	Water	8260B	
480-13848-5MSD	Matrix Spike Duplicate	T	Water	8260B	
480-13848-6	Field Dup 1	T	Water	8260B	

Report Basis

T = Total

GC/MS Semi VOA					
Prep Batch: 480-44050					
LCS 480-44050/2-A	Lab Control Sample	T	Water	3510C	
MB 480-44050/1-A	Method Blank	T	Water	3510C	
480-13848-2	NCR 13S	T	Water	3510C	
480-13848-3	NCR 3S	T	Water	3510C	
480-13848-4	NCR 4S	T	Water	3510C	
480-13848-5	NCR 5S	T	Water	3510C	
480-13848-5MS	Matrix Spike	T	Water	3510C	
480-13848-5MSD	Matrix Spike Duplicate	T	Water	3510C	
480-13848-6	Field Dup 1	T	Water	3510C	
Analysis Batch:480-44598					
LCS 480-44050/2-A	Lab Control Sample	T	Water	8270C	480-44050
MB 480-44050/1-A	Method Blank	T	Water	8270C	480-44050
480-13848-2	NCR 13S	T	Water	8270C	480-44050
480-13848-3	NCR 3S	T	Water	8270C	480-44050
480-13848-4	NCR 4S	T	Water	8270C	480-44050
480-13848-5	NCR 5S	T	Water	8270C	480-44050
480-13848-5MS	Matrix Spike	T	Water	8270C	480-44050
480-13848-5MSD	Matrix Spike Duplicate	T	Water	8270C	480-44050
480-13848-6	Field Dup 1	T	Water	8270C	480-44050

Report Basis

T = Total

Client: N Tonawanda Water Works

Job Number: 480-13848-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 480-43963					
LCS 480-43963/2-A	Lab Control Sample	T	Water	3005A	
MB 480-43963/1-A	Method Blank	T	Water	3005A	
480-13848-2	NCR 13S	T	Water	3005A	
480-13848-3	NCR 3S	T	Water	3005A	
480-13848-4	NCR 4S	T	Water	3005A	
480-13848-5	NCR 5S	T	Water	3005A	
480-13848-5MS	Matrix Spike	T	Water	3005A	
480-13848-5MSD	Matrix Spike Duplicate	T	Water	3005A	
480-13848-6	Field Dup 1	T	Water	3005A	
Analysis Batch:480-44153					
LCS 480-43963/2-A	Lab Control Sample	T	Water	6010B	480-43963
MB 480-43963/1-A	Method Blank	T	Water	6010B	480-43963
480-13848-2	NCR 13S	T	Water	6010B	480-43963
480-13848-3	NCR 3S	T	Water	6010B	480-43963
480-13848-4	NCR 4S	T	Water	6010B	480-43963
480-13848-5	NCR 5S	T	Water	6010B	480-43963
480-13848-5MS	Matrix Spike	T	Water	6010B	480-43963
480-13848-5MSD	Matrix Spike Duplicate	T	Water	6010B	480-43963
480-13848-6	Field Dup 1	T	Water	6010B	480-43963
Prep Batch: 480-44694					
LCS 480-44694/24-A	Lab Control Sample	T	Water	7470A	
MB 480-44694/25-A	Method Blank	T	Water	7470A	
480-13848-2	NCR 13S	T	Water	7470A	
480-13848-3	NCR 3S	T	Water	7470A	
480-13848-4	NCR 4S	T	Water	7470A	
480-13848-5	NCR 5S	T	Water	7470A	
480-13848-5MS	Matrix Spike	T	Water	7470A	
480-13848-5MSD	Matrix Spike Duplicate	T	Water	7470A	
480-13848-6	Field Dup 1	T	Water	7470A	
Analysis Batch:480-44852					
LCS 480-44694/24-A	Lab Control Sample	T	Water	7470A	480-44694
MB 480-44694/25-A	Method Blank	T	Water	7470A	480-44694
480-13848-2	NCR 13S	T	Water	7470A	480-44694
480-13848-3	NCR 3S	T	Water	7470A	480-44694
480-13848-4	NCR 4S	T	Water	7470A	480-44694
480-13848-5	NCR 5S	T	Water	7470A	480-44694
480-13848-5MS	Matrix Spike	T	Water	7470A	480-44694
480-13848-5MSD	Matrix Spike Duplicate	T	Water	7470A	480-44694
480-13848-6	Field Dup 1	T	Water	7470A	480-44694

Client: N Tonawanda Water Works

Job Number: 480-13848-1

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: 480-13848-1

Laboratory Chronicle

Lab ID: 480-13848-1 **Client ID:** TRIP BLANK

Sample Date/Time: 12/09/2011 00:00 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-A-1		480-45360		12/20/2011 22:46	1	TAL BUF	DC
A:8260B	480-13848-A-1		480-45360		12/20/2011 22:46	1	TAL BUF	DC

Lab ID: 480-13848-2 **Client ID:** NCR 13S

Sample Date/Time: 12/09/2011 11:00 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-C-2		480-45360		12/20/2011 23:08	1	TAL BUF	DC
A:8260B	480-13848-C-2		480-45360		12/20/2011 23:08	1	TAL BUF	DC
P:3510C	480-13848-F-2-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-F-2-A		480-44598	480-44050	12/15/2011 23:07	1	TAL BUF	RMM
P:3005A	480-13848-B-2-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-2-A		480-44153	480-43963	12/12/2011 22:13	1	TAL BUF	LH
P:7470A	480-13848-B-2-B		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-2-B		480-44852	480-44694	12/15/2011 20:51	1	TAL BUF	MM

Lab ID: 480-13848-3 **Client ID:** NCR 3S

Sample Date/Time: 12/09/2011 10:20 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-D-3		480-45360		12/20/2011 23:29	1	TAL BUF	DC
A:8260B	480-13848-D-3		480-45360		12/20/2011 23:29	1	TAL BUF	DC
P:3510C	480-13848-A-3-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-A-3-A		480-44598	480-44050	12/15/2011 23:30	1	TAL BUF	RMM
P:3005A	480-13848-B-3-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-3-A		480-44153	480-43963	12/12/2011 22:15	1	TAL BUF	LH
P:7470A	480-13848-B-3-B		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-3-B		480-44852	480-44694	12/15/2011 20:52	1	TAL BUF	MM

Lab ID: 480-13848-4 **Client ID:** NCR 4S

Sample Date/Time: 12/09/2011 09:45 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-E-4		480-45360		12/20/2011 23:52	1	TAL BUF	DC
A:8260B	480-13848-E-4		480-45360		12/20/2011 23:52	1	TAL BUF	DC
P:3510C	480-13848-A-4-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-A-4-A		480-44598	480-44050	12/15/2011 23:53	1	TAL BUF	RMM
P:3005A	480-13848-B-4-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-4-A		480-44153	480-43963	12/12/2011 22:18	1	TAL BUF	LH
P:7470A	480-13848-B-4-B		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-4-B		480-44852	480-44694	12/15/2011 20:54	1	TAL BUF	MM

