2010 ANNUAL MONITORING REPORT

NIAGARA COUNTY REFUSE DISTRICT SITE

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

SUBMITTED TO:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NEW YORK STATE DEPARMENT OF ENVIRONMENTAL CONSERVATION

SUBMITTED BY:

Niagara County Refuse District and PRP Group

PREPARED BY:

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

February 2011

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Submitted To:

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

and

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SECTION 1
INTRODUCTION

1.1 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Record of Decision (USEPA, 1993), the United States District Court Consent Decree (USA, 1995), and the USEPA-approved Operation, Maintenance, and Monitoring (OM&M) Manual (CRA, 2000), the Niagara County Refuse Site Potentially Responsible Parties (PRP) Group performed a remedial action at the Niagara County Refuse Site (Site), Wheatfield, New York. The PRP Group currently provides site-related OM&M services. This Annual Monitoring Report summarizes monitoring activities from January through December 2010.

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 (PCS) 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, and NCR-13S in December 2010. An attempt was made to sample well NCR-5S however; there was no water in the well. 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:

- 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 2010 sampling event, one well (NCR-5S) was not sampled due to a lack of water in the well.

A request was submitted to the USEPA and NYSDEC in 2005 to reduce the analytical parameters in each of the groundwater samples collected. The request proposed reducing groundwater laboratory analysis to five metals that have historically been identified as exceeding NYSDEC and USEPA groundwater standards in the shallow groundwater at the Site. The elimination of analysis for VOCs and SVOCs was also proposed. The USEPA agreed, after discussions with the NYSDEC and input from NYSDOH, to reduce the collection of VOCs and SVOCs to every two years beginning in 2006 (every other groundwater sampling event). The USEPA requested that metals continue to be analyzed for each groundwater sampling round. The basis for this decision was stated to be the significant residential growth around the Site in recent years.

1.2.2 Effluent Sampling

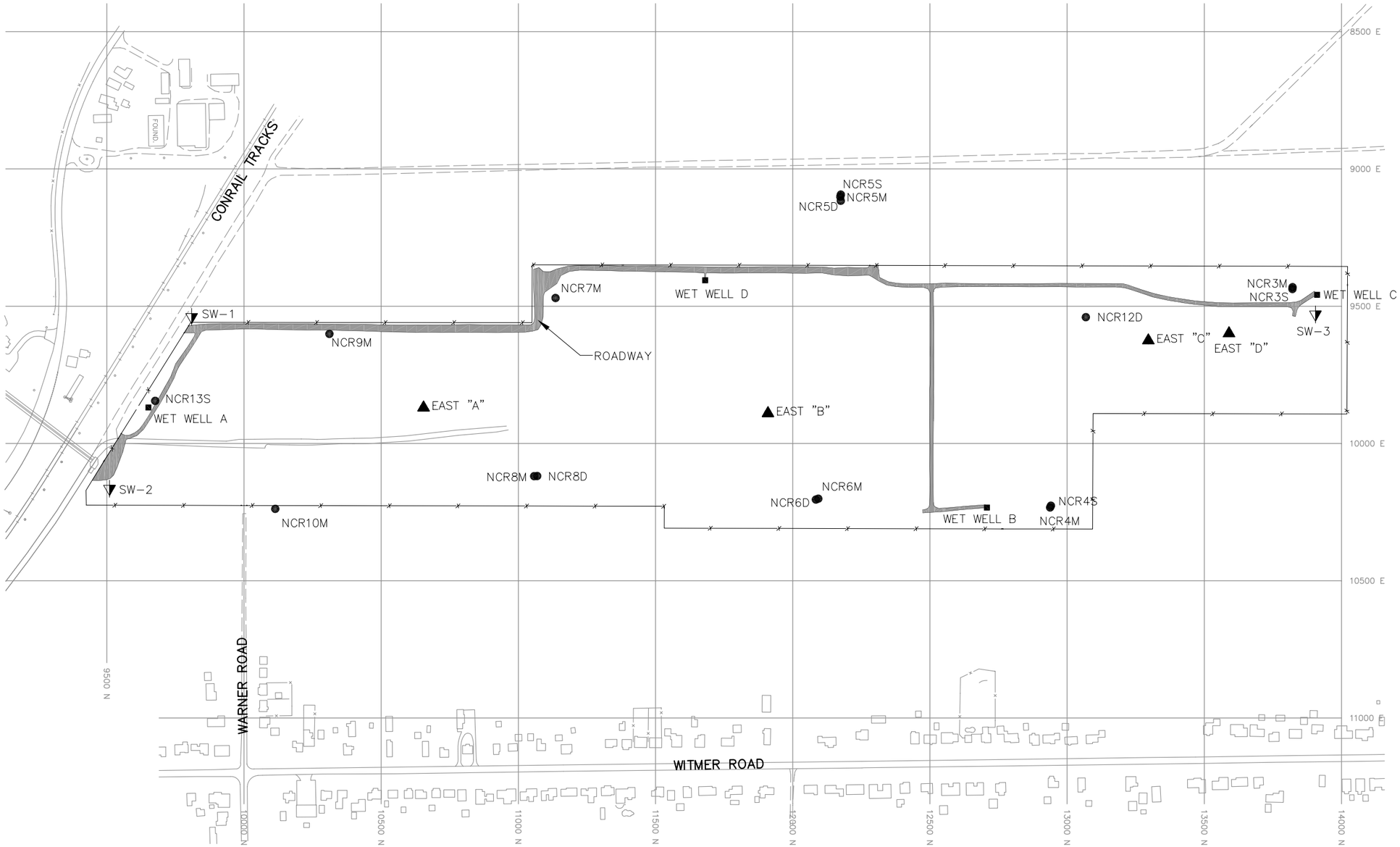
Groundwater from the perimeter collection system is discharged to the City of North Tonawanda treatment system without pre-treatment. A monitoring station in Wet Well A allows both the effluent water quality and the volume of effluent to be verified by the City of North Tonawanda. In compliance with 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 2010. 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 2010. 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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SECTION 2
RESULTS

2.1 ANALYTICAL RESULTS

2.1.1 Effluent Samples

Effluent samples were collected in March and September 2010 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 2010 and the new 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 111 to 122, 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 metals only.

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). A sheet of well purging information, including pH, conductivity, turbidity, odor, comments, and well volumes, is also provided in Appendix C.

December 2010 Event

Monitoring wells NCR-3S, NCR-4S, and NCR-13S were sampled on December 16, 2010. The locations of the monitoring wells are provided in Figure 1.1. The data validation report is presented in Appendix D.

Seventeen metals were identified in one or more of the groundwater samples. Five 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, lead and zinc, have detections that are greater than historic high at the site.

- Aluminum exceeded the NYSDEC AWQS in each of the three samples. Historically these wells have been above the NYSDEC AWQS standard.

- Copper was identified in each of the three samples above the NYSDEC AWQS. Typically, copper exceeds 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.

- Lead was found above the analytical detection limits but below the water quality standards for lead, in two of the three samples. The concentration of lead in NCR-3S was 3.7 ug/L. Lead had not been identified above detection limits previously at this location.

- Magnesium was identified in each of the three 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 three samples. The Record of Decision (ROD) (USEPA, 1993) identifies sodium as typically exceeding MCLs in the regional groundwater.

- Zinc was detected below the standards used for comparison in each of the three samples. The detected level in NCR-13S (47.3 ug/L) was higher than had been identified in previous sampling events.

Plots of historic metals concentrations over time are presented in Figure 2.1A through Figure 2.1J.

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

2.2 SITE INSPECTIONS

Monthly Site inspections were conducted between January and December 2010. 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 January and February site inspections and the cover vegetation was noted to be low, typical for the early part of the year, during the January, March, April, and May site inspections. Tall vegetation was noted on the cap during the June, July, and August site inspections. The landfill cap was mowed in September and the cover vegetation remained short for the remainder of 2010.

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 February, March, and June and slightly low in May, June, July, August, September, and November. Typical winter vegetative conditions were observed from January through March, and again in October through December, and conditions were noted as good during the May through September 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:

- Cutting trees and brush inside perimeter fence that could damage fence.
- Cutting tall grass, brush, and weeds along the inside of the perimeter fence line and pathways to monitoring and observation wells.
- Mowing the landfill cap.
- Cutting brush near fence line, control shed, and front gate.
- Repairs to a hole in the perimeter fence.

Occasional unscheduled maintenance at the landfill is required. During this reporting period, only one item requiring unscheduled maintenance was addressed.

- On July 16, a leaking hose was replaced at wet well A 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 2010, water levels were collected from the monitoring wells on a monthly basis. Water levels generally varied between 0.4 and 3.8 feet over the course of the year.

