2005 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:

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February 2006

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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 PRP Group performed a remedial action at the Niagara County Refuse Site (Site), Wheatfield, New York. The PRP Group is currently providing operations, maintenance, and monitoring (OM&M). This fifth Annual Monitoring Report summarizes monitoring activities from January through December 2005.

The Site is a former municipal landfill comprised of approximately 60 acres, 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 migration of contamination. These systems began operation in November of 2000.

1.2 PROCEDURES

1.2.1 Groundwater Sampling Procedure

Based on the OM&M Manual (CRA, 2000), groundwater sample collection was completed quarterly from the four monitoring wells at the Site for the first two years after PCS startup. The four wells are screened in the shallow overburden materials. Groundwater sampling on a quarterly schedule was completed in 2002, two years post-PCS startup. Semi-annual groundwater sampling was begun in 2003. Samples were collected from wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S in May and December 2005. In accordance with the OM&M Manual, groundwater sampling has continued at a semi-annual schedule through 2005, completing the three years of semi-annual groundwater sampling as defined in the OM&M Manual. Annual groundwater sampling will begin in 2006, assuming that water level conditions permit collection of groundwater samples.

Each groundwater monitoring well was purged prior to sample collection by pumping five 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.

Groundwater sampling was begun 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:

- Select volatile organic compounds (VOCs) using EPA method 624 and method SW-8260;
- Select semi-volatile organic compounds (SVOCs) using EPA method 625 and method SW-8270;
- Mercury using EPA method 245.1 and method SW-7470; and
- Inorganics using EPA method 200.7 and method SW-6010.

The groundwater samples were analyzed by Severn-Trent Laboratories of Buffalo, 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 this reporting period, some of the quality assurance samples could not be completely collected. During the May 2005 sampling event, no duplicate sample was collected and the matrix spike and matrix spike duplicate (MS/MSD) samples were limited to VOCs because of low groundwater volume. During the December 2005 sampling event, the duplicate sample and the MS/MSD samples were limited to VOCs only 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 analysis of groundwater to five metals that have historically been identified as exceeding 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 volatile and semi-volatiles to every two years beginning in 2006 (every other groundwater sampling event). The USEPA requested that all inorganics 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 Procedure

Groundwater from the perimeter collection system is discharged to the City of North Tonawanda treatment system without pretreatment. 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 is sampled monthly. The effluent samples are collected in compliance with the OM&M Manual (CRA, 2000) and 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 effluent monitoring locations. Water level measurements were collected ten times during 2005. 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.



SECTION 2 RESULTS

2.1 ANALYTICAL RESULTS

2.1.1 Effluent Samples

Effluent samples were collected monthly during 2005 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. The April 2005 metals sample was apparently misplaced at the City of North Tonawanda Wastewater Treatment Plant laboratory, and therefore could not be analyzed. All analytical results were found to be compliant with the discharge permit for the site. Effluent analytical results are presented in Appendix A.

2.1.2 Groundwater Analytical Results

Analytical results for the two sampling events during this reporting period are summarized in Table 2.1. The analytical 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 51 to 62, since the startup 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). Beginning in 2006, annual groundwater samples will be collected.

The full set of analytical results received from the laboratories are presented in Appendix B, along with the COCs. 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 B. This sheet also indicates which well was used to collect the field duplicate, and the well from which the matrix spike (MS) and the matrix spike duplicate (MSD) were collected. A sheet of well purging information, including pH, conductivity, turbidity, odor, comments, and well volumes, is also provided in Appendix B. The data validation package is presented in Appendix C.

May 2005 Event

Monitoring wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S were sampled on May 3, 2005. The locations of the monitoring wells are provided in Figure 1.1. No VOCs were detected in the groundwater samples above the NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs. The analytical results for acetone and 2-butanone were rejected due to poor calibration linearity. No SVOCs were detected. The data validation reports are presented in Appendix C.