Client: N Tonawanda Water Works Job Number: 480-13848-1

Laboratory Chronicle

Lab ID: 480-13848-5 **Client ID:** NCR 5S

Sample Date/Time: 12/09/2011 12:05 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-C-5		480-45360		12/21/2011 00:14	1	TAL BUF	DC
A:8260B	480-13848-C-5		480-45360		12/21/2011 00:14	1	TAL BUF	DC
P:3510C	480-13848-F-5-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-F-5-A		480-44598	480-44050	12/16/2011 00:16	1	TAL BUF	RMM
P:3005A	480-13848-B-5-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-5-A		480-44153	480-43963	12/12/2011 22:20	1	TAL BUF	LH
P:7470A	480-13848-B-5-E		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-5-E		480-44852	480-44694	12/15/2011 20:56	1	TAL BUF	MM

Lab ID: 480-13848-5 **Client ID:** NCR 5S

Sample Date/Time: 12/09/2011 12:05 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-D-5 MS		480-45360		12/21/2011 00:36	1	TAL BUF	DC
A:8260B	480-13848-D-5 MS		480-45360		12/21/2011 00:36	1	TAL BUF	DC
P:3510C	480-13848-A-5-A MS		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-A-5-A MS		480-44598	480-44050	12/15/2011 20:49	1	TAL BUF	RMM
P:3005A	480-13848-B-5-C MS		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-5-C MS		480-44153	480-43963	12/12/2011 22:31	1	TAL BUF	LH
P:7470A	480-13848-B-5-G MS		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-5-G MS		480-44852	480-44694	12/15/2011 21:02	1	TAL BUF	MM

Lab ID: 480-13848-5 **Client ID:** NCR 5S

Sample Date/Time: 12/09/2011 12:05 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-D-5 MSD		480-45360		12/21/2011 00:58	1	TAL BUF	DC
A:8260B	480-13848-D-5 MSD		480-45360		12/21/2011 00:58	1	TAL BUF	DC
P:3510C	480-13848-A-5-B MSD		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-A-5-B MSD		480-44598	480-44050	12/15/2011 21:12	1	TAL BUF	RMM
P:3005A	480-13848-B-5-D MSD		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-5-D MSD		480-44153	480-43963	12/12/2011 22:33	1	TAL BUF	LH
P:7470A	480-13848-B-5-H MSD		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-5-H MSD		480-44852	480-44694	12/15/2011 21:04	1	TAL BUF	MM

Client: N Tonawanda Water Works Job Number: 480-13848-1

Laboratory Chronicle

Lab ID: 480-13848-5 SD **Client ID:** NCR 5S

Sample Date/Time: 12/09/2011 12:05 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	480-13848-B-5-B SD ^5		480-44153	480-43963	12/12/2011 08:30	5	TAL BUF	SS
A:6010B	480-13848-B-5-B SD ^5		480-44153	480-43963	12/12/2011 22:22	5	TAL BUF	LH
P:3005A	480-13848-B-5-A PDS		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-5-A PDS		480-44153	480-43963	12/12/2011 22:29	1	TAL BUF	LH
P:7470A	480-13848-B-5-F SD ^5		480-44852	480-44694	12/15/2011 15:55	5	TAL BUF	MM
A:7470A	480-13848-B-5-F SD ^5		480-44852	480-44694	12/15/2011 20:57	5	TAL BUF	MM

Lab ID: 480-13848-6 **Client ID:** Field Dup 1

Sample Date/Time: 12/09/2011 00:00 Received Date/Time: 12/09/2011 14:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-13848-C-6		480-45360		12/21/2011 01:20	1	TAL BUF	DC
A:8260B	480-13848-C-6		480-45360		12/21/2011 01:20	1	TAL BUF	DC
P:3510C	480-13848-A-6-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	480-13848-A-6-A		480-44598	480-44050	12/16/2011 00:39	1	TAL BUF	RMM
P:3005A	480-13848-B-6-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	480-13848-B-6-A		480-44153	480-43963	12/12/2011 22:35	1	TAL BUF	LH
P:7470A	480-13848-B-6-B		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	480-13848-B-6-B		480-44852	480-44694	12/15/2011 21:06	1	TAL BUF	MM

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:5030B	MB 480-45360/5		480-45360		12/20/2011 21:41	1	TAL BUF	DC
A:8260B	MB 480-45360/5		480-45360		12/20/2011 21:41	1	TAL BUF	DC
P:3510C	MB 480-44050/1-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	MB 480-44050/1-A		480-44598	480-44050	12/15/2011 20:03	1	TAL BUF	RMM
P:3005A	MB 480-43963/1-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	MB 480-43963/1-A		480-44153	480-43963	12/12/2011 21:37	1	TAL BUF	LH
P:7470A	MB 480-44694/25-A		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	MB 480-44694/25-A		480-44852	480-44694	12/15/2011 21:19	1	TAL BUF	MM

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Laboratory Chronicle

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:5030B	LCS 480-45360/4		480-45360		12/20/2011 21:19	1	TAL BUF	DC
A:8260B	LCS 480-45360/4		480-45360		12/20/2011 21:19	1	TAL BUF	DC
P:3510C	LCS 480-44050/2-A		480-44598	480-44050	12/12/2011 13:57	1	TAL BUF	KB
A:8270C	LCS 480-44050/2-A		480-44598	480-44050	12/15/2011 20:26	1	TAL BUF	RMM
P:3005A	LCS 480-43963/2-A		480-44153	480-43963	12/12/2011 08:30	1	TAL BUF	SS
A:6010B	LCS 480-43963/2-A		480-44153	480-43963	12/12/2011 21:40	1	TAL BUF	LH
P:7470A	LCS 480-44694/24-A		480-44852	480-44694	12/15/2011 15:55	1	TAL BUF	MM
A:7470A	LCS 480-44694/24-A		480-44852	480-44694	12/15/2011 21:17	1	TAL BUF	MM

Lab References:

TAL BUF = TestAmerica Buffalo

Certification Summary

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

TestAmerica Job ID: 480-13848-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	Georgia EPD	4	N/A
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	Kentucky UST	4	30
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY0044
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	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Hampshire	NELAC	1	68-00281
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
TestAmerica Buffalo	USDA	USDA		P330-08-00242
TestAmerica Buffalo	Virginia	NELAC Secondary AB	3	460185
TestAmerica Buffalo	Virginia	State Program	3	278
TestAmerica Buffalo	Washington	State Program	10	C1677
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: Richard C Baker	Lab PM: Hoffman, Sally	Carrier Tracking No(s):	COC No: 490-19065-4741.1
Client Contact: William Davignon	Phone: (716) 435-8503	E-Mail: sally.hoffman@testamericainc.com		Page: Page 1 of 1
Company: N Tonawanda Water Works		**Analysis Requested**		Job #:
Address: City Hall, Room 6, 216 Payne Ave	Due Date Requested:			
City: North Tonaw[redacted]	TAT Requested (days): normal			
State, Zip: NY, 14120				
Phone:	PO #: Purchase Order not requir			
Email: wmd_ntwwtp@live.com	WO #:			
Project Name: City of North Tonawanda - NCRS/	Project #: 48002901			
Site: New York	SSOW#:			