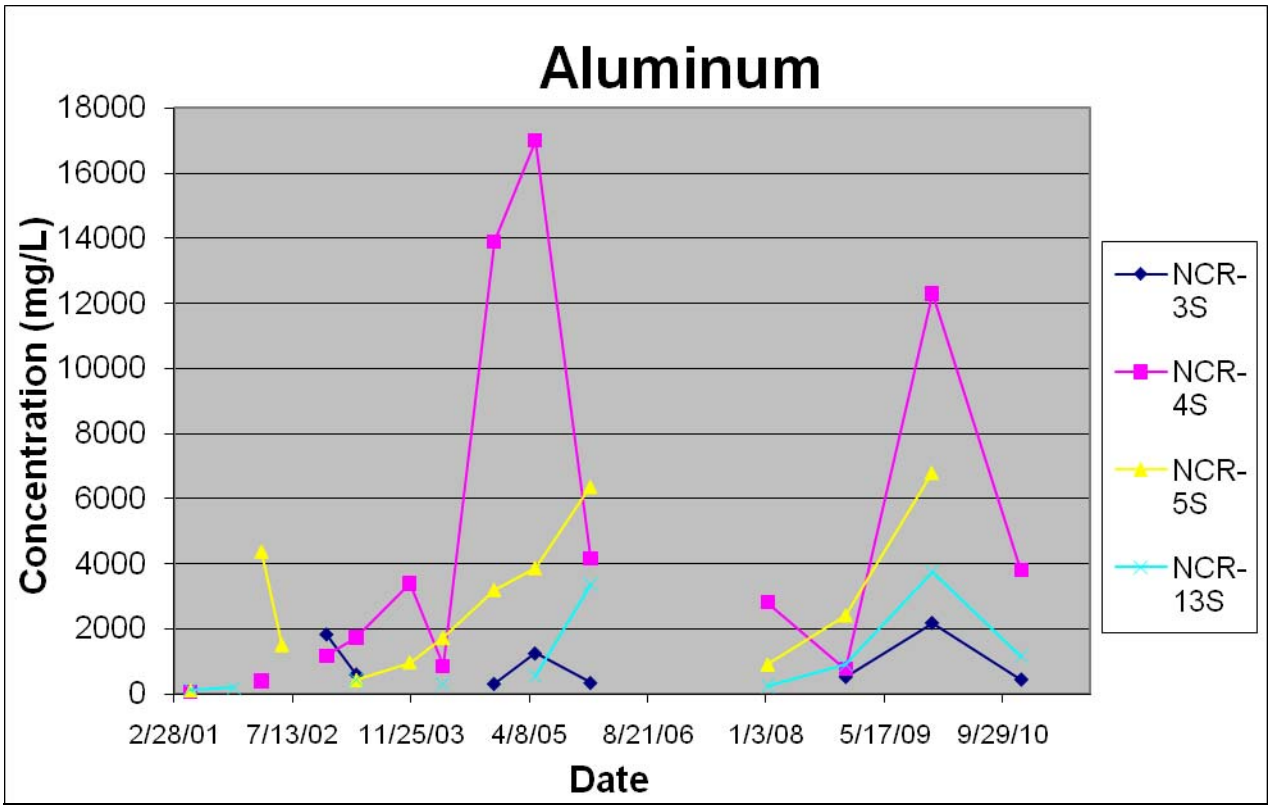

Figure 2.1A: Plot of Historical Aluminum Concentration

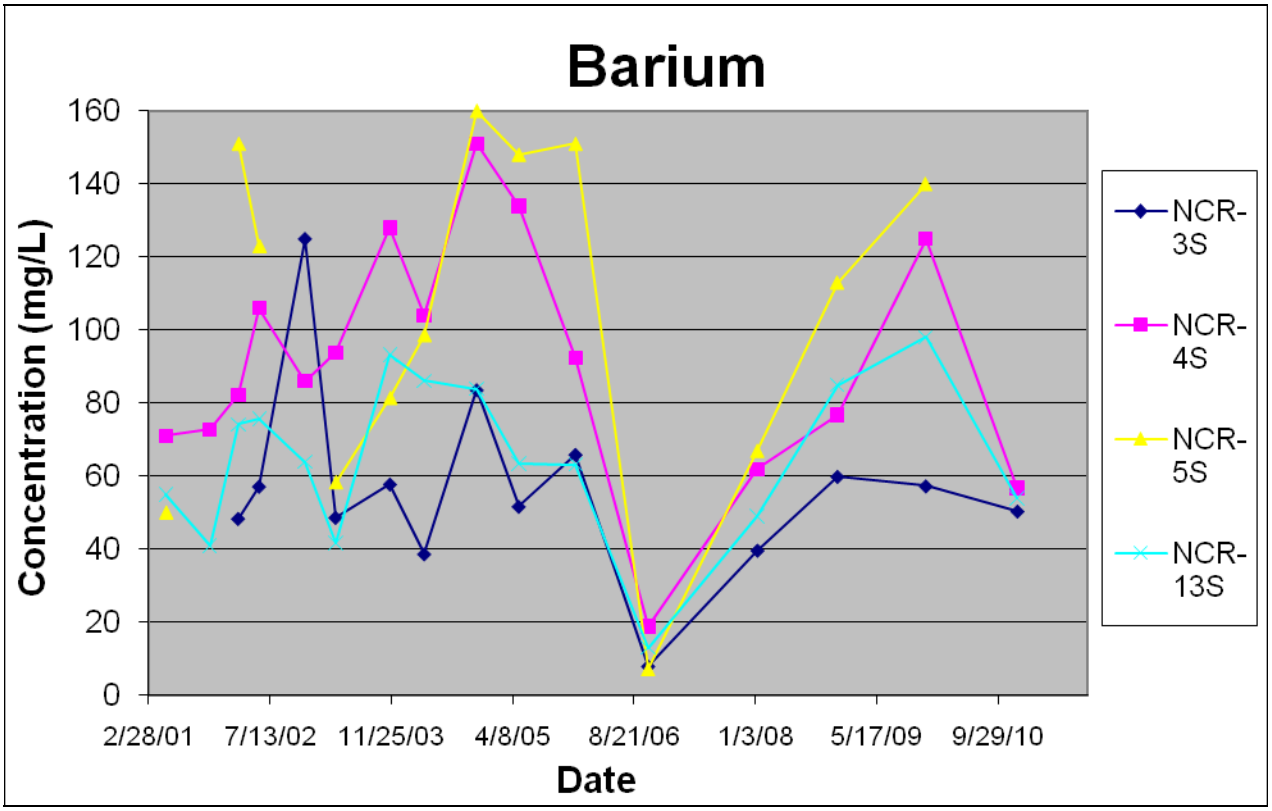

Figure 2.1B: Plot of Historical Barium Concentration

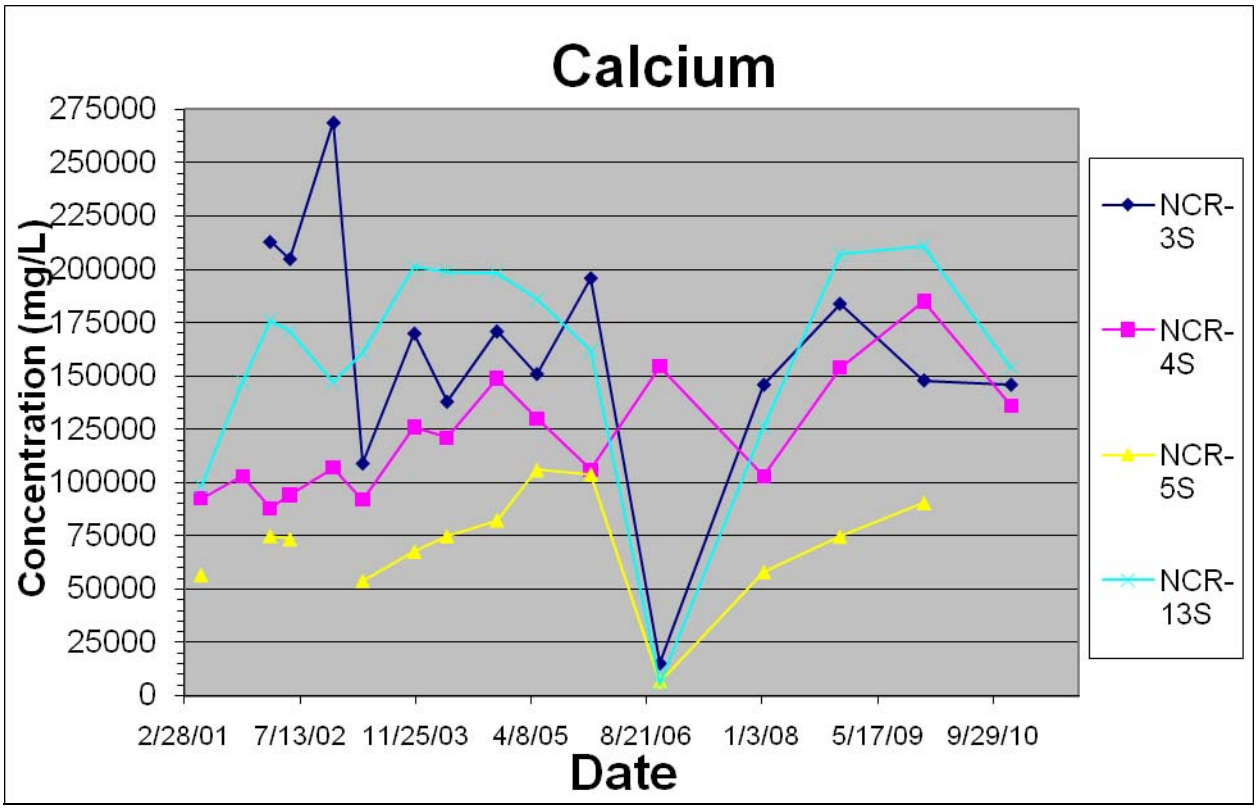

Figure 2.1C: Plot of Historical Calcium Concentration

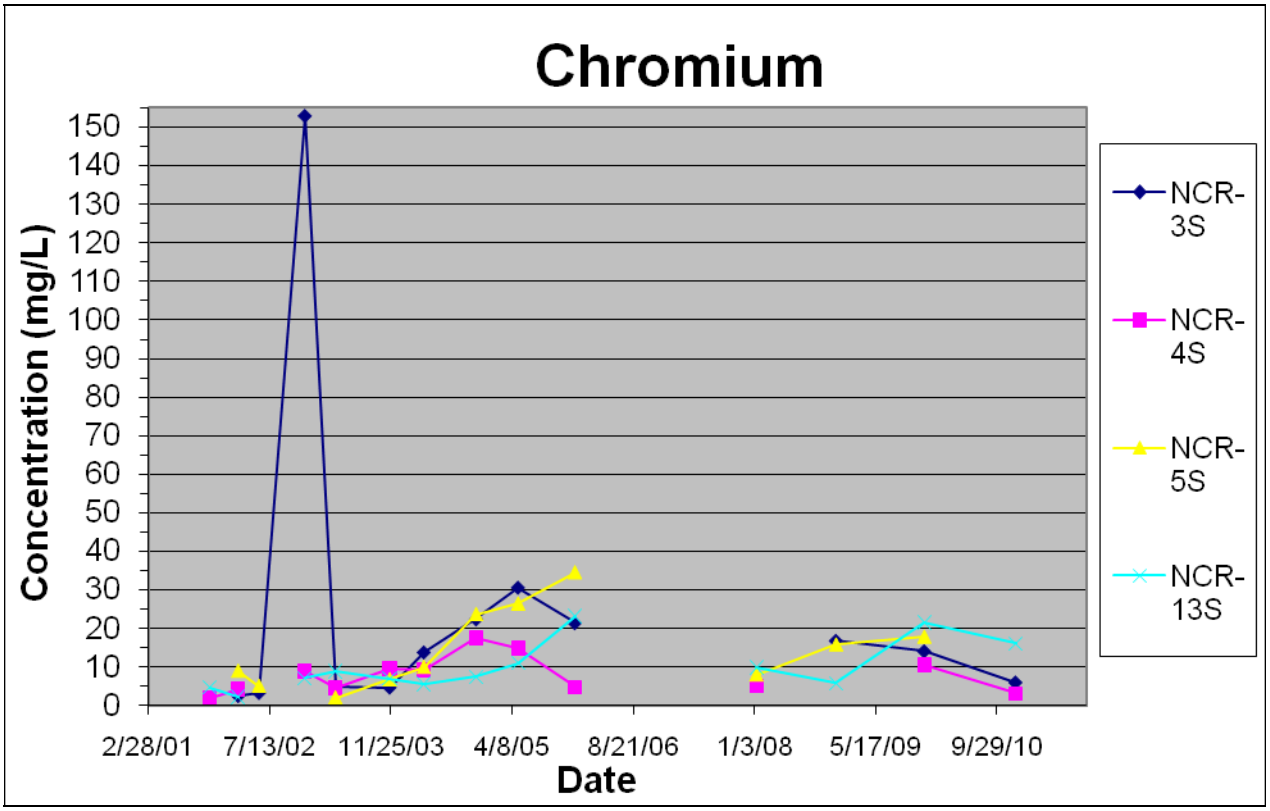

Figure 2.1D: Plot of Historical Chromium Concentration

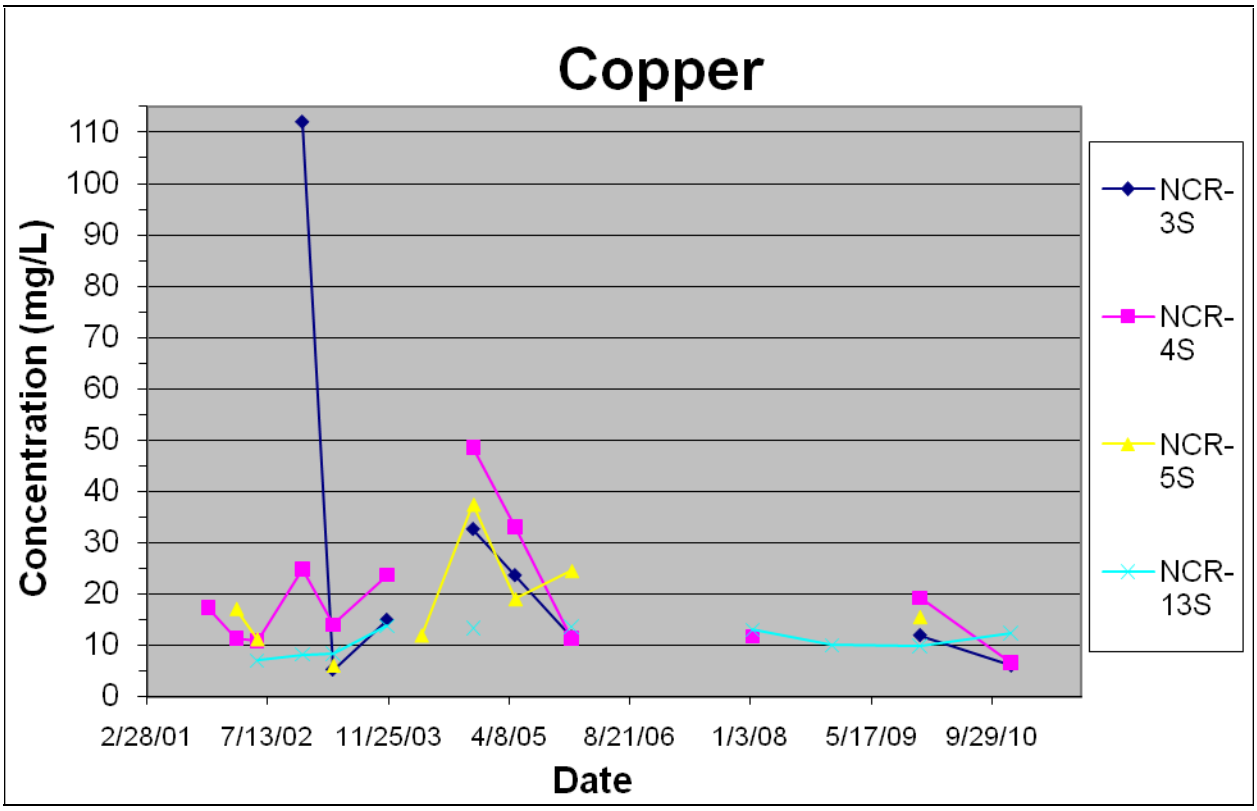

Figure 2.1E: Plot of Historical Copper Concentration

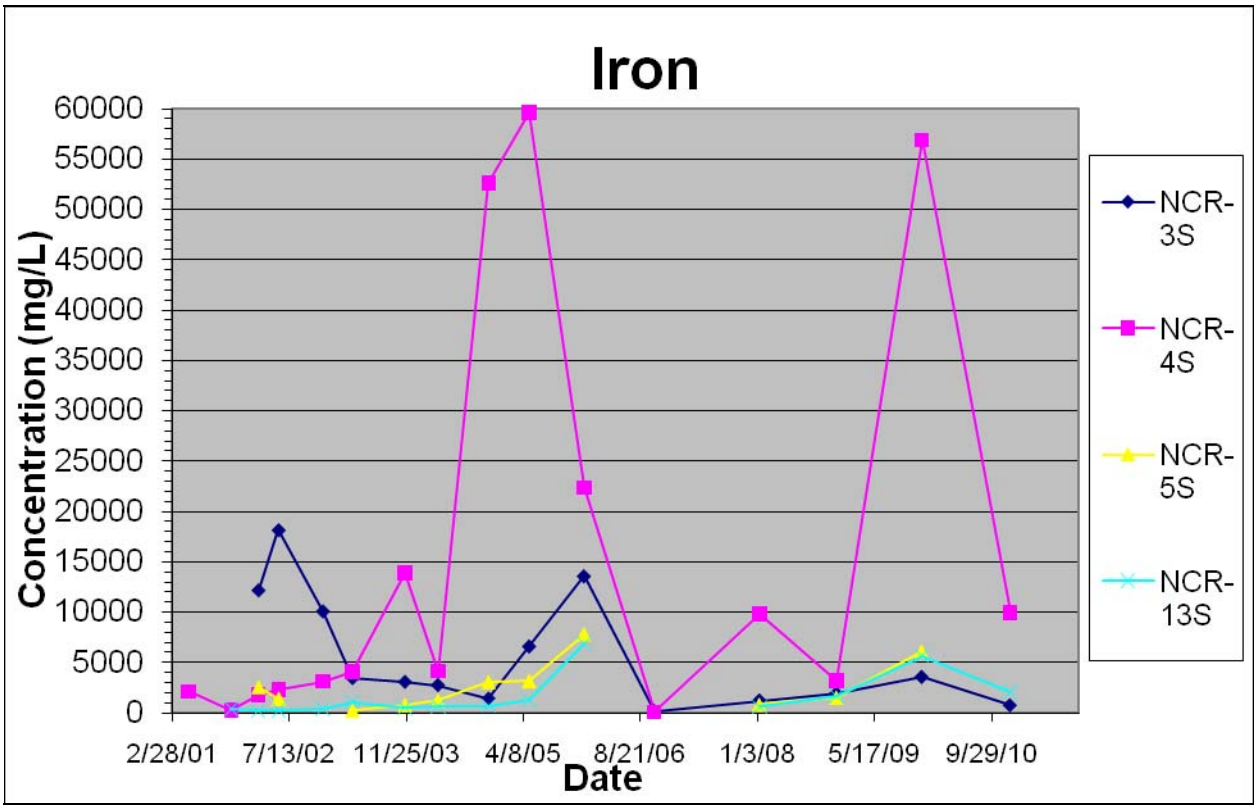

Figure 2.1F: Plot of Historical Iron Concentration

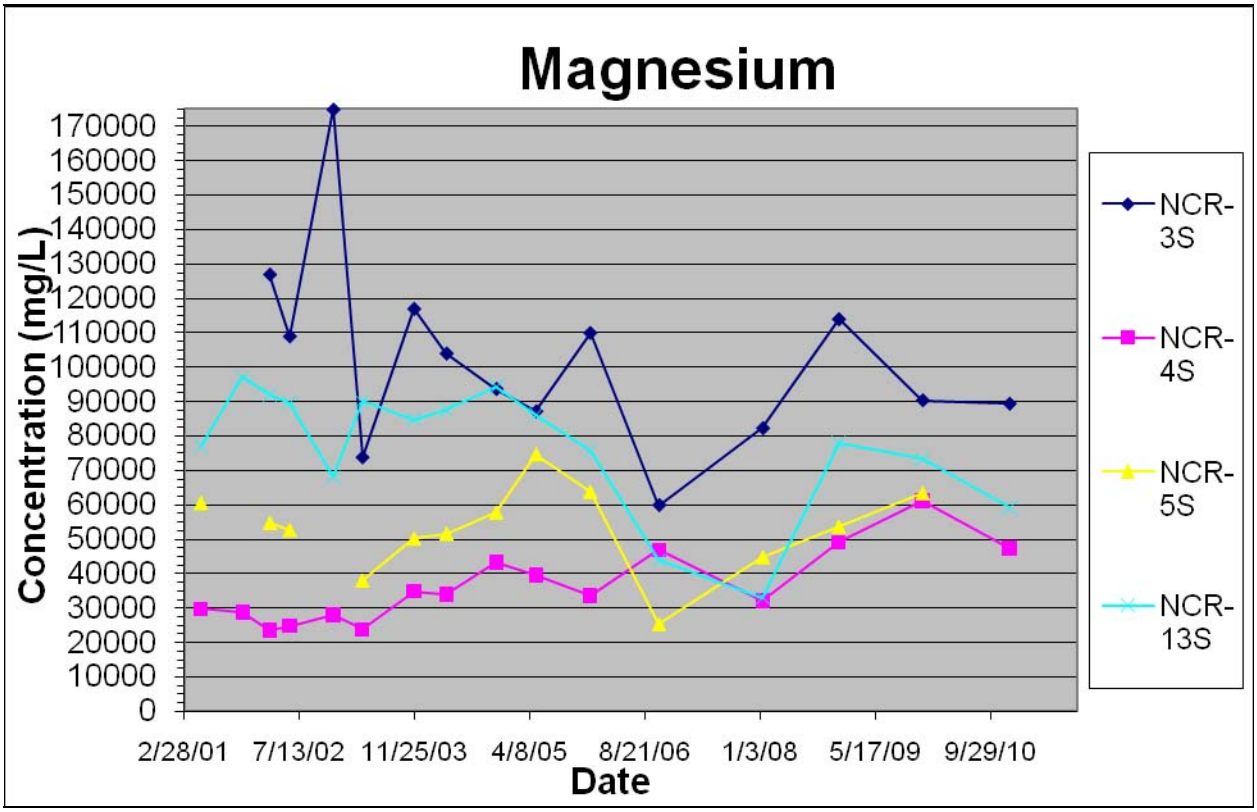

Figure 2.1G: Plot of Historical Magnesium Concentration

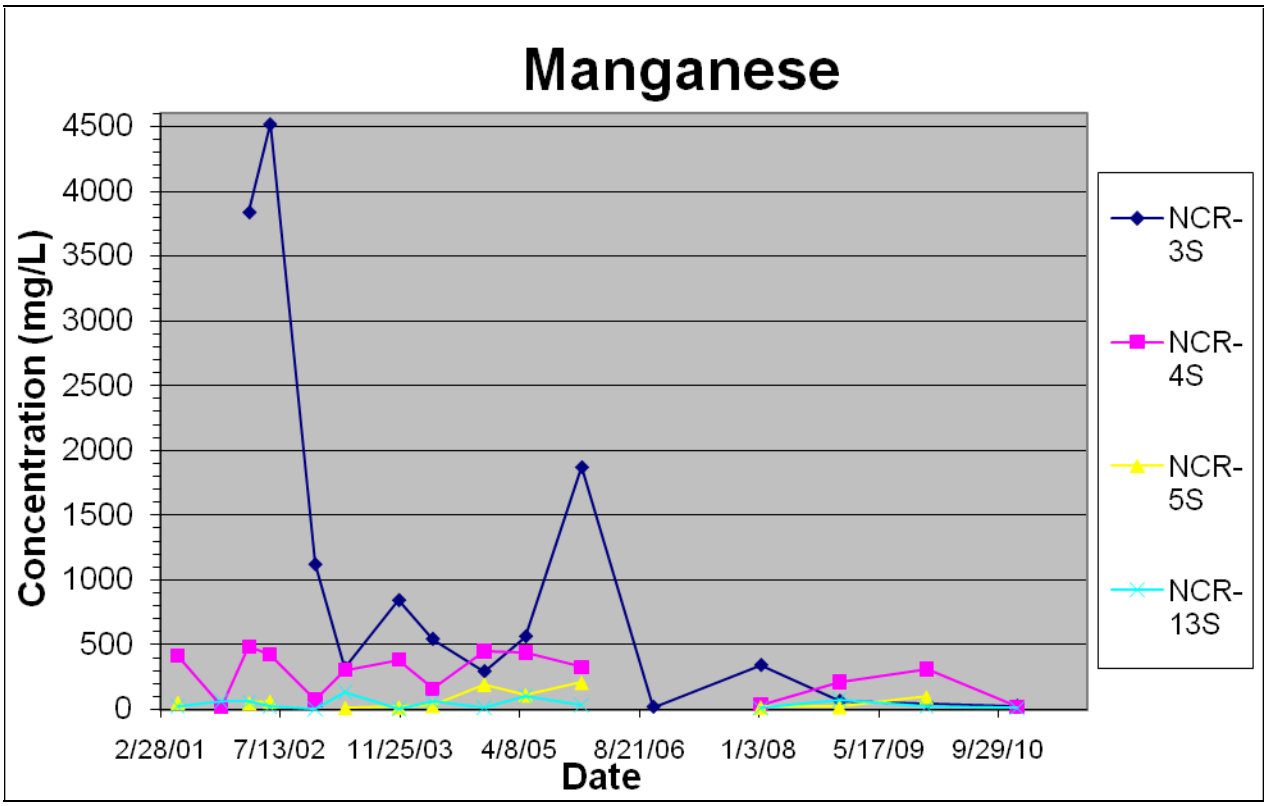

Figure 2.1H: Plot of Historical Manganese Concentration

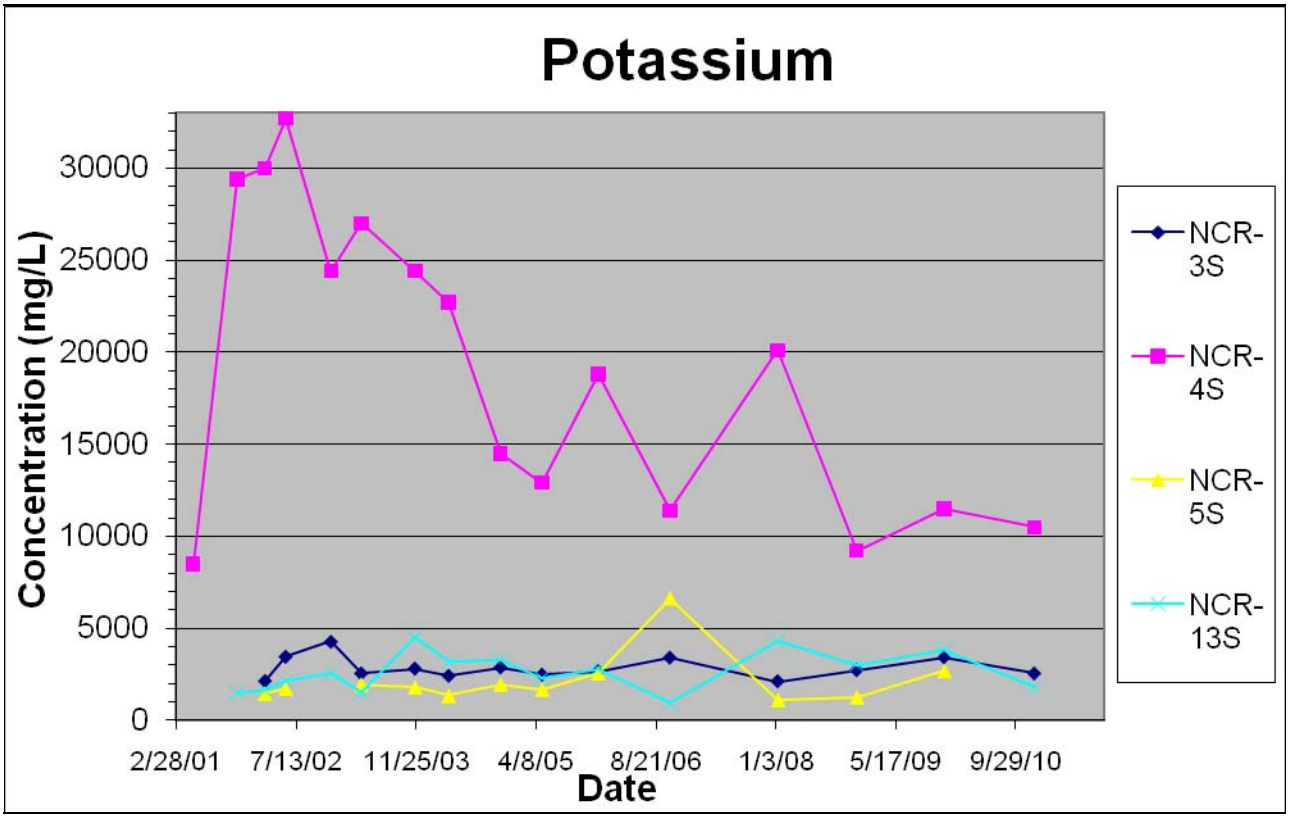

Figure 2.1I: Plot of Historical Potassium Concentration

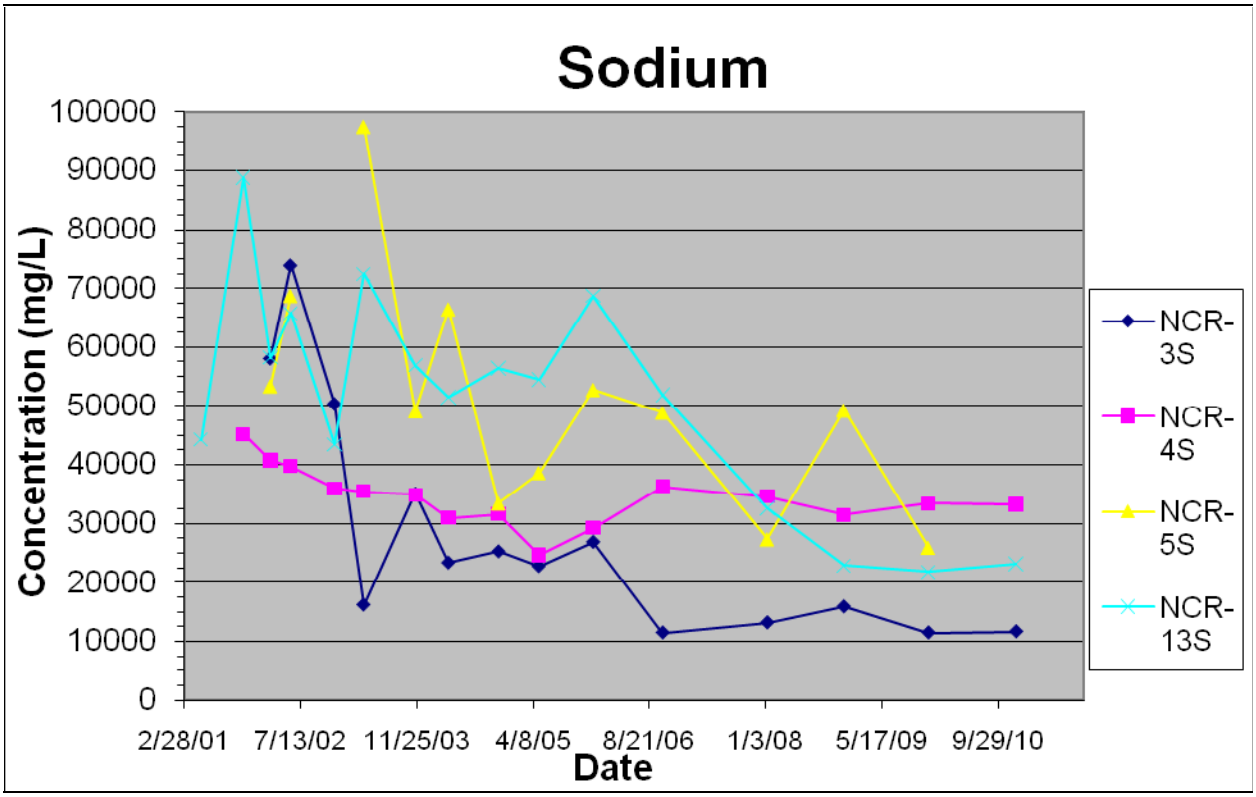

Figure 2.1J: Plot of Historical Potassium Concentration

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

City of North Tonawanda 216 Payne Ave North Tonawanda, NY C/O Niagara County Refuse Site Validated Groundwater Sampling December 2010		Sample ID: Lab ID: Source: SDG: Matrix: Sampled: Validated:	NYS DEC AWQS*	NYS DOH MCL	US EPA MCL	NCR-3S RTL1063-04 TAL-Buffalo RTL1063 WATER 12/16/2010 1/13/2011	NCR-4S RTL1063-05 TAL-Buffalo RTL1063 WATER 12/16/2010 1/13/2011	NCR-5S TAL-Buffalo WATER	NCR-13S RTL1063-01 TAL-Buffalo RTL1063 WATER 12/16/2010 1/13/2011
CAS NO.	COMPOUND	UNITS:							
	METALS								
7429-90-5	Aluminum	ug/L	100	-	-	465	3810	NS	1170
7440-39-3	Barium	ug/L	1000	2000	2000	50.4	56.7	NS	53.9
7440-43-9	Cadmium	ug/L	5	5	5	0.5 J	0.9 J	NS	1.1
7440-70-2	Calcium	ug/L	-	-	-	146000	136000	NS	154000
7440-47-3	Chromium	ug/L	50	100	100	6	3.2 J	NS	16.1
7440-48-4	Cobalt	ug/L	-	-	-	4 U	0.6 J	NS	4 U
7440-50-8	Copper	ug/L	5	-	-	6 J	6.6 J	NS	12.4
7439-89-6	Iron	ug/L	300[>]	300[>]	-	**723**	**9960**	NS	**2030**
7439-92-1	Lead	ug/L	25	25	15	3.7 J	6.7	NS	5 U
7439-95-4	Magnesium	ug/L	35000[+]	-	-	89400	47400	NS	59200
7439-96-5	Manganese	ug/L	300[>]	300[>]	-	25.9	22.9	NS	13.1
7440-02-0	Nickel	ug/L	100	-	-	6.8 J	4.4 J	NS	8.2 J
7440-09-7	Potassium	ug/L	-	-	-	2540	10500	NS	1770
7782-49-2	Selenium	ug/L	10	50	50	15 U	9.4 J	NS	15 U
7440-23-5	Sodium	ug/L	20000	20000	20000	11700 J	**33300 J**	NS	**23200 J**
7440-62-2	Vanadium	ug/L	14	-	-	2.5 J	2.1 J	NS	3.7 J
7440-66-6	Zinc	ug/L	2000[+]	5000	-	20.6	268	NS	47.3

* = NYSDEC Ambient Water Quality Standards.

+=Guidance value. ND = Not detected.

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

J = Estimated value. - = No standard identified. NS = Well not sampled due to a lack of water.

Boxed values exceed NYSDEC AWQS.

Bold values exceed NYSDOH maximum contaminant levels (MCL).

Shaded values exceed USEPA maximum contaminant levels.

Note: A sample was scheduled to be collected from NCR-5S however no water was present in the well on the sampling date.

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		Continued growth of target vegetation. A slightly higher than normal water level was noted during the February, March, and July inspections. A slightly lower water level was noted during the May, July, August, September, and November inspections. Normal winter conditions, expected for the time of year, were observed during the January through March and October through December inspections.