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)	[redacted]	6010B, 7470A	8260B - TCL list OLM04.2	8270C - TCL SVOA - OLM04.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	A	N	X	
[redacted]				[redacted]							
TRIP BLANK			g	Water	N	N	[illegible]	3		3	
MS	12/9/11	1205	g	Water	N	N	1	3	1	5	
MSD	12/9/11	1205	g	Water	N	N	1	3	1	5	
NCR 13S	12/9/11	1102	g	Water	N	N	1	3	2	6	
NCR 3S	12/9/11	1020	g	Water	N	N	1	3	2	6	
NCR 4S	12/9/11	0945	g	Water	N	N	1	3	1	5	
NCR 5S	12/9/11	1205	g	Water	N	N	1	3	2	6	
Field Dup 1	12/9/11		g	Water	N	N	1	3	1	5	
[redacted]				Water							
[redacted]				Water							

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	
Relinquished by: Richard C Baker	Date/Time: 12/9/11 1400	Company: [illegible]	Received by: [signature]	Date/Time: 12/9/11 1400	Company: TA Buffalo
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2@5.7	

Login Sample Receipt Checklist

Client: N Tonawanda Water Works

Job Number: 480-13848-1

Login Number: 13848

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert

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	

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: RC Becker

DATE OF SAMPLE COLLECTION: 1 2 0 9 1 1 (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*
NCR3S	NCR 3S	.35	~1.35	1020	Annual monitoring well sampling	8260B, 8270C 6010B, 7470A	480-[illegible]-4741	
NCR4S	NCR 4S	.30	~1.08	0945	"	"	"	
NCR5S	NCR 5S	.75	2.65	1205	"	"	"	
NCR13S	NCR 13S	.52	1.82	1100	"	"	"	
NCR5S	(MS/MSD) *	.75	2.6	1205	"	"	"	
Field Dup	(Duplicate) * NCR 13S	.52	1.82	1100	"	"	"	
	~~(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: 12/06/11 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 35

ONE WELL VOLUME: .55 gallons

FIVE WELL VOLUMES: 2.75 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)	.6					
pH	5.55					
TEMPERATURE	47.3					
CONDUCTIVITY	1.10					
TURBIDITY	73					
COLOR	cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/6/11 (DATE) Richard C Becker (PRINT NAME) (SIGNATURE)

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/7/11 (MM DD YY)

CREW MEMBERS: RC Bracken

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 35

ONE WELL VOLUME: ~4 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)	~.4					
pH	5.95					
TEMPERATURE	48.4					
CONDUCTIVITY	1.01					
TURBIDITY	37					
COLOR	Slightly cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/7/11 Richard C Bracken Richard C Bracken

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/8/11 (MM DD YY)

CREW MEMBERS: R C Baker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: DCR 35

ONE WELL VOLUME: .37 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)	~.4					
pH	6.42					
TEMPERATURE	48.7					
CONDUCTIVITY	0.95					
TURBIDITY	28					
COLOR	slightly cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/8/11 Richard C Baker R C Baker

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/6/11 (MM DD YY)

CREW MEMBERS: R C Bocken

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR-45

ONE WELL VOLUME: .41 gallons

FIVE WELL VOLUMES: ~~2.3~~ 2.05 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)	~.42					
pH	5.77					
TEMPERATURE	44.7					
CONDUCTIVITY	1.0					
TURBIDITY	320					
COLOR	tan					
ODOR	none					
COMMENTS	welldry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/6/11 Richard C Bocken R C Bocken

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/07/11 (MM DD YY)

CREW MEMBERS: R C Bolen

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR-45

ONE WELL VOLUME: .35 gallons

FIVE WELL VOLUMES: 1.75 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)	~.36					
pH	6.1					
TEMPERATURE	44.9					
CONDUCTIVITY	1.04					
TURBIDITY	221					
COLOR	tan					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/07/11 Richard C Bolen

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/8/11 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR-45

ONE WELL VOLUME: .32 gallons

FIVE WELL VOLUMES: 1.6 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)	~3.3					
pH	6.32					
TEMPERATURE	44.7					
CONDUCTIVITY	1.03					
TURBIDITY	139					
COLOR	tan					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/8/11 (DATE) Richard C Becker (PRINT NAME) (SIGNATURE)

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/06/11 (MM DD YY)

CREW MEMBERS: Richard Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR-5S

ONE WELL VOLUME: 1.02 gallons

FIVE WELL VOLUMES: 5.10 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)	~1.1					
pH	6.64					
TEMPERATURE	47.7					
CONDUCTIVITY	0.55					
TURBIDITY	37					
COLOR	cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/6/11 Richard C Becker

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/7/11 (MM DD YY)

CREW MEMBERS: Richard C Bocken

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 5S

ONE WELL VOLUME: .86 gallons

FIVE WELL VOLUMES: 4.3 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)	~8.8					
pH	6.7					
TEMPERATURE	47.0					
CONDUCTIVITY	0.58					
TURBIDITY	91					
COLOR	cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/7/11 (DATE) Richard C Bocken (PRINT NAME) Richard C Bocken (SIGNATURE)

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/08/11 (MM DD YY)

CREW MEMBERS: RC Decker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR-55

ONE WELL VOLUME: .78 gallons

FIVE WELL VOLUMES: 3.9 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)	.8					
pH	7.3					
TEMPERATURE	48.1					
CONDUCTIVITY	0.57					
TURBIDITY	95					
COLOR	cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/8/11 — DATE

Richard C Baker — PRINT NAME

Richard C Baker — SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/06/11 (MM DD YY)

CREW MEMBERS: R C Bacher

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 135

ONE WELL VOLUME: .7 gallons

FIVE WELL VOLUMES: 3.5 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					
pH	6.2					
TEMPERATURE	48.4					
CONDUCTIVITY	1.10					
TURBIDITY	65					
COLOR	cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/6/11 — DATE

Richard C Bacher — PRINT NAME

Richard C Bacher — SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/7/11 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 13S

ONE WELL VOLUME: 0.58 gallons

FIVE WELL VOLUMES: 2.9 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)	~.6					
pH	6.45					
TEMPERATURE	50.4					
CONDUCTIVITY	1.05					
TURBIDITY	21					
COLOR	slightly cloudy					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/7/11	Richard C Baker	Richard C Baker
DATE	PRINT NAME	SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/08/11 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 135

ONE WELL VOLUME: .54 gallons

FIVE WELL VOLUMES: 2.7 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)	~.6					
pH	6.4					
TEMPERATURE	49.3					
CONDUCTIVITY	1.03					
TURBIDITY	14					
COLOR	clear					
ODOR	none					
COMMENTS	well dry					

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/08/11 — DATE

Richard C Becker — PRINT NAME

Richard C Becker — SIGNATURE

FP-4C

APPENDIX D

DATA VALIDATION REPORT

DATA USABILITY SUMMARY REPORT
FOR
NIAGARA COUNTY REFUSE SITE

Prepared By:

PARSONS

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Syracuse, NY 13212
Phone: (315) 451-9560
Fax: (315) 451-9570

JANUARY 2012

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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 December 9, 2011. 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 28 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 these laboratory analyses 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 for each analytical method 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 8260B analytical method. Certain reported results for the TCL VOC samples were considered estimated based upon instrument calibrations. 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 8270C analytical method. The TCL SVOC samples did not require qualification resulting from data validation. 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 certain metals using the USEPA SW-846 6010B/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 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 1,1,2-trichloro-1,2,2-trifluoroethane (50.8%D), acetone (28.2%D), carbon disulfide (49.4%D), methyl tert-butyl ether (30.4%D), 2-butanone (22.5%D), cyclohexane (28.4%D), methylcyclohexane (36%D), and 2-hexanone (22.4%D) in the continuing calibration associated with all project samples. Therefore, sample results for these compounds which were nondetects were considered estimated and qualified "UJ".

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
- MSB 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.

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 matrix spike recoveries and field duplicate precision as discussed below.

MS/MSD Recoveries

All MS/MSD recoveries were compliant and within QC acceptance limits with the exception of the low MS/MSD recoveries for sodium (74%R/61%R; QC limit 75-125%R) and the high MS/MSD recoveries for aluminum (133%R/130%R) associated with all samples. Therefore, all sodium results were considered estimated, possibly biased low, with the positive results qualified "J" and nondetected results qualified "UJ" for the affected samples. Positive aluminum results were considered estimated, possibly biased high, and qualified "J" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable for the field duplicate pair NCR-13S and FIELD DUP 1 with the exception of the precision for manganese (65%RPD), iron (104%RPD), aluminum (88%RPD), zinc (61%RPD), and chromium (70%RPD). Therefore, the

manganese, iron, aluminum, zinc, and chromium results for these samples were considered estimated and qualified "J".

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	TCL VOCs	TCL SVOCs	METALS
NCR-3S	Water	12/09/11	OK	OK	OK
NCR-4S	Water	12/09/11	OK	OK	OK
NCR-5S	Water	12/09/11	OK	OK	OK
NCR-13S	Water	12/09/11	OK	OK	OK
FIELD DUP 1	Water	12/09/11	OK	OK	OK
TRIP BLANK	Water	12/09/11	OK		
TOTAL SAMPLES			6	5	5

NOTES: OK - Sample analysis considered valid and usable.

ATTACHMENT A

VALIDATED LABORATORY DATA

							Dup of NCR-13S	
City of North Tonawanda WWTP		Sample ID:	NCR-3S	NCR-4S	NCR-5S	NCR-13S	FIELD DUP 1	Trip Blank
830 River Road		Lab Sample Id:	480-13848-3	480-13848-4	480-13848-5	480-13848-2	480-13848-6	480-13848-1
North Tonawanda, NY		Source:	STL-Buffalo	STL-Buffalo	STL-Buffalo	STL-Buffalo	STL-Buffalo	STL-Buffalo
C/O Niagara County Refuse Site		SDG:	480-13848	480-13848	480-13848	480-13848	480-13848	480-13848
Groundwater Sampling Event		Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
December 2012		Sampled:	12/9/2011	12/9/2011	12/9/2011	12/9/2011	12/9/2011	12/9/2011
		Validated:	1/9/2011	1/9/2011	1/9/2011	1/9/2011	1/9/2011	1/9/2011
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-trifluoroethane	ug/L	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
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 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
78-93-3	2-Butanone	ug/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
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 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
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 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
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 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
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 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
108-87-2	Methylcyclohexane	ug/L	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
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

City of North Tonawanda WWTP 830 River Road North Tonawanda, NY C/O Niagara County Refuse Site Groundwater Sampling Event December 2012		Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR-3S 480-13848-3 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-4S 480-13848-4 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-5S 480-13848-5 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-13S 480-13848-2 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	Dup of NCR-13S FIELD DUP 1 480-13848-6 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	Trip Blank 480-13848-1 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011
CAS NO.	COMPOUND	UNITS:						
	SEMIVOLATILES							
92-52-4	Biphenyl	ug/L	5 U	5 U	5 U	5 U	5 U	
108-60-1	bis (2-chloroisopropyl) ether	ug/L	5 U	5 U	5 U	5 U	5 U	
95-95-4	2,4,5-Trichlorophenol	ug/L	5 U	5 U	5 U	5 U	5 U	
88-06-2	2,4,6-Trichlorophenol	ug/L	5 U	5 U	5 U	5 U	5 U	
120-83-2	2,4-Dichlorophenol	ug/L	5 U	5 U	5 U	5 U	5 U	
105-67-9	2,4-Dimethylphenol	ug/L	5 U	5 U	5 U	5 U	5 U	
51-28-5	2,4-Dinitrophenol	ug/L	10 U	10 U	10 U	10 U	10 U	
121-14-2	2,4-Dinitrotoluene	ug/L	5 U	5 U	5 U	5 U	5 U	
606-20-2	2,6-Dinitrotoluene	ug/L	5 U	5 U	5 U	5 U	5 U	
91-58-7	2-Chloronaphthalene	ug/L	5 U	5 U	5 U	5 U	5 U	
95-57-8	2-Chlorophenol	ug/L	5 U	5 U	5 U	5 U	5 U	
91-57-6	2-Methylnapthalene	ug/L	5 U	5 U	5 U	5 U	5 U	
95-48.7	2-Methylphenol	ug/L	5 U	5 U	5 U	5 U	5 U	
88-74-4	2-Nitroaniline	ug/L	10 U	10 U	10 U	10 U	10 U	
88-75-5	2-Nitrophenol	ug/L	5 U	5 U	5 U	5 U	5 U	
91-94-1	3,3'-Dichlorobenzidine	ug/L	5 U	5 U	5 U	5 U	5 U	
99-09-2	3-Nitroaniline	ug/L	10 U	10 U	10 U	10 U	10 U	
534-521	4,6-Dinitro-2-methyphenol	ug/L	10 U	10 U	10 U	10 U	10 U	
101-55-3	4-Bromophenyl phenyl ether	ug/L	5 U	5 U	5 U	5 U	5 U	
59-50-7	4-Chloro-3-methylphenol	ug/L	5 U	5 U	5 U	5 U	5 U	
106-47-8	4-Chloroaniline	ug/L	5 U	5 U	5 U	5 U	5 U	
7005-72-3	4-Chlorophenyl phenyl ether	ug/L	5 U	5 U	5 U	5 U	5 U	
106-44-5	4-Methylphenol	ug/L	10 U	10 U	10 U	10 U	10 U	
100-01-6	4-Nitroaniline	ug/L	10 U	10 U	10 U	10 U	10 U	
100-02-7	4-Nitrophenol	ug/L	10 U	10 U	10 U	10 U	10 U	
83-32-9	Acenaphthene	ug/L	5 U	5 U	5 U	5 U	5 U	
208-96-8	Acenaphthylene	ug/L	5 U	5 U	5 U	5 U	5 U	
98-86-2	Acetophenone	ug/L	5 U	5 U	5 U	5 U	5 U	
120-12-7	Anthracene	ug/L	5 U	5 U	5 U	5 U	5 U	
191224-9	Atrazine	ug/L	5 U	5 U	5 U	5 U	5 U	
100-52-7	Benzaldehyde	ug/L	5 U	5 U	5 U	5 U	5 U	
56-55-3	Benzo(a)anthracene	ug/L	5 U	5 U	5 U	5 U	5 U	
50-32-8	Benzo(a)pyrene	ug/L	5 U	5 U	5 U	5 U	5 U	
205-99-2	Benzo(b)fluoranthene	ug/L	5 U	5 U	5 U	5 U	5 U	