Perimeter Fence	X		Repaired small hole cut in the perimeter fence.
Condition of Roads	X		No erosion or other problems. Covered in snow during the January and February inspections.
Integrity of the Cap	X		No problems were noted in 2010. Covered in snow in January and 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 January and February inspections. Height of vegetation on the cap was noted as low during the January, March, April, and May inspections and noted as tall during the June, July, and August inspections. The cap was mowed prior to the September 2010 inspection.

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

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

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

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

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

Notes:

- = measurment not collected.

dry = no water in well.

Table 2.3
Niagara County Refuse Site
Water Level Measurements

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

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

Notes:

- = measurment not collected.

dry = no water in well.

SECTION 3
SUMMARY AND CONCLUSIONS

The following summary and conclusions were developed based on the data collected during this reporting period (January through December 2010):

- Metals groundwater samples were collected in 2010. The analytical results were consistent with historical results. The annual groundwater samples scheduled for collection in November 2011 will be analyzed for volatile organics, semi-volatile organics, and metals.

- Seventeen metals were identified in one or more of the groundwater samples. Five of the detected metals exceeded either the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs, which is consistent with previous sampling events. In general, detected values appeared to be consistent with ranges observed in previous sampling events.

- Two effluent samples were collected in 2010. All analytical results were found to be compliant with the discharge permit. During 2010, 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 2010, 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 2010. Water levels generally varied between 0.4 and 3.8 feet over the course of the year.

- The objectives of the groundwater monitoring program (to monitor the effectiveness of the perimeter collection system and the perimeter barrier system) have been met. The groundwater monitoring program provides data for demonstration of the effectiveness of the hydraulic containment, collection, and extraction of Site-related groundwater.

SECTION 4
REFERENCES

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

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

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

Parsons, 2010, 2009 Annual Monitoring Report, Niagara County Refuse District Site; Parsons, February 2010.

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

Paul J. Drof
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: March 4 & 5, 2010

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

SPL #	SAMPLE NAME	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	#OF BTLS
01	30510 RCB EFF	3/4/10	0730	Wet Well A	volitiles	2
02	30510 RCB EFF	3/4/10	1530	Wet Well A	volitiles	2
03	30510 RCB EFF	3/5/10	0730	Wet Well A	volitiles	2
04	30510 RCB EFF	3/4/10 - 3/5/10	0730 - 0730	Wet Well A	wet chemistry	1

FLOWS:

FINAL METER READING 49187880

INITIAL METER READING 49179758

MONTHLY FLOW 10,122

RELINQUISHED BY: Richard C Becker

RECEIVED BY William M. Davignon

DATE 3/5/10

TIME 7:58 am

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

Gary Franklin
Acting 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 9 & 10, 2010

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

SPL #	SAMPLE NAME	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	#OF BTLS
01	91010 RCB EFF	9/9/10	0730	Wet Well A	volatiles	2
02	91010 RCB EFF	9/9/10	1700	" " "	"	2
03	91010 RCB EFF	9/10/10	0730	" " "	"	2
04	91010 RCB EFF	9/09/10 9/10/10	0730 - 0730	" " "	wet chemistry	1

FLOWS:

FINAL METER READING 5121067 1

INITIAL METER READING 5120951 0

MONTHLY FLOW 1161

RELINQUISHED BY: Richard C Beck

RECEIVED BY [signature]

DATE 9/10/10

TIME 7:30 Am

Analytical Results: NIAGARA COUNTY REFUSE SITE 2010

PARAMETER	RESULT mg/l	RESULT mg/l	COMP.
pH (COMP.)	7.61	7.38	YES
COD	64	235	YES
SUSPENDED SOLIDS	5	34	YES
BOD	11	*****	YES
PO4	0.04	0.24	YES
PHENOLS	< 0.012	< 0.010	YES
METALS			
ALUMINUM	0.033	0.178	YES
CHROMIUM	< 0.025	< 0.026	YES
LEAD	< 0.028	< 0.028	YES
NICKEL	< 0.024	< 0.026	YES
ZINC	0.036	0.135	YES
IRON	0.570	5.368	YES
MAGNESIUM	152	209	YES
MANGANESE	0.108	0.549	YES
SODIUM	149	745	YES
PURGEABLES			
Benzene	< 0.005	< 0.005	YES
Toluene	< 0.004	< 0.005	YES
Chlorobenzene	< 0.005	< 0.005	YES
Ethylbenzene	< 0.005	< 0.005	YES
Total Xylenes	< 0.014		YES
1,3 - Dichlorobenzene	< 0.005	< 0.005	YES
1,4-Dichlorobenzene	< 0.005	< 0.005	YES
1,2 - Dichlorobenzene	< 0.005	< 0.005	YES
Vinyl Chloride	< 0.005	< 0.002	YES
1,1-Dichloroethene	< 0.005	< 0.004	YES
Methylene chloride	< 0.005	< 0.005	YES
trans-1,2 Dichloroethene	< 0.005	< 0.005	YES
1,1-Dichloroethane	< 0.005	< 0.004	YES
Chloroform	< 0.005	< 0.005	YES
1,1,1-Trichloroethane	< 0.005	< 0.004	YES
Trichloroethene	< 0.005	< 0.005	YES
TOTAL FLOW (gallons)	10,122	1161	
SAMPLE DATE	3/4/10 & 3/5/10	9/9/10 & 9/10/10	
***** No BOD reported. DO depletion was too high.		Final result was "0".	

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

Work Order: RTL1063

Project Description
NIAGARA COUNTY REFUSE SITE

For:

William Davignon

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Melissa Deyo

Melissa Deyo For Sally Hoffman

Project Manager

melissa.deyo@testamericainc.com

Monday, January 3, 2011

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

TestAmerica Buffalo
Current Certifications

As of 08/16/2010

STATE	Program	Cert # / Lab ID
Arkansas	CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA,NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP,SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA	10026
North Dakota	CWA, RCRA	R-176
Oklahoma	CWA, RCRA	9421
Oregon*	CWA,RCRA	NY200003
Pennsylvania*	NELAP CWA,RCRA	68-00281
Tennessee	SDWA	02970
Texas*	NELAP CWA, RCRA	T104704412-08-TX
USDA	FOREIGN SOIL PERMIT	S-41579
Virginia	SDWA	278
Washington*	NELAP CWA,RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA,RCRA	252

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

CASE NARRATIVE

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. field-pH), they were not analyzed immediately, but as soon as possible after laboratory receipt.