City of North Tonawanda WWTP 830 River Road North Tonawanda, NY C/O Niagara County Refuse Site Groundwater Sampling Event December 2012		Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	NCR-3S 480-13848-3 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-4S 480-13848-4 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-5S 480-13848-5 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	NCR-13S 480-13848-2 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	Dup of NCR-13S FIELD DUP 1 480-13848-6 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011	Trip Blank 480-13848-1 STL-Buffalo 480-13848 WATER 12/9/2011 1/9/2011
CAS NO.	COMPOUND	UNITS:						
	SEMIVOLATILES							
191-24-2	Benzo(g,h,i)perylene	ug/L	5 U	5 U	5 U	5 U	5 U	
207-08-9	Benzo(k)fluoranthene	ug/L	5 U	5 U	5 U	5 U	5 U	
111-91-1	Bis (2-chlorothoxy)methane	ug/L	5 U	5 U	5 U	5 U	5 U	
111-44-4	Bis (2-chloroethyl)ether	ug/L	5 U	5 U	5 U	5 U	5 U	
117-81-7	Bis (2-ethylhexyl)phthalate	ug/L	5 U	5 U	5 U	5 U	5 U	
85-68-7	Butyl benzyl phthalate	ug/L	5 U	5 U	5 U	5 U	5 U	
105-60-2	Caprolactam	ug/L	5 U	5 U	5 U	5 U	5 U	
86-74-2	Carbazole	ug/L	5 U	5 U	5 U	5 U	5 U	
218-019	Chrysene	ug/L	5 U	5 U	5 U	5 U	5 U	
84-74-2	Di-n-butyl phthalate	ug/L	5 U	5 U	5 U	5 U	5 U	
117-84-0	Di-n-octyl phthalate	ug/L	5 U	5 U	5 U	5 U	5 U	
53-70-3	Dibenz(a,h)anthracene	ug/L	5 U	5 U	5 U	5 U	5 U	
132-64-9	Dibenzofuran	ug/L	10 U	10 U	10 U	10 U	10 U	
84-55-2	Diethyl phthalate	ug/L	5 U	5 U	5 U	5 U	5 U	
131-11-3	Dimethyl phthalate	ug/L	5 U	5 U	5 U	5 U	5 U	
206-44-0	Fluoranthene	ug/L	5 U	5 U	5 U	5 U	5 U	
86-73-7	Fluorene	ug/L	5 U	5 U	5 U	5 U	5 U	
118-74-1	Hexachlorobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	
87-68-3	Hexachlorobutadiene	ug/L	5 U	5 U	5 U	5 U	5 U	
77-47-4	Hexachlorocyclopentadiene	ug/L	5 U	5 U	5 U	5 U	5 U	
67-72-1	Hexachloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L	5 U	5 U	5 U	5 U	5 U	
78-59-1	Isophorone	ug/L	5 U	5 U	5 U	5 U	5 U	
621-64-7	N-Nitrosodi-n-propylamine	ug/L	5 U	5 U	5 U	5 U	5 U	
86-30-6	N-Nitrosodiphenylamine	ug/L	5 U	5 U	5 U	5 U	5 U	
91-20-3	Naphthalene	ug/L	5 U	5 U	5 U	5 U	5 U	
98-95-3	Nitrobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	
87-86-5	Pentachlorophenol	ug/L	10 U	10 U	10 U	10 U	10 U	
85-01-8	Phenanthrene	ug/L	5 U	5 U	5 U	5 U	5 U	
108-95-2	Phenol	ug/L	5 U	5 U	5 U	5 U	5 U	
129-00-0	Pyrene	ug/L	5 U	5 U	5 U	5 U	5 U	
	METALS							
7439-95-4	Magnesium	ug/L	73400	44900	42700	49000	51000	
7439-96-5	Manganese	ug/L	200	150	220	4 J	7.9 J	
7440-23-5	Sodium	ug/L	9100 J	33100 J	32200 J	12800 J	12500 J	
7440-43-9	Cadmium	ug/L	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	
7440-36-0	Antimony	ug/L	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	
7440-09-7	Potassium	ug/L	2600	18500	3000	3100	3400	
7440-41-7	Beryllium	ug/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
7440-39-3	Barium	ug/L	49	93	180	59	61	
7440-28-0	Thallium	ug/L	10 U	10 U	10 U	10 U	10 U	
7440-70-2	Calcium	ug/L	122000	142000	83800	164000	164000	
7440-89-6	Iron	ug/L	5300	18200	8300	540 J	1700 J	
7440-02-0	Nickel	ug/L	26	1.3 U	21	1.3 U	1.3 U	
7440-62-2	Vanadium	ug/L	1.1 U	1.1 U	15	1.1 U	1.1 U	
7440-22-4	Silver	ug/L	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	
7440-50-8	Copper	ug/L	10	10	24	1.5 U	1.5 U	
7429-90-5	Aluminum	ug/L	580 J	6100 J	8900 J	380 J	980 J	
7439-92-1	Lead	ug/L	3 U	9.4	13	3 U	3 U	
7440-66-6	Zinc	ug/L	340	400	88	47 J	25 J	
7782-49-2	Selenium	ug/L	8.7 U	8.7 U	8.7 U	8.7 U	8.7 U	
7440-47-3	Chromium	ug/L	18	5.6	24	4.6 J	9.5 J	
7440-48-4	Cobalt	ug/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	
7439-97-6	Mercury	ug/L	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	

APPENDIX E

MONTHLY INSPECTION LOGS AND PHOTOGRAPHS

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 04/07/11 (MM DD YY)

INSPECTOR(S): R C Baker

	Item	*Inspect For*	*Action Required*	*Comments*
1.	**Perimeter Collection System/Off-Site Forcemain**			
☐	Manholes	- cover on securely	yes	
☐		- condition of cover	good	
☐		- condition of inside of manhole	good	
☐		- flow conditions	no apparent flow	
☐	Wet Wells	- cover on securely	yes	
☐		- condition of cover	good	
☐		- condition of inside of wet well	good	
2.	**Landfill Cap**			
☐	Vegetated Soil Cover	- erosion	no	
☐		- bare areas	no	
☐		- washouts	no	
☐		- leachate seeps	no	
☐		- length of vegetation	short	
☐		- dead/dying vegetation	winter kill	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 6 | 0 | 7 | 1 | 1 (MM DD YY)

INSPECTOR(S): RC Becker

Item	*Inspect For*	*Action Required*	*Comments*
2. Landfill Cap (continued)			
☐ Access Roads	- bare areas, dead/dying veg.	winter kill	
	- erosion	no	
	- potholes or puddles	no	
	- obstruction	no	
3. Wetlands (Area "F")	- dead/dying vegetation	winter kill	
	- change in water budget	normal	
	- general condition of wetlands	good	
4. Other Site Systems			
☐ Perimeter Fence	- integrity of fence	good	
	- integrity of gates	good	
	- integrity of locks	good	
	- placement and condition of signs	good	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10 | 07 | 11 (MM DD YY)