There are pertinent documents appended to this report, 2 pages, are included and are an integral part of this report.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

DATA QUALIFIERS AND DEFINITIONS

J	Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
M1	The MS and/or MSD were outside the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS and /or MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
NR	Any inclusion of NR indicates that the project specific requirements do not require reporting estimated values below the laboratory reporting limit.

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTL1063-01 (NCR 13S - Water)						**Sampled: 12/16/10 13:15**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**1.17**		0.200	0.045	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Barium	**0.0539**		0.0020	0.0005	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Cadmium	**0.0011**		0.0010	0.0003	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Calcium	**154**		0.5	0.1	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Chromium	**0.0161**		0.0040	0.0009	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Copper	**0.0124**		0.0100	0.0015	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Iron	**2.03**		0.050	0.019	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Magnesium	**59.2**		0.200	NR	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Manganese	**0.0131**		0.0030	NR	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Nickel	**0.0082**	J	0.0100	0.0013	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Potassium	**1.77**		0.500	0.200	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Sodium	**23.2**		1.0	NR	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Vanadium	**0.0037**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Zinc	**0.0473**		0.0100	0.0017	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Sample ID: RTL1063-04 (NCR 3S - Water)						**Sampled: 12/16/10 13:50**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**0.465**		0.200	0.045	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Barium	**0.0504**		0.0020	0.0005	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Cadmium	**0.0005**	J	0.0010	0.0003	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Calcium	**146**		0.5	0.1	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Chromium	**0.0060**		0.0040	0.0009	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Copper	**0.0060**	J	0.0100	0.0015	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Iron	**0.723**		0.050	0.019	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Lead	**0.0037**	J	0.0050	0.0030	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Magnesium	**89.4**		0.200	NR	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Manganese	**0.0259**		0.0030	NR	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Nickel	**0.0068**	J	0.0100	0.0013	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Potassium	**2.54**		0.500	0.200	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Sodium	**11.7**		1.0	NR	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Vanadium	**0.0025**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Zinc	**0.0206**		0.0100	0.0017	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Sample ID: RTL1063-05 (NCR 4S - Water)						**Sampled: 12/16/10 14:35**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**3.81**		0.200	0.045	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Barium	**0.0567**		0.0020	0.0005	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Cadmium	**0.0009**	J	0.0010	0.0003	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Calcium	**136**		0.5	0.1	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Chromium	**0.0032**	J	0.0040	0.0009	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Cobalt	**0.0006**	J	0.0040	0.0006	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Copper	**0.0066**	J	0.0100	0.0015	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Iron	**9.96**		0.050	0.019	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Lead	**0.0067**		0.0050	0.0030	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Magnesium	**47.4**		0.200	NR	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Manganese	**0.0229**		0.0030	NR	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTL1063-05 (NCR 4S - Water) - cont.						**Sampled: 12/16/10 14:35**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods - cont.										
Nickel	**0.0044**	J	0.0100	0.0013	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Potassium	**10.5**		0.500	0.200	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Selenium	**0.0094**	J	0.0150	0.0087	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Sodium	**33.3**		1.0	NR	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Vanadium	**0.0021**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Zinc	**0.268**		0.0100	0.0017	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Sample ID: RTL1063-06 (Field Dup 1 - Water)						**Sampled: 12/16/10**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**0.763**		0.200	0.045	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Barium	**0.0519**		0.0020	0.0005	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Cadmium	**0.0006**	J	0.0010	0.0003	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Calcium	**147**		0.5	0.1	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Chromium	**0.0088**		0.0040	0.0009	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Copper	**0.0071**	J	0.0100	0.0015	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Iron	**1.26**		0.050	0.019	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Lead	**0.0033**	J	0.0050	0.0030	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Magnesium	**90.4**		0.200	NR	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Manganese	**0.0297**		0.0030	NR	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Nickel	**0.0115**		0.0100	0.0013	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Potassium	**2.67**		0.500	0.200	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Sodium	**11.9**		1.0	NR	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Vanadium	**0.0026**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Zinc	**0.0382**		0.0100	0.0017	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B

North Tonawanda, City of
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North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Sample Summary

Sample Identification	Lab Number	Client Matrix	Date/Time Sampled	Date/Time Received	Sample Qualifiers
NCR 13S	RTL1063-01	Water	12/16/10 13:15	12/16/10 14:55	
NCR 3S	RTL1063-04	Water	12/16/10 13:50	12/16/10 14:55	
NCR 4S	RTL1063-05	Water	12/16/10 14:35	12/16/10 14:55	
Field Dup 1	RTL1063-06	Water	12/16/10	12/16/10 14:55	

North Tonawanda, City of
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Work Order: RTL1063

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Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTL1063-01 (NCR 13S - Water)						**Sampled: 12/16/10 13:15**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**1.17**		0.200	0.045	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Antimony	ND		0.0200	0.0068	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Barium	**0.0539**		0.0020	0.0005	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Beryllium	ND		0.0020	0.0003	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Cadmium	**0.0011**		0.0010	0.0003	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Calcium	**154**		0.5	0.1	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Chromium	**0.0161**		0.0040	0.0009	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Cobalt	ND		0.0040	0.0006	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Copper	**0.0124**		0.0100	0.0015	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Iron	**2.03**		0.050	0.019	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Lead	ND		0.0050	0.0030	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Magnesium	**59.2**		0.200	NR	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Manganese	**0.0131**		0.0030	NR	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Nickel	**0.0082**	J	0.0100	0.0013	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Potassium	**1.77**		0.500	0.200	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Selenium	ND		0.0150	0.0087	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Silver	ND		0.0030	0.0017	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Sodium	**23.2**		1.0	NR	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Thallium	ND		0.0200	0.0102	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Vanadium	**0.0037**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Zinc	**0.0473**		0.0100	0.0017	mg/L	1.00	12/17/10 15:07	LMH	10L1445	6010B
Mercury	ND		0.0002	0.0001	mg/L	1.00	12/20/10 13:11	JRK	10L1616	7470A

North Tonawanda, City of
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Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTL1063-04 (NCR 3S - Water)						**Sampled: 12/16/10 13:50**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**0.465**		0.200	0.045	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Antimony	ND		0.0200	0.0068	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Barium	**0.0504**		0.0020	0.0005	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Beryllium	ND		0.0020	0.0003	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Cadmium	**0.0005**	J	0.0010	0.0003	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Calcium	**146**		0.5	0.1	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Chromium	**0.0060**		0.0040	0.0009	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Cobalt	ND		0.0040	0.0006	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Copper	**0.0060**	J	0.0100	0.0015	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Iron	**0.723**		0.050	0.019	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Lead	**0.0037**	J	0.0050	0.0030	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Magnesium	**89.4**		0.200	NR	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Manganese	**0.0259**		0.0030	NR	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Nickel	**0.0068**	J	0.0100	0.0013	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Potassium	**2.54**		0.500	0.200	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Selenium	ND		0.0150	0.0087	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Silver	ND		0.0030	0.0017	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Sodium	**11.7**		1.0	NR	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Thallium	ND		0.0200	0.0102	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Vanadium	**0.0025**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Zinc	**0.0206**		0.0100	0.0017	mg/L	1.00	12/17/10 15:21	LMH	10L1445	6010B
Mercury	ND		0.0002	0.0001	mg/L	1.00	12/20/10 13:17	JRK	10L1616	7470A

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTL1063-05 (NCR 4S - Water)						**Sampled: 12/16/10 14:35**		**Recvd: 12/16/10 14:55**		
Total Metals by SW 846 Series Methods										
Aluminum	**3.81**		0.200	0.045	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Antimony	ND		0.0200	0.0068	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Barium	**0.0567**		0.0020	0.0005	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Beryllium	ND		0.0020	0.0003	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Cadmium	**0.0009**	J	0.0010	0.0003	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Calcium	**136**		0.5	0.1	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Chromium	**0.0032**	J	0.0040	0.0009	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Cobalt	**0.0006**	J	0.0040	0.0006	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Copper	**0.0066**	J	0.0100	0.0015	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Iron	**9.96**		0.050	0.019	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Lead	**0.0067**		0.0050	0.0030	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Magnesium	**47.4**		0.200	NR	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Manganese	**0.0229**		0.0030	NR	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Nickel	**0.0044**	J	0.0100	0.0013	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Potassium	**10.5**		0.500	0.200	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Selenium	**0.0094**	J	0.0150	0.0087	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Silver	ND		0.0030	0.0017	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Sodium	**33.3**		1.0	NR	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Thallium	ND		0.0200	0.0102	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Vanadium	**0.0021**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Zinc	**0.268**		0.0100	0.0017	mg/L	1.00	12/17/10 15:23	LMH	10L1445	6010B
Mercury	ND		0.0002	0.0001	mg/L	1.00	12/20/10 13:19	JRK	10L1616	7470A

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTL1063-06 (Field Dup 1 - Water)						**Sampled: 12/16/10**			**Recvd: 12/16/10 14:55**	
Total Metals by SW 846 Series Methods										
Aluminum	**0.763**		0.200	0.045	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Antimony	ND		0.0200	0.0068	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Barium	**0.0519**		0.0020	0.0005	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Beryllium	ND		0.0020	0.0003	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Cadmium	**0.0006**	J	0.0010	0.0003	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Calcium	**147**		0.5	0.1	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Chromium	**0.0088**		0.0040	0.0009	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Cobalt	ND		0.0040	0.0006	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Copper	**0.0071**	J	0.0100	0.0015	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Iron	**1.26**		0.050	0.019	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Lead	**0.0033**	J	0.0050	0.0030	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Magnesium	**90.4**		0.200	NR	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Manganese	**0.0297**		0.0030	NR	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Nickel	**0.0115**		0.0100	0.0013	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Potassium	**2.67**		0.500	0.200	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Selenium	ND		0.0150	0.0087	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Silver	ND		0.0030	0.0017	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Sodium	**11.9**		1.0	NR	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Thallium	ND		0.0200	0.0102	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Vanadium	**0.0026**	J	0.0050	0.0011	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Zinc	**0.0382**		0.0100	0.0017	mg/L	1.00	12/17/10 15:26	LMH	10L1445	6010B
Mercury	ND		0.0002	0.0001	mg/L	1.00	12/20/10 13:21	JRK	10L1616	7470A

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
Total Metals by SW 846 Series Methods									
6010B	10L1445	RTL1063-01	50.00	mL	50.00	mL	12/17/10 07:30	DAN	3005A
6010B	10L1445	RTL1063-04	50.00	mL	50.00	mL	12/17/10 07:30	DAN	3005A
6010B	10L1445	RTL1063-05	50.00	mL	50.00	mL	12/17/10 07:30	DAN	3005A
6010B	10L1445	RTL1063-06	50.00	mL	50.00	mL	12/17/10 07:30	DAN	3005A
7470A	10L1616	RTL1063-01	30.00	mL	50.00	mL	12/20/10 10:30	JRK	7470A
7470A	10L1616	RTL1063-04	30.00	mL	50.00	mL	12/20/10 10:30	JRK	7470A
7470A	10L1616	RTL1063-05	30.00	mL	50.00	mL	12/20/10 10:30	JRK	7470A
7470A	10L1616	RTL1063-06	30.00	mL	50.00	mL	12/20/10 10:30	JRK	7470A

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
Total Metals by SW 846 Series Methods											
Blank Analyzed: 12/17/10 (Lab Number:10L1445-BLK1, Batch: 10L1445)											
Aluminum			0.200	0.045	mg/L	ND					
Antimony			0.0200	0.0068	mg/L	ND					
Barium			0.0020	0.0005	mg/L	ND					
Beryllium			0.0020	0.0003	mg/L	ND					
Cadmium			0.0010	0.0003	mg/L	ND					
Calcium			0.5	0.1	mg/L	ND					
Chromium			0.0040	0.0009	mg/L	ND					
Cobalt			0.0040	0.0006	mg/L	ND					
Copper			0.0100	0.0015	mg/L	ND					
Iron			0.050	0.019	mg/L	ND					
Lead			0.0050	0.0030	mg/L	ND					
Magnesium			0.200	NR	mg/L	ND					
Manganese			0.0030	NR	mg/L	ND					
Nickel			0.0100	0.0013	mg/L	ND					
Potassium			0.500	0.200	mg/L	ND					
Selenium			0.0150	0.0087	mg/L	ND					
Silver			0.0030	0.0017	mg/L	ND					
Sodium			1.0	NR	mg/L	ND					
Thallium			0.0200	0.0102	mg/L	ND					
Vanadium			0.0050	0.0011	mg/L	ND					
Zinc			0.0100	0.0017	mg/L	ND					
LCS Analyzed: 12/17/10 (Lab Number:10L1445-BS1, Batch: 10L1445)											
Aluminum		10.0	0.200	0.045	mg/L	9.61	96	80-120			
Antimony		0.200	0.0200	0.0068	mg/L	0.198	99	80-120			
Barium		0.200	0.0020	0.0005	mg/L	0.205	103	80-120			
Beryllium		0.200	0.0020	0.0003	mg/L	0.200	100	80-120			
Cadmium		0.200	0.0010	0.0003	mg/L	0.202	101	80-120			
Calcium		10.0	0.5	0.1	mg/L	10.2	102	80-120			
Chromium		0.200	0.0040	0.0009	mg/L	0.203	101	80-120			
Cobalt		0.200	0.0040	0.0006	mg/L	0.198	99	80-120			
Copper		0.200	0.0100	0.0015	mg/L	0.210	105	80-120			
Iron		10.0	0.050	0.019	mg/L	9.70	97	80-120			
Lead		0.200	0.0050	0.0030	mg/L	0.199	99	80-120			
Magnesium		10.0	0.200	NR	mg/L	10.0	100	80-120			
Manganese		0.200	0.0030	NR	mg/L	0.206	103	80-120			
Nickel		0.200	0.0100	0.0013	mg/L	0.198	99	80-120			