INSPECTOR(S): R C Backon

	Item	*Inspect For*	*Action Required*	*Comments*
4.	**Other Site Systems (continued)**			
	Drainage Ditches/ Swale Outlets	- sediment build-up	no	
		- erosion	no	
		- condition of erosion protection	good	
		- flow obstructions	none	
		- dead/dying vegetation	winter kill	
		- cable concrete/gabion mats and riprap	good	
	Culverts	- sediment build-up	no	
		- erosion	no	
		- condition of erosion protection	good	
		- flow obstructions	none	
	Gas Vents	- intact /damage	intact	
	Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10/20/11 (MM DD YY)

INSPECTOR(S): R C Baker

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 6 2 0 9 (MM DD YY)

INSPECTOR(S): RC Becker

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 02/9/11 (MM DD YY)

INSPECTOR(S): Richard C Bocker

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 03/31/11 (MM DD YY)

INSPECTOR(S): R C Bolton

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 03/31/11 (MM DD YY)

INSPECTOR(S): Richard C Becker

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 03/03/11 (MM DD YY)

INSPECTOR(S): Richard C Rocker

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 4/9/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 4/9/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 4/9/2011 (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	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
	- dead/dying vegetation	winter kill	
	- cable concrete/gabion mats and riprap	good	
Culverts	- sediment build-up	none	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
Gas Vents	- intact/damage	intact	
Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/6/2011
(MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/6/2011 (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	
☐	- erosion	none	
☐	- potholes or puddles	none	
☐	- obstruction	none	
3 Wetlands (Area "F")	- dead/dying vegetation	none	
	- change in water budget	high	
	- general conditions of wetlands	good	
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	good	
☐	- integrity of gates	good	
☐	- integrity of locks	good	
☐	- placement and condition of signs	good	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 5/6/2011 (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	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
	- dead/dying vegetation	none	
	- cable concrete/gabion mats and riprap	good condition	
☐ Culverts	- sediment build-up	none	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
☐ Gas Vents	- intact/damage	intact	
☐ Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 6/3/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 6/3/2011 (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	
		- erosion	none	
		- potholes or puddles	none	
		- obstruction	none	
3	Wetlands (Area "F")	- dead/dying vegetation	none	
		- change in water budget	normal	
		- general conditions of wetlands	good	
4	Other Site Systems			
	Perimeter Fence	- integrity of fence	good	
		- integrity of gates	good	
		- integrity of locks	good	
		- placement and condition of signs	good	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 6/3/2011 (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	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
	- dead/dying vegetation	none	
	- cable concrete/gabion mats and riprap	good condition	
☐ Culverts	- sediment build-up	none	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
☐ Gas Vents	- intact/damage	intact	
☐ Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 7/15/2011
(MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 7/15/2011 (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	
		- erosion	none	
		- potholes or puddles	none	
		- obstruction	none	
3	Wetlands (Area "F")	- dead/dying vegetation	none	
		- change in water budget	low	
		- general conditions of wetlands	good	
4	Other Site Systems			
	Perimeter Fence	- integrity of fence	good	
		- integrity of gates	good	
		- integrity of locks	good	
		- placement and condition of signs	good	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 7/15/2011 (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	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
	- dead/dying vegetation	none	
	- cable concrete/gabion mats and riprap	good condition	
Culverts	- sediment build-up	none	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
Gas Vents	- intact/damage	intact	
Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 8/5/2011
(MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 8/5/2011 (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	
☐	- erosion	none	
☐	- potholes or puddles	none	
☐	- obstruction	none	
3 Wetlands (Area "F")	- dead/dying vegetation	none	
	- change in water budget	low	
	- general conditions of wetlands	good	
4 Other Site Systems			
☐ Perimeter Fence	- integrity of fence	good	
☐	- integrity of gates	good	
☐	- integrity of locks	good	
☐	- placement and condition of signs	good	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 8/5/2011 (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	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
	- dead/dying vegetation	none	
	- cable concrete/gabion mats and riprap	good condition	
☐ Culverts	- sediment build-up	none	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
☐ Gas Vents	- intact/damage	intact	
☐ Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 9/15/2011 (MM DD YY)

INSPECTOR(S): RC Becken

	Item	*Inspect For*	*Action Required*	*Comments*
1	Perimeter collection System/Off-Site Forcemain			
	Manholes	- cover on securely	yes	
		- condition of cover	good	
		- condition of inside of manhole	good	
		- flow conditions	no apparent flow	
	Wet Wells	- cover on securely	yes	
		- condition of cover	good	
		- condition of inside of wet well	good	
2	Landfill Cap			
	Vegetated Soil Cover	- erosion	none	
		- bare areas	none	
		- washouts	none	
		- leachate seeps	none	
		- length of vegetation	high were not mowed	
		- dead/dying vegetation	none	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 9/15/2011 (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	
☐		- erosion	none	
☐		- potholes or puddles	none	
☐		- obstruction	none	
3	Wetlands (Area "F")	- dead/dying vegetation	none	
		- change in water budget	low	
		- general conditions of wetlands	good	
4	Other Site Systems			
☐	Perimeter Fence	- integrity of fence	good	
☐		- integrity of gates	good	
☐		- integrity of locks	good	
☐		- placement and condition of signs	good	

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 9/15/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/7/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/7/2011 (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	
		- erosion	none	
		- potholes or puddles	none	
		- obstruction	none	
3	Wetlands (Area "F")	- dead/dying vegetation	none	
		- change in water budget	normal	
		- general conditions of wetlands	good	
4	Other Site Systems			
	Perimeter Fence	- integrity of fence	good	
		- integrity of gates	good	
		- integrity of locks	good	
		- placement and condition of signs	good	

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 10/7/2011 (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	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
	- dead/dying vegetation	none	
	- cable concrete/gabion mats and riprap	good condition	
☐ Culverts	- sediment build-up	none	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	none	
☐ Gas Vents	- intact/damage	intact	
☐ Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/3/2011
(MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/3/2011 (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	
		- erosion	none	
		- potholes or puddles	none	
		- obstruction	none	
3	Wetlands (Area "F")	- dead/dying vegetation	none	
		- change in water budget	normal	
		- general conditions of wetlands	good	
4	Other Site Systems			
	Perimeter Fence	- integrity of fence	good	
		- integrity of gates	good	
		- integrity of locks	good	
		- placement and condition of signs	good	

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 11/3/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/1/2011
(MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/1/2011 (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	
		- erosion	none	
		- potholes or puddles	none	
		- obstruction	none	
3	Wetlands (Area "F")	- dead/dying vegetation	winter kill	
		- change in water budget	normal	
		- general conditions of wetlands	good	
4	Other Site Systems			
	Perimeter Fence	- integrity of fence	good	
		- integrity of gates	good	
		- integrity of locks	good	
		- placement and condition of signs	good	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, NY

DATE: 12/1/2011 (MM DD YY)

INSPECTOR(S): RC Becken

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

FORM 1

Photo 1: Top of landfill facing north.

Photo 2: Taken from north side of landfill facing northwest near wet well D.

Photo 3: Top of landfill facing west.