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
Total Metals by SW 846 Series Methods											
LCS Analyzed: 12/17/10 (Lab Number:10L1445-BS1, Batch: 10L1445)											
Potassium		10.0	0.500	0.200	mg/L	10.1	101	80-120			
Selenium		0.200	0.0150	0.0087	mg/L	0.203	101	80-120			
Silver		0.0500	0.0030	0.0017	mg/L	0.0542	108	80-120			
Sodium		10.0	1.0	NR	mg/L	10.2	102	80-120			
Thallium		0.200	0.0200	0.0102	mg/L	0.198	99	80-120			
Vanadium		0.200	0.0050	0.0011	mg/L	0.200	100	80-120			
Zinc		0.200	0.0100	0.0017	mg/L	0.198	99	80-120			
Matrix Spike Analyzed: 12/17/10 (Lab Number:10L1445-MS1, Batch: 10L1445)											
QC Source Sample: RTL1063-01											
Aluminum	1.17	10.0	0.200	0.045	mg/L	10.7	95	75-125			
Antimony	ND	0.200	0.0200	0.0068	mg/L	0.206	103	75-125			
Barium	0.0539	0.200	0.0020	0.0005	mg/L	0.256	101	75-125			
Beryllium	ND	0.200	0.0020	0.0003	mg/L	0.206	103	75-125			
Cadmium	0.00108	0.200	0.0010	0.0003	mg/L	0.207	103	75-125			
Calcium	154	10.0	0.5	0.1	mg/L	164	103	75-125			
Chromium	0.0161	0.200	0.0040	0.0009	mg/L	0.213	98	75-125			
Cobalt	ND	0.200	0.0040	0.0006	mg/L	0.202	101	75-125			
Copper	0.0124	0.200	0.0100	0.0015	mg/L	0.214	101	75-125			
Iron	2.03	10.0	0.050	0.019	mg/L	10.7	87	75-125			
Lead	ND	0.200	0.0050	0.0030	mg/L	0.204	102	75-125			
Magnesium	59.2	10.0	0.200	NR	mg/L	71.5	123	75-125			
Manganese	0.0131	0.200	0.0030	NR	mg/L	0.204	95	75-125			
Nickel	0.00819	0.200	0.0100	0.0013	mg/L	0.204	98	75-125			
Potassium	1.77	10.0	0.500	0.200	mg/L	12.1	103	75-125			
Selenium	ND	0.200	0.0150	0.0087	mg/L	0.205	103	75-125			
Silver	ND	0.0500	0.0030	0.0017	mg/L	0.0557	111	75-125			
Sodium	23.2	10.0	1.0	NR	mg/L	35.7	126	75-125			M1
Thallium	ND	0.200	0.0200	0.0102	mg/L	0.203	102	75-125			
Vanadium	0.00371	0.200	0.0050	0.0011	mg/L	0.206	101	75-125			
Zinc	0.0473	0.200	0.0100	0.0017	mg/L	0.205	79	75-125			
Matrix Spike Dup Analyzed: 12/17/10 (Lab Number:10L1445-MSD1, Batch: 10L1445)											
QC Source Sample: RTL1063-01											
Aluminum	1.17	10.0	0.200	0.045	mg/L	10.6	94	75-125	0.9	20	
Antimony	ND	0.200	0.0200	0.0068	mg/L	0.208	104	75-125	1	20	
Barium	0.0539	0.200	0.0020	0.0005	mg/L	0.258	102	75-125	1	20	
Beryllium	ND	0.200	0.0020	0.0003	mg/L	0.207	104	75-125	0.4	20	

North Tonawanda, City of
City Hall Room 6, 216 Payne Ave
North Tonawanda, NY 14120

Work Order: RTL1063

Project: NIAGARA COUNTY REFUSE SITE
Project Number: NO TONAW004

Received: 12/16/10
Reported: 01/03/11 15:55

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
Total Metals by SW 846 Series Methods											
Matrix Spike Dup Analyzed: 12/17/10 (Lab Number:10L1445-MSD1, Batch: 10L1445)											
QC Source Sample: RTL1063-01											
Cadmium	0.00108	0.200	0.0010	0.0003	mg/L	0.209	104	75-125	0.9	20	
Calcium	154	10.0	0.5	0.1	mg/L	167	132	75-125	2	20	MHA
Chromium	0.0161	0.200	0.0040	0.0009	mg/L	0.216	100	75-125	2	20	
Cobalt	ND	0.200	0.0040	0.0006	mg/L	0.203	101	75-125	0.5	20	
Copper	0.0124	0.200	0.0100	0.0015	mg/L	0.219	103	75-125	2	20	
Iron	2.03	10.0	0.050	0.019	mg/L	10.9	89	75-125	2	20	
Lead	ND	0.200	0.0050	0.0030	mg/L	0.204	102	75-125	0.02	20	
Magnesium	59.2	10.0	0.200	NR	mg/L	67.3	81	75-125	6	20	
Manganese	0.0131	0.200	0.0030	NR	mg/L	0.207	97	75-125	2	20	
Nickel	0.00819	0.200	0.0100	0.0013	mg/L	0.206	99	75-125	0.8	20	
Potassium	1.77	10.0	0.500	0.200	mg/L	12.4	106	75-125	2	20	
Selenium	ND	0.200	0.0150	0.0087	mg/L	0.207	104	75-125	1	20	
Silver	ND	0.0500	0.0030	0.0017	mg/L	0.0548	110	75-125	2	20	
Sodium	23.2	10.0	1.0	NR	mg/L	33.3	102	75-125	7	20	
Thallium	ND	0.200	0.0200	0.0102	mg/L	0.204	102	75-125	0.5	20	
Vanadium	0.00371	0.200	0.0050	0.0011	mg/L	0.206	101	75-125	0.3	20	
Zinc	0.0473	0.200	0.0100	0.0017	mg/L	0.214	83	75-125	4	20	
Total Metals by SW 846 Series Methods											
Blank Analyzed: 12/20/10 (Lab Number:10L1616-BLK1, Batch: 10L1616)											
Mercury			0.0002	0.0001	mg/L	ND					
LCS Analyzed: 12/20/10 (Lab Number:10L1616-BS1, Batch: 10L1616)											
Mercury		0.00667	0.0002	0.0001	mg/L	0.00657	98	80-120			
Matrix Spike Analyzed: 12/20/10 (Lab Number:10L1616-MS2, Batch: 10L1616)											
QC Source Sample: RTL1063-01											
Mercury	ND	0.00667	0.0002	0.0001	mg/L	0.00645	97	75-125			
Matrix Spike Dup Analyzed: 12/20/10 (Lab Number:10L1616-MSD2, Batch: 10L1616)											
QC Source Sample: RTL1063-01											
Mercury	ND	0.00667	0.0002	0.0001	mg/L	0.00670	100	75-125	4	20	

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Richard C Backus	Lab PM: Sally Hoffman	Carrier Tracking No(s):	COC No: 12062010 1609_1
Client Contact: William Davignon	Phone: (716) 435-8500	E-Mail: Sally.Hoffman@testamericainc.com		Page: 1
Company: North Tonawanda, City of				Job #:
Address: City Hall Room 6, 216 Payne Ave	Due Date Requested:			
City: North Tonawanda	TAT Requested (Business Days): 10			
State, Zip: NY, 14120				
Phone: ---	PO #:			
Email: wmd_ntwwtp@live.com	WO #: RTL0685			
Project Name: NIAGARA COUNTY REFUSE SITE	Project #: NIAGARA COUNTY REFUSE SITE			
Site: City of North Tonawanda - NY1A8791	SSOW#:			

Parameter(s) Requested

Preservation Codes:
A=HCL Z=Z
B=NaOH
C=Zn Acetate
D=Nitric Acid
E=Ice
N=None
S=H2SO4
V=MCAA
Container Codes:
A=Amber T=Tedlar
G=Glass V=Vial
P=Poly/Plastic
S=Summa

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	T-Metals::T-Hg	Total Number of containers	Special Instructions/Note:
			Preserv-Cont Code:				D-P		
NCR 1S	12/16/10	1315	G	W	N		1	1	
NCR 3S	12/16/10	1350	G	W	N		1	1	
NCR 4S	12/16/10	1435	G	W	N		1	1	
NCR 5S			G	W	N		1	1	
MS	12/16/10	1315	G	W	N		1	1	
SD	12/16/10	1315	G	W	N		1	1	
Field Dup 1	12/16/10		G	W	N		1	1	

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Richard C Backus	12/16/10			1645	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: 342901

Cooler Temperature(s) °C and Other Remarks: 5.2°C

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Richard C Bracken	Lab PM: Sally Hoffman	Carrier Tracking No(s):	COC No: 12082010 18:09_1
Client Contact: William Davignon	Phone: (716) 435-8500	E-Mail: Sally.Hoffman@testamericainc.com		Page: 1
Company: North Tonawanda, City of				Job #:
Address: City Hall Room 6, 216 Payne Ave	Due Date Requested:	Parameter(s) Requested		Preservation Codes: A=HCL, B=NaOH, C=Zn Acetate, D=Nitric Acid, E=Hot, N=None, S=H2SO4, V=MCAA, Z=Z
City: North Tonawanda	TAT Requested (Business Days): 10			Container Codes: A=Amber, G=Glass, P=Poly/Plastic, S=Summa, T=Tedlar, V=Vial
State, Zip: NY, 14120	PO #:			
Phone: —	WO #: RTL0685			
Email: wmd_nbwwtp@live.com	Project #: NIAGARA COUNTY REFUSE SITE			
Project Name: NIAGARA COUNTY REFUSE SITE	SSOW#:			
Site: City of North Tonawanda - NY1A8791				

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)	T-Metals::T-Hg	Total Number of containers	Special Instructions/Note:
			Preserv Cont Code			D_P		
NCR 1S	12/16/10	1345	G	W	N	1	1	
NCR 3S	12/16/10	1350	G	W	N	1	1	
NCR 4S	12/16/10	1435	G	W	N	1	1	
[redacted]								
MS	12/16/10	1315	G	W	N	1	1	
SD	12/16/10	1315	G	W	N	1	1	
Field Dup 1	12/16/10		G	W	N	1	1	

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Richard C Bracken				12/16/10 1455	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by	Date/Time	Company

Custody Seals Intact: ☒ Yes △ No | Custody Seal No.: 84C901 | Cooler Temperature(s) °C and Other Remarks: 5.2°

GROUNDWATER SAMPLING • SAMPLE COLLECTION DATA SHEET

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

SAMPLING CREW MEMBERS: Richard C. Becken

DATE OF SAMPLE COLLECTION: 1/2/6/10
(M M D D Y Y)

Sample I.D. Number	*Well Number*	*Well Volume (Gallons)*	*Volume Purged (Gallons)*	*Sample Time*	*Sample Description*	*Analysis Required*	*Chain-of-Custody Number*	*Shipping Manifest Number*
NCR 3S	NCR 3S	0.4	1.6	1350	annual monitoring well	T. Metals	120320101809	NA
NCR 4S	NCR 4S	0.34	0.45	1435	annual monitoring well	T. Metals		NA
NCR 5S	~~NCR 5S~~ NCR 5S	well dry	well dry		~~annual monitoring well~~	~~T. Metals~~		NA
NCR 13S	NCR 13S	0.5	1.5	1315	annual monitoring well	T. Metals		NA
NCR 13S	(MS/MSD) *	0.5	1.5	1315	annual monitoring well	T. Metals		NA
Field Dup 1	(Duplicate) * NCR-3S	0.4	1.6	1350	annual monitoring well	T. Metals		NA
	(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: 12/16/10 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 35

ONE WELL VOLUME: 0.4 gallons

FIVE WELL VOLUMES: 2.0i gallons

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

WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	~0.4	~.8	~1.2	~1.6		
pH	7.28	7.0	6.92	7.08		
TEMPERATURE	42.9	44.9	44.7	41.2		
CONDUCTIVITY	1.27	1.26	1.23	1.19		
TURBIDITY	41.6	33.39	35.7	28.1		
COLOR	slightly cloudy	slightly cloudy	slightly cloudy	slightly cloudy		
ODOR	none	none	none	none		
COMMENTS			well dry	well dry		

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/16/10 — DATE

Richard C Becker — PRINT NAME

Richard C Becker — SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/16/10 (MM DD YY)

CREW MEMBERS: RC Becken

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 4S

ONE WELL VOLUME: .34 gallons

FIVE WELL VOLUMES: 1.7 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)	~.34	~.45				
pH	7.64	7.60				
TEMPERATURE	58.4	57.1				
CONDUCTIVITY	0.97	0.76				
TURBIDITY	585	427				
COLOR	light tan	light tan				
ODOR	none	none				
COMMENTS		well dry				

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/16/10 Richard C Becken Richard C Becken

DATE PRINT NAME SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/16/10 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 55

ONE WELL VOLUME: _____ 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)						
pH						
TEMPERATURE						
CONDUCTIVITY						
TURBIDITY						
COLOR						
ODOR						
COMMENTS						

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/16/10 — DATE

Richard C Becker — PRINT NAME

Richard C Becker — SIGNATURE

FP-4C

WELL PURGING INFORMATION

SITE/PROJECT NAME: Niagara County Refuse Site

DATE: 12/16/10 (MM DD YY)

CREW MEMBERS: RC Becker

PURGING METHOD: Dedicated Bladder Pump

WELL NUMBER: NCR 13S

ONE WELL VOLUME: 0.496 gallons

FIVE WELL VOLUMES: 2.48 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)	~.5	1.0	1.5			
pH	6.97	7.00	7.14			
TEMPERATURE	46.3	44.3	40.5			
CONDUCTIVITY	1.09	1.08	1.04			
TURBIDITY	3.0	9.65	7.85			
COLOR	clear	clear	clear			
ODOR	none	none	none			
COMMENTS		water dry	well dry			

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

12/16/10
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

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

JANUARY 2011

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LIST OF TABLES

LIST OF ATTACHMENTS

SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected from the Niagara County Refuse site in North Tonawanda, New York on December 16, 2010. 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 25 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 metals. Summaries of issues concerning these laboratory analyses are presented in Subsection 1.3.1. 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 Metals Analysis

Groundwater samples collected from the site were analyzed for target analyte list 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 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)
- Matrix spike recoveries
- Laboratory duplicate precision
- Laboratory control sample
- 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.

Matrix Spike Recoveries

All matrix spike (MS) recoveries were compliant and within QC acceptance limits with the exception of the high MS recovery for sodium (126%R; QC limit 75-125%R) associated with all samples. Therefore, positive sodium 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 all analytes with the exception of the field duplicate precision for iron (54%RPD) and nickel (51%RPD) associated with the field duplicate samples NCR-3S and FIELD DUP 1. Therefore, the iron and nickel 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	METALS
NCR-3S	Water	12/16/10	OK
NCR-4S	Water	12/16/10	OK
NCR-5S	Water	12/16/10	OK
NCR-13S	Water	12/16/10	OK
FIELD DUP 1	Water	12/16/10	OK
			5

NOTES: OK - Sample analysis considered valid and usable.

ATTACHMENT A

VALIDATED LABORATORY DATA

				Dup of NCR-3		
City of North Tonawanda NY1A8791		Sample ID:	NCR-3S	FIELD DUP #1	NCR-4S	NCR-13S
216 Payne Ave		Lab Sample Id:	RTL1063-04	RTL1063-06	RTL1063-05	RTL1063-01
North Tonawanda, NY		Source:	TAL-Buffalo	TAL-Buffalo	TAL-Buffalo	TAL-Buffalo
C/O Niagara County Refuse Site		SDG:	RTL1063	RTL1063	RTL1063	RTL1063
Validated Groundwater Sampling Event		Matrix:	WATER	WATER	WATER	WATER
December 2010		Sampled:	12/16/2010	12/16/2010	12/16/2010	12/16/2010
		Validated:	1/13/2011	1/13/2011	1/13/2011	1/13/2011
CAS NO.	COMPOUND	UNITS:				
	METALS					
7429-90-5	Aluminum	ug/L	465	763	3810	1170
7440-36-0	Antimony	ug/L	20 U	20 U	20 U	20 U
7440-39-3	Barium	ug/L	50.4	51.9	56.7	53.9
7440-41-7	Beryllium	ug/L	2 U	2 U	2 U	2 U
7440-43-9	Cadmium	ug/L	0.5 J	0.6 J	0.9 J	1.1
7440-70-2	Calcium	ug/L	146000	147000	136000	154000
7440-47-3	Chromium	ug/L	6	8.8	3.2 J	16.1
7440-48-4	Cobalt	ug/L	4 U	4 U	0.6 J	4 U
7440-50-8	Copper	ug/L	6 J	7.1 J	6.6 J	12.4
7439-89-6	Iron	ug/L	723	1260	9960	2030
7439-92-1	Lead	ug/L	3.7 J	3.3 J	6.7	5 U
7439-95-4	Magnesium	ug/L	89400	90400	47400	59200
7439-96-5	Manganese	ug/L	25.9	29.7	22.9	13.1
7440-02-0	Nickel	ug/L	6.8 J	11.5 J	4.4 J	8.2 J
7440-09-7	Potassium	ug/L	2540	2670	10500	1770
7782-49-2	Selenium	ug/L	15 U	15 U	9.4 J	15 U
7440-22-4	Silver	ug/L	3 U	3 U	3 U	3 U
7439-97-6	Mercury	ug/L	0.2 U	0.2 U	0.2 U	0.2 U
7440-23-5	Sodium	ug/L	11700 J	11900 J	33300 J	23200 J
7440-28-0	Thallium	ug/L	20 U	20 U	20 U	20 U
7440-62-2	Vanadium	ug/L	2.5 J	2.6 J	2.1 J	3.7 J
7440-66-6	Zinc	ug/L	20.6	38.2	268	47.3

APPENDIX E

MONTHLY INSPECTION LOGS AND PHOTOGRAPHS

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 01/07/10 (MM DD YY)

INSPECTOR(S): R C Backen

	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 snow covered	
		- dead/dying vegetation	winter kill	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 01/07/10 (MM DD YY)

INSPECTOR(S): R C Becker

Item	Inspect For	Action Required	Comments
2. **Landfill Cap (continued)**			
☐ Access Roads	- bare areas, dead/dying veg.	snow covered	
	- 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: 01/07/15 (MM DD YY)

INSPECTOR(S): RC Becker

Item	Inspect For	Action Required	Comments
4. Other Site Systems (continued)			
Drainage Ditches/ Swale Outlets	- sediment build-up	snow covered	
	- erosion	none	
	- condition of erosion protection	good	
	- flow obstructions	snow	
	- dead/dying vegetation	winter kill	
	- cable concrete/gabion mats and riprap	good snow covered	
Culverts	- sediment build-up	snow	
	- 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, New York

DATE: 02/01/10 (MM DD YY)

INSPECTOR(S): RC Bracken

	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	snow covered	
☐		- washouts	none	
☐		- leachate seeps	none	
☐		- length of vegetation	snow covered	
☐		- dead/dying vegetation	snow covered	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 0 2 0 1 1 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.	snow covered	
	- erosion	none	
	- potholes or puddles	none	
	- obstruction	none	
3. Wetlands (Area "F")	- dead/dying vegetation	winter kill	
	- change in water budget	higher than 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: 12/06/10 (MM DD YY)

INSPECTOR(S): R C Becker

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

DATE: 10 3 1 1 1 0 (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	short	
☐		- dead/dying vegetation	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 05/11/10 (MM DD YY)

INSPECTOR(S): RC Belker

Item	Inspect For	Action Required	Comments
2. Landfill Cap (continued)			
☐ Access Roads	- bare areas, dead/dying veg.	no	
	- erosion	none	
	- potholes or puddles	none	
	- obstruction	none	
3. Wetlands (Area "F")	- dead/dying vegetation	yes	
	- change in water budget	high	
	- 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	OK	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10/1/1/10 (MM DD YY)

INSPECTOR(S): RC Belkin

	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	none	
		- dead/dying vegetation	yes	
		- 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, New York

DATE: 04/1/10 (MM DD YY)

INSPECTOR(S): RC Becker

	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	no	
		- bare areas	no	
		- washouts	no	
		- leachate seeps	no	
		- length of vegetation	short	
		- dead/dying vegetation	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 04/01/10 (MM DD YY)

INSPECTOR(S): RC Beckam

Item	Inspect For	Action Required	Comments
2. Landfill Cap (continued)			
☐ Access Roads	- bare areas, dead/dying veg.	yes	
	- erosion	no	
	- potholes or puddles	no	
	- obstruction	no	
3. Wetlands (Area "F")	- dead/dying vegetation	yes	
	- change in water budget	average	
	- 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: 04/11/13 (MM DD YY)

INSPECTOR(S): RC Berlan

	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	yes	
		- 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: 05/06/10 (MM DD YY)

INSPECTOR(S): RC Becker

	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	short	
☐		- dead/dying vegetation	none	

FORM I

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 05/06/14 (MM DD YY)

INSPECTOR(S): RC Becker

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	no	
	- change in water budget	low for spring time	
	- 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: 05 04 19 (MM DD YY)

INSPECTOR(S): RC Bodkin

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	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 good condition	
Wells	- locks secure	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 06/10/10 (MM DD YY)

INSPECTOR(S): RC Becker

	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	tall / thick	
☐		- dead/dying vegetation	no	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10/6/10/10 (MM DD YY)

INSPECTOR(S): RC Becker

Item	Inspect For	Action Required	Comments
2. **Landfill Cap (continued)**			
☐ Access Roads	- bare areas, dead/dying veg.	no	
	- erosion	none	
	- potholes or puddles	no	
	- obstruction	none	
3. **Wetlands (Area "F")**	- dead/dying vegetation	no	
	- change in water budget	slightly above average	
	- general condition of wetlands	great	
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: 06/10/13 (MM DD YY)

INSPECTOR(S): RC Becker

	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	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, New York

DATE: 06/07/02/10 (MM DD YY)

INSPECTOR(S): Richard C Becker

	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	good	
☐	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, New York

DATE: 06/02/19 (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.	none	
☐		- erosion	none	
☐		- potholes or puddles	none	
☐		- obstruction	none	
3.	**Wetlands (Area "F")**	- dead/dying vegetation	none	
		- change in water budget	low	
		- 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: 0 7 0 2 / 1 6 (MM DD YY)

INSPECTOR(S): Richard C Baker

	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	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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 08/12/09 (MM DD YY)

INSPECTOR(S): RC Becker

	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	tall	
☐		- dead/dying vegetation	no	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 08/12/16 (MM DD YY)

INSPECTOR(S): RC Bolton

Item	Inspect For	Action Required	Comments
2. Landfill Cap (continued)			
☐ Access Roads	- bare areas, dead/dying veg.	no	
	- erosion	none	
	- potholes or puddles	none	
	- obstruction	none	
3. Wetlands (Area "F")	- dead/dying vegetation	no	
	- change in water budget	low	
	- 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: 08/12/10 (MM DD YY)

INSPECTOR(S): R C Becker

	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	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, New York

DATE: 09/16/10 (MM DD YY)

INSPECTOR(S): RC Backen

	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	okat	
☐		- dead/dying vegetation	none	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 09/16/10 (MM DD YY)

INSPECTOR(S): RC Becker

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 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: 10/9/16/19 (MM DD YY)

INSPECTOR(S): RC Becker

	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	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

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10/8/10 (MM DD YY)

INSPECTOR(S): RC Becker

	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	yes	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10/8/10 (MM DD YY)

INSPECTOR(S): RC Bakem

	Item	*Inspect For*	*Action Required*	*Comments*
2.	**Landfill Cap (continued)**			
☐	Access Roads	- bare areas, dead/dying veg.	yes	
☐		- erosion	no	
☐		- potholes or puddles	none	
☐		- obstruction	none	
3.	**Wetlands (Area "F")**	- dead/dying vegetation	yes	
		- 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: 10/08/10 (MM DD YY)

INSPECTOR(S): RC Becker

	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	none	
☐		- dead/dying vegetation	yes	
☐		- 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, New York

DATE: 11/05/10 (MM DD YY)

INSPECTOR(S): RC Becker

	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	yes winter kill	

FORM 1

MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 11 / 05 / 09 (MM DD YY)

INSPECTOR(S): RC Becker

	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	yes winter kill	
		- change in water budget	low	
		- 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: 11/05/16 (MM DD YY)

INSPECTOR(S): RC 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	none	
☐		- dead/dying vegetation	yes 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, New York

DATE: 1 1 2 6 2 1 1 9 (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	OK	
☐	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: 12/21/10 (MM DD YY)

INSPECTOR(S): R 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	none	
3.	**Wetlands (Area "F")**	- dead/dying vegetation	winter kill	
		- change in water budget	higher than last month	
		- 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: 12/6/21 (MM DD YY)

INSPECTOR(S): RC Rocka

	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	none	
		- dead/dying vegetation	some 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

Photo 1: Entrance of landfill facing northwest.