APPENDIX F

MAINTENANCE RECORD LOGS

MAINTENANCE RECORD LOG

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

CREW MEMBERS: R C Backen

1. Date: 0 1 0 3 1 1 (MM DD YY)

Time: 1 5 1 5 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: remove NCR sign

2. Company Performing Maintenance

Name: O+M Enterprises Inc.

Address: 7134 Marigold Dr.
N. Tonawanda, NY 14120

Contact Name: Richard C Backen

3. Methods Used:

remove sign from fence

Description of Material Removed:

Sign

Problems/Comments:

none

1/3/11 Richard C Backen
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

CRA 5723 (17)

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Imperial Fence

1. Date: 01 05 11 (MM DD YY)

Time: 1030 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: repair fence + gate

2. Company Performing Maintenance

Name: Imperial Fence

Address: 3325 Niagara Falls Blvd.

N. Tonawanda, NY 14120

Contact Name: Brad Bonai

3. Methods Used:

install new 3" post, straighten 2-4" post and reset, install new fence wire, top + mid rails, re hang gates.

Description of Material Removed:

old post and fence

Problems/Comments:

none

1/5/11 Richard C Becker Richard C Becker

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becker

1. Date: 0 1 0 6 1 1 (MM DD YY)

Time: 0 9 4 5 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: replacing signs

2. Company Performing Maintenance

Name: O+M Enterprises

Address: 7134 Marigold Dr.
N. Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

replacing signs, provide new chain to lock gate

Description of Material Removed:

none

Problems/Comments:

none

1/6/11 Richard C Becker Richard C Becker

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C Becker

1. Date: 02/23/11 (MM DD YY)

Time: 1930 (HH mm)

Scheduled/Unscheduled: unscheduled

Type of Maintenance Performed: trouble shoot Wet well C pump alarm

2. Company Performing Maintenance

Name: O&M Enterprises, Inc.

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

restarted and checked amperage

Description of Material Removed:

none

Problems/Comments:

high amperage - pump & motor currently operating but will need replacement probably Tomorrow

2/23/11 Richard C Becker
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C Becker

1. Date: 0 2 2 4 1 1 (MM DD YY)

Time: 1 0 3 0 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: replace wet well pump motor with spare

2. Company Performing Maintenance

Name: Oram Enterprises, Inc.

Address: 7134 Marigold Dr.

North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

shutdown power lockout + tag, pull motor and pump, replace with spare pump + motor, needed to cut bad spot (leak) out of 2" hose.

Description of Material Removed:

pump, motor + approximately 1 foot of 2" hose.

Problems/Comments:

none - ordered new pump + motor

12/24/11 Richard C Becker

DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

CRA 5723 (17)

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C Becker

1. Date: 02/25/11 (MM DD YY)

Time: 0930 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: trouble shoot pump + motor taken from WSC on 2/24/11

2. Company Performing Maintenance

Name: O+M Enterprises, Inc.

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

disassembled pump + motor cleaned

Description of Material Removed:

none

Problems/Comments:

none

2/25/11 Rick Becker
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

CRA 5723 (17)

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C Becker

1. Date: 02 26 11 (MM DD YY)

Time: 1045 (HH mm)

Scheduled/Unscheduled: Scheduled

Type of Maintenance Performed: install pump in wet well #2

2. Company Performing Maintenance

Name: O+M Enterprises, Inc.

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

pulled old pump replaced with rebuild spare pump

Description of Material Removed:

old pump/motor

Problems/Comments:

none

2/26/11 Richard C Becker [signature]
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

CRA 5723 (17)

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C Becker

1. Date: 02/28/11 (MM DD YY)

Time: 1545 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: adjust on/off floats

2. Company Performing Maintenance

Name: O&M Enterprises, Inc.

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

lowered float's slightly

Description of Material Removed:

none

Problems/Comments:

none

2/28/11 Rick Becker Richard C Becker
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 6/2/2011
   Time 8:30
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowed grass near fence line 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 mounted mower

Description of Material Removed:

none

Problems/Comments:

none

6/2/2011 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 6/3/2011
   Time 12:30
   Scheduled/Unscheduled: scheduled
   Type of Maintenance Performed: repaired East B well
2. Company Performing Maintenance
   Name: O&M Enterprises
   Address: 7134 Marigold Dr.
   N. Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

well outer casing rustedremoved old outercasing and installed new

Description of Material Removed:

old casing

Problems/Comments:

none

DATE 6/03/11 INSPECTOR INSPECTOR'S SIGNATURE

FORM 2 Rick Becken

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 7/15/2011
   Time 8:30
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowed grass near fence line 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 mounted mower

Description of Material Removed:

none

Problems/Comments:

none

7/15/2011 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 8/4/2011
   Time 9:30
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowing roads and fence line
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc
   Address: 7134 Marigold Dr
   N. Tonawanda,NY
   Contact Name: Richard C. Becken
3. Methods Used:
   Tractor and mower

Description of Material Removed:

none

Problems/Comments:

none

DATE	INSPECTOR	INSPECTOR'S SIGNATURE
8/4/2011	RC Becken	

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Becken

1. Date 8/29/2011
   Time 2:55
   Scheduled/Unschedule unscheduled
   Type of Maintenance Performed: clean up tree that blew over
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr
   North Tonawanda, NY
   Contact Name: Rick Becken
3. Methods Used:

cut up and stacked wood

Description of Material Removed:

none

Problems/Comments:

none

8/29/2011	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 9/9/2011
   Time 8:15
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowing grass
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

9/9/2011	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 9/15/2011
   Time 12:00
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowing grass
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

9/15/2011	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 9/17/2011
   Time 8:00
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowing grass
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

9/17/2011	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 9/21/2011
   Time 8:30
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowing grass
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

9/21/2011	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 9/23/2011
   Time 8:35
   Scheduled/Unscheduled:
   Type of Maintenance Performed: mowing grass
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

9/23/2011	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 20-Oct-11
   Time 930
   Scheduled/Unscheduled:
   Type of Maintenance Performed: cut brush and trees on fence line
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

Brush cutters and chain saw

Description of Material Removed:

None

Problems/Comments:

None

10/20/2011	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 30-Nov-11
   Time 1430
   Scheduled/Unscheduled:
   Type of Maintenance Performed: repair wet well c discharge hose
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

replace cracked discharge hose with spare hose

Description of Material Removed:

hose

Problems/Comments:

None

11/30/2011	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 1-Dec-11
   Time 1400
   Scheduled/Unscheduled:
   Type of Maintenance Performed: repair wet well c discharge hose
2. Company Performing Maintenance
   Name: O&M Enterprises, Inc.
   Address: 7134 Marigold Dr.
   North Tonawanda, NY 14120
   Contact Name: Rick Becken
3. Methods Used:

replace broken dicharge with spare hose

Description of Material Removed:

hose

Problems/Comments:

None

12/1/2011 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: 1/7/2011 (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"	12:25	598.93	25.88	573.05
EAST "B"	12:05	596.23	19.43	576.80
EAST "C"	11:55	598.69	19.83	578.86
EAST "D"	11:35	593.20	14.99	578.21
NCR-3S	9:25	579.60	3.56	576.04
NCR-4S	10:15	577.88	3.04	574.84
NCR-5S	11:05	579.34	7.68	571.66
NCR-13S	8:35	577.15	4.6	572.55