Photo 2: Taken from west side of landfill facing northeast near wet well D.

Photo 3: Top of landfill facing south.

Photo 4: Wet well D and wetlands facing northwest from landfill.

APPENDIX F

MAINTENANCE RECORD LOGS

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C. Becken

1. Date: 0 4 2 9 1 0 (MM DD YY)

Time: 1 0 0 0 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: repair fence

2. Company Performing Maintenance

Name: O&M Enterprises, Inc.

Address. 7134 Marigold Drive
North Tonawanda, NY 14120

Contact Name: Richard C. Becken

3. Methods Used:

wove in new section of fence to repair small cut

Description of Material Removed:

none

Problems/Comments:

none

4/29/10 Richard C. Becken
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

CHA 5733 (17)

MAINTENANCE RECORD LOG

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

CREW MEMBERS: Richard C. Becken

1. Date: 06/04/10 (MM DD YY)

Time: 0930 (HH mm)

Scheduled/Unscheduled: Scheduled

Type of Maintenance Performed: mowing grass

2. Company Performing Maintenance

Name: O&M Enterprises, Inc.

Address: 7134 Marigold Drive
North Tonawanda, NY 14120

Contact Name: Richard C. Becken

3. Methods Used:

mowed around wells and perimeter fencing

Description of Material Removed:

none

Problems/Comments:

none

6/4/10 Richard C. Becken
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. Becken

1. Date: 07/16/10 (MM DD YY)

Time: 0945 (HH mm)

Scheduled/Unscheduled: unscheduled

Type of Maintenance Performed: cut lock, & repair Wet Well A, repair autodialer

2. Company Performing Maintenance

Name: O&M Enterprises, Inc.

Address: 7134 Marigold Drive
North Tonawanda, NY 14120

Contact Name: Richard C. Becken

3. Methods Used:

remove unknown lock from front gate, repair Wet Well A hose which was corroded
reboot autodialer which had locked up

Description of Material Removed:

none

Problems/Comments:

none

7/16/10 Richard C. Becken
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

CHA 5723 (17)

MAINTENANCE RECORD LOG

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

CREW MEMBERS: R C Becker

1. Date: 0 8 1 2 1 0 (MM DD YY)

Time: 1 2 0 0 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: weed whacked around monitoring wells pump wells and control shed

2. Company Performing Maintenance

Name: D+M Enterprises, Inc.

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

weed whacked around wells + control shed

Description of Material Removed:

none

Problems/Comments:

none

8/12/10 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: RC Backer

1. Date: 0 9 0 3 1 0 (MM DD YY)

Time: 0 9 0 0 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: mowed grass

2. Company Performing Maintenance

Name: O+M Enterprises

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Rick Backer

3. Methods Used:

tractor mounted mower

Description of Material Removed:

none

Problems/Comments:

none

9/3/10 Richard C Backer
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: RC Becker

1. Date: 09/17/10 (MM DD YY)

Time: 0830 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: mowing landfill

2. Company Performing Maintenance

Name: O+M Enterprises, INC.

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Richard Becker

3. Methods Used:

tractor + mower

Description of Material Removed:

none

Problems/Comments:

none

9/17/10 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: R C Baker

1. Date: 0 9 1 8 1 0 (MM DD YY)

Time: 0 8 0 0 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: mowed grass

2. Company Performing Maintenance

Name: O+M

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

Contact Name: Rick Baker

3. Methods Used:

tractor mounted mower

Description of Material Removed:

none

Problems/Comments:

none

9/18/10 Richard C Baker
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Bocken

1. Date: 10 08 10 (MM DD YY)

Time: 09 15 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: cut brush near front gate, control shed + fence line

2. Company Performing Maintenance

Name: D+M Enterprises Inc

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name: Richard C Bocken

3. Methods Used:

hand operated brush cutters

Description of Material Removed:

none

Problems/Comments:

none

10/8/10 Richard C Bocken
DATE INSPECTOR INSPECTOR'S SIGNATURE

FORM 2

MAINTENANCE RECORD LOG

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

CREW MEMBERS: RC Backen

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

Time: 1 3 5 0 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: cut trees in fence (perimeter)

2. Company Performing Maintenance

Name: O+M Enterprises Inc

Address: 7134 Marigold Dr.
North Tonawanda, NY 14120

Contact Name:

3. Methods Used:

chain saw, hand saw

Description of Material Removed:

none

Problems/Comments:

none

11/11/10 Richard C Backen 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: R.C. Becker

1. Date: 12/30/10 (MM DD YY)

Time: 0915 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: cut trees + brush near perimeter fence

2. Company Performing Maintenance

Name: O-I-N Enterprises Inc.

Address: 7134 Marigold Dr

North Tonawanda, NY 14120

Contact Name: Rick Becker

3. Methods Used:

chain saw

Description of Material Removed:

none

Problems/Comments:

none

12/30/10	Rick Becker	R.C. Becker
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: 0 1 0 7 1 0 (M M D D Y Y)

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"	13:15	598.93	25.62	573.31
EAST "B"	12:45	596.23	19.78	576.45
EAST "C"	12:20	598.69	20.24	578.45
EAST "D"	11:45	593.20	15.25	577.95
NCR-3S	10:25	579.60	3.19	576.41
NCR-4S	11:30	591.88	2.85	589.03
NCR-5S	10:55	597.34	6.45	590.89
NCR-13S	9:45	593.13	4.64	588.49

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:30		~10"
WW B	11:20		~7"
WW C	10:30		~4"
WW D	10:00		~8"

Total System Flow	Time of Measurement
48200282	9:30

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 0 2 0 1 1 0 (M M D D Y Y)

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"	12:45	598.93	25.72	573.21
EAST "B"	12:25	596.23	19.97	576.26
EAST "C"	12:00	598.69	20.46	578.23
EAST "D"	11:45	593.20	15.42	577.78
NCR-3S	10:35	579.60	3.48	576.12
NCR-4S	11:00	591.88	Frozen	000.00
NCR-5S	11:25	597.34	6.33	591.01
NCR-13S	9:45	593.13	4.65	588.48

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:45		~10"
WW B	11:20		~7"
WW C	11:05		~6"
WW D	10:00		~7"

Total System Flow	Time of Measurement
48964480	9:45

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 0 3 1 1 1 0 (M M D D Y Y)

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"	12:35	598.93	25.77	573.16
EAST "B"	12:25	596.23	19.83	576.40
EAST "C"	11:55	598.69	20.25	578.44
EAST "D"	11:45	593.20	15.38	577.82
NCR-3S	11:15	579.60	2.06	577.54
NCR-4S	10:30	591.88	2.6	589.28
NCR-5S	11:35	597.34	5.81	591.53
NCR-13S	9:25	593.13	3.68	589.45

WET WELLS

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

Total System Flow	Time of Measurement
49348489	9:15

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 04/11/10 (M M D D Y Y)

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"	12:45	598.93	25.81	573.12
EAST "B"	12:25	596.23	19.83	576.40
EAST "C"	12:05	598.69	20.31	578.38
EAST "D"	11:45	593.20	15.48	577.72
NCR-3S	10:55	579.60	3.3	576.30
NCR-4S	10:30	591.88	2.94	588.94
NCR-5S	11:35	597.34	6.18	591.16
NCR-13S	9:15	593.13	4.71	588.42

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		~6"
WW D	9:45		~7"

Total System Flow	Time of Measurement
50236140	9:05

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 0 5 0 6 1 0 (M M D D Y Y)

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"	12:35	598.93	25.79	573.14
EAST "B"	12:25	596.23	19.76	576.47
EAST "C"	12:05	598.69	20.21	578.48
EAST "D"	12:15	593.20	15.49	577.71
NCR-3S	10:00	579.60	4.61	574.99
NCR-4S	10:25	591.88	2.84	589.04
NCR-5S	11:55	597.34	7.93	589.41
NCR-13S	9:20	593.13	5.1	588.03

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:25		~7"
WW B	10:15		~6"
WW C	9:55		~6"
WW D	9:45		~8"

Total System Flow	Time of Measurement
50820974	9:25

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 0 6 1 0 1 0 (M M D D Y Y)

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"	12:45	598.93	25.73	573.20
EAST "B"	12:25	596.23	19.83	576.40
EAST "C"	12:05	598.69	20.24	578.45
EAST "D"	11:45	593.20	15.59	577.61
NCR-3S	10:55	579.60	3.98	575.62
NCR-4S	10:30	591.88	2.86	589.02
NCR-5S	11:35	597.34	7.75	589.59
NCR-13S	9:15	593.13	4.97	588.16

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:10		~10"
WW B	10:15		~6"
WW C	10:05		~7"
WW D	9:55		~6"

Total System Flow	Time of Measurement
51067571	9:10

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 07/02/10 (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"	12:15	596.23	19.99	576.24
EAST "C"	12:00	598.69	20.65	578.04
EAST "D"	11:40	593.20	15.7	577.50
NCR-3S	10:35	579.60	dry	000.00
NCR-4S	10:55	591.88	dry	000.00
NCR-5S	11:15	597.34	9.11	588.23
NCR-13S	9:35	593.13	7.4	585.73

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:20		~8"
WW B	10:25		~5"
WW C	10:15		~8"
WW D	10:05		~6"

Total System Flow	Time of Measurement
51132030	9:20

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 0 8 1 2 1 0 (M M D D Y Y)

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	25.74	573.19
EAST "B"	12:15	596.23	19.84	576.39
EAST "C"	12:00	598.69	20.22	578.47
EAST "D"	11:40	593.20	15.65	577.55
NCR-3S	10:40	579.60	dry	000.00
NCR-4S	11:00	591.88	dry	000.00
NCR-5S	9:25	597.34	dry	000.00
NCR-13S	9:35	593.13	dry	000.00

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:30		~9"
WW B	10:55		~6"
WW C	10:35		~7"
WW D	10:15		~6"

Total System Flow	Time of Measurement
51184891	9:30

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 09/16/10 (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"	12:15	596.23	19.87	576.36
EAST "C"	12:00	598.69	20.19	578.50
EAST "D"	11:40	593.20	15.65	577.55
NCR-3S	10:40	579.60	dry	000.00
NCR-4S	11:00	591.88	dry	000.00
NCR-5S	12:05	597.34	dry	000.00
NCR-13S	9:35	593.13	dry	000.00

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	10:30		~8"
WW B	10:55		~6"
WW C	10:35		~7"
WW D	10:15		~6"

Total System Flow	Time of Measurement
51215670	10:30

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 10/08/10 (M M D D Y Y)

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	25.77	573.16
EAST "B"	12:15	596.23	19.7	576.53
EAST "C"	12:35	598.69	20.32	578.37
EAST "D"	12:50	593.20	15.43	577.77
NCR-3S	10:00	579.60	dry	
NCR-4S	10:55	591.88	dry	
NCR-5S	11:20	597.34	dry	
NCR-13S	11:35	593.13	dry	

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:00		~8"
WW B	10:25		~6"
WW C	9:45		~5"
WW D	9:25		~7"

Total System Flow	Time of Measurement
51232070	9:00

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 11/05/10 (M M D D Y Y)

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"	12:45	598.93	25.82	573.11
EAST "B"	12:25	596.23	19.52	576.71
EAST "C"	12:05	598.69	19.98	578.71
EAST "D"	11:45	593.20	15.53	577.67
NCR-3S	10:55	579.60	dry(5.76)	573.84
NCR-4S	10:30	591.88	dry(4.85)	587.03
NCR-5S	11:35	597.34	dry(10.99)	586.35
NCR-13S	9:15	593.13	dry(7.66)	585.47

WET WELLS

Wet Well	Time of Measurement	Total Flow	Depth of Water
WW A	9:10		~10"
WW B	10:15		~5"
WW C	10:05		~7"
WW D	9:55		~6"

Total System Flow	Time of Measurement
51251660	9:10

FP-3D

WATER LEVEL RECORD

PROJECT NAME: *NIAGARA COUNTY REFUSE SITE*

LOCATION: Wheatfield, New York

DATE: 12/21/10 (M M D D Y Y)

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"	11:35	598.93	25.88	573.05
EAST "B"	11:15	596.23	19.52	576.71
EAST "C"	10:55	598.69	20.4	578.29
EAST "D"	10:35	593.20	15.22	577.98
NCR-3S	9:25	579.60	2.78	576.82
NCR-4S	9:45	591.88	2.91	588.97
NCR-5S	10:20	597.34	dry	
NCR-13S	8:25	593.13	5.82	587.31

WET WELLS

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

Total System Flow	Time of Measurement
51585665	8:15

FP-3D