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:20		~8"
WW B	10:05		~4"
WW C	9:35		~4"
WW D	8:50		~10"

Total System Flow	Time of Measurement
52531320	8:20

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 2/9/2011 (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"	14:55	598.93	26.05	572.88
EAST "B"	14:25	596.23	19.95	576.28
EAST "C"	13:50	598.69	20.45	578.24
EAST "D"	13:35	593.20	15.21	577.99
NCR-3S	11:25	579.60	3.90	575.70
NCR-4S	10:15	577.88	2.90	574.98
NCR-5S	12:45	579.34	7.33	572.01
NCR-13S	9:55	577.15	4.77	572.38

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:50		~6"
WW B	11:55		~5"
WW C	11:15		~4"
WW D	10:40		~7"

Total System Flow	Time of Measurement
52879155	9:50

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 3/3/2011 (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"	13:45	598.93	26.12	572.81
EAST "B"	12:45	596.23	20.17	576.06
EAST "C"	12:15	598.69	21.01	577.68
EAST "D"	11:45	593.20	15.80	577.40
NCR-3S	10:50	579.60	3.39	576.21
NCR-4S	10:30	577.88	2.65	575.23
NCR-5S	11:35	579.34	5.95	573.39
NCR-13S	9:15	577.15	4.40	572.75

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:05		~8"
WW B	10:15		~6"
WW C	10:05		~20"
WW D	9:45		~7"

Total System Flow	Time of Measurement
53586800	9:05

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 4/9/2011 (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"	12:15	598.93	26.13	572.80
EAST "B"	11:15	596.23	20.12	576.11
EAST "C"	11:25	598.69	20.65	578.04
EAST "D"	11:15	593.20	15.65	577.55
NCR-3S	9:55	579.60	3.48	576.12
NCR-4S	10:30	577.88	2.91	574.97
NCR-5S	11:00	579.34	6.23	573.11
NCR-13S	8:15	577.15	4.51	572.64

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:00		~12"
WW B	10:15		~6"
WW C	9:45		~12"
WW D	9:25		~7"

Total System Flow	Time of Measurement
55158875	8:00

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 5/6/2011 (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	26.15	572.78
EAST "B"	11:25	596.23	20.31	575.92
EAST "C"	11:40	598.69	20.37	578.32
EAST "D"	11:55	593.20	15.75	577.45
NCR-3S	9:50	579.60	3.31	576.29
NCR-4S	10:25	577.88	2.90	574.98
NCR-5S	10:55	579.34	6.21	573.13
NCR-13S	10:45	577.15	4.52	572.63

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:15		~10"
WW B	10:10		~6"
WW C	9:45		~8"
WW D	9:25		~6"

Total System Flow	Time of Measurement
56224015	9:15

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 6/3/2011 (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"	12:15	598.93	26.22	572.71
EAST "B"	11:55	596.23	19.98	576.25
EAST "C"	11:25	598.69	20.82	577.87
EAST "D"	12:55	593.20	15.92	577.28
NCR-3S	9:55	579.60	3.61	575.99
NCR-4S	10:30	577.88	3.37	574.51
NCR-5S	11:00	579.34	7.16	572.18
NCR-13S	9:20	577.15	5.2	571.95

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:00		~8"
WW B	10:15		~5"
WW C	9:45		~9"
WW D	9:25		~6"

Total System Flow	Time of Measurement
57003360	9:00

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 7/15/2011 (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"	12:55	598.93	25.78	573.15
EAST "B"	12:10	596.23	20.00	576.23
EAST "C"	12:00	598.69	20.65	578.04
EAST "D"	11:40	593.20	15.71	577.49
NCR-3S	10:35	579.60	dry	
NCR-4S	10:55	577.88	dry	
NCR-5S	11:10	579.34	dry	
NCR-13S	9:35	577.15	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:20	57146451	~7"
WW B	10:25		~6"
WW C	10:15		~10"
WW D	10:05		~6"

Total System Flow	Time of Measurement
57158841	9:20

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 8/5/2011 (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"	11:50	598.93	26.44	572.49
EAST "B"	11:40	596.23	19.99	576.24
EAST "C"	12:20	598.69	20.75	577.94
EAST "D"	12:40	593.20	15.88	577.32
NCR-3S	10:15	579.60	dry	
NCR-4S	10:50	577.88	dry	
NCR-5S	11:00	579.34	dry	
NCR-13S	9:20	577.15	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:20	57146451	~7"
WW B	10:55		~6"
WW C	10:10		~10"
WW D	9:45		~6"

Total System Flow	Time of Measurement
57184325	9:20

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 9/15/2011 (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	26.54	572.39
EAST "B"	12:10	596.23	20.05	576.18
EAST "C"	12:25	598.69	20.95	577.74
EAST "D"	12:45	593.20	15.96	577.24
NCR-3S	10:25	579.60	dry	
NCR-4S	11:00	577.88	dry	
NCR-5S	11:30	579.34	dry	
NCR-13S	9:20	577.15	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:00	57212452	~10"
WW B	10:55		~6"
WW C	10:20		~11"
WW D	11:15		~10"

Total System Flow	Time of Measurement
57212452	8:00

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 10/7/2011 (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"	11:20	598.93	26.1	572.83
EAST "B"	11:35	596.23	19.1	577.13
EAST "C"	11:50	598.69	20.86	577.83
EAST "D"	12:05	593.20	15.9	577.30
NCR-3S	9:50	579.60	5.37	574.23
NCR-4S	10:15	577.88	dry	
NCR-5S	10:55	579.34	dry	
NCR-13S	9:10	577.15	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:00		~8"
WW B	10:30		~6"
WW C	9:45		~10"
WW D	9:25		~7"

Total System Flow	Time of Measurement
57259292	9:00

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 11/3/2011 (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"	11:30	598.93	26.05	572.88
EAST "B"	11:45	596.23	19.11	577.12
EAST "C"	12:00	598.69	20.45	578.24
EAST "D"	12:15	593.20	15.73	577.47
NCR-3S	10:30	579.60	3.76	575.84
NCR-4S	10:45	577.88	3.47	574.41
NCR-5S	11:15	579.34	dry	
NCR-13S	9:40	577.15	5.67	571.48

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:30		~10"
WW B	11:00		~6"
WW C	10:25		~10"
WW D	10:05		~6"

Total System Flow	Time of Measurement
57762182	9:30

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 12/1/2011 (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"	10:25	598.93	26.04	572.89
EAST "B"	10:45	596.23	15.70	580.53
EAST "C"	11:00	598.69	20.74	577.95
EAST "D"	11:25	593.20	15.44	577.76
NCR-3S	9:15	579.60	3.20	576.40
NCR-4S	9:45	577.88	2.79	575.09
NCR-5S	8:40	579.34	9.90	569.44
NCR-13S	10:10	577.15	4.23	572.92

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	8:45		~10"
WW B	10:00		~5"
WW C	9:30		~9"
WW D	9:00		~5"

Total System Flow	Time of Measurement
58267438	8:45

FP-3D