Fourteen metals were identified in one or more of the groundwater samples. Typically, an average of approximately thirteen metals are detected. Detected values were within ranges observed in previous sampling events. Aluminum exceeded the NYSDEC AWQS in

each of the samples. Copper exceeded NYSDEC AWQS in three samples and was below the analytical detection limits in the fourth. Iron was identified in all of the samples and exceeded standards (NYSDEC AWQS and NYSDOH MCL) in all samples. The Record of Decision (USEPA, 1993) identifies iron as typically exceeding MCLs in the regional groundwater. Lead was identified in one sample (NCR-4S) exceeding the standards (NYSDEC AWQS, NYSDOH MCL, and USEPA MCL) but was below analytical detection limits in the other three samples. Magnesium exceeded the AWQS guidance value (not a standard) in each of the samples. Manganese was detected in each of the samples, and exceeded the NYSDEC AWQS and NYSDOH MCL standard in NCR-3S and NCR-4S. Sodium was found above the NYSDEC AWQS and the NYSDOH MCL in all of the samples. The Record of Decision (USEPA, 1993) identifies sodium as typically exceeding MCLs in the regional groundwater.

Groundwater analytical results were validated and reviewed by Parsons for usability (see Appendix C 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. It was noted that a trip blank for VOC analysis was not submitted with the groundwater samples due to the low volume fo groundwater that could be collected. VOC sample results were considered usable following data validation, with the exception of the non-detected acetone and 2-butanone results for all samples, due to poor calibration linearity. All acetone sample results were qualified with an "R". The VOC results were 94.3% complete. The rejection of the acetone and 2-butanone data precluded the data set from being 100% complete.

The SVOC and metals samples did not require qualification resulting from data validation. All analytical results were 100% usable for the SVOC and metals groundwater data.

December 2005 Event

All of the monitoring wells (NCR-3S, NCR-4S, NCR-5S, and NCR-13S) were sampled on December 23, 2005. No VOCs or SVOCs were detected in the groundwater samples. The data validation reports are presented in Appendix C.

Fifteen metals were identified in one or more of the groundwater samples collected on December 23, 2005. Typically, an average of approximately thirteen metals are detected. As with the May 2005 event, detected values were consistent with historical observations. Aluminum and copper were found in each of the samples at a level above the NYSDEC AWQS. Iron was identified and exceeded standards (NYSDEC AWQS and NYSDOH MCL) in all of the samples. Magnesium exceeded the AWQS guidance value (not a standard) in three of the four samples. Manganese was detected in each of the samples and exceeded NYSDEC AWQS and NYSDOH MCL in NCR-3S and NCR-4S. Sodium was found above the NYSDEC AWQS and the NYSDOH MCL in all of the samples. As mentioned, the Record of Decision (USEPA, 1993) identifies iron and sodium as typically exceeding MCLs in the regional groundwater.

Groundwater analytical results were validated and reviewed by Parsons for usability (see Appendix C 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. One VOC, chloroethane, did not have a compliant continuing calibration. All chloroethane results were non-detect but were considered estimates and qualified "UJ". All sample results were considered usable following data validation. The VOC, SVOC, and metals groundwater results were 100% complete.

Summary of Groundwater Analytical Results

In May 2005, no VOCs were identified above any of the applicable standards, and no SVOCs were detected. In December 2005, no VOCs or SVOCs were detected. The analytical results for acetone and 2-butanone were rejected during data validation for the May 2005 sampling round.

The analytical results for metals were fairly similar between the two rounds. Fourteen metals were detected in the May 2005 sampling round and fifteen were detected in the December 2005 sampling round. Cadmium was not detected in the May 2005 round but was detected in one sample in the December 2005 round. Aluminum, copper, magnesium, and manganese exceeded standards in both groundwater sampling rounds. Iron and sodium, both identified in the ROD (USEPA, 1993) as typically exceeding MCLs in the regional groundwater, also exceeded standards in analytical results from both sampling rounds. Lead exceeded standards in the May 2005, round but was below standards in December 2005.

2.2 SITE INSPECTIONS

Monthly Site inspections were conducted between January 2005 and December 2005. 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 findings of the inspections is included in Table 2.2. Copies of the Monthly Inspection Logs have been included in Appendix D.

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. Minor surface erosion was observed in a few small areas within the cap limits, but does not threaten the cap. These areas do not appear to be expanding or deepening, and will continue to be monitored for change. The erosion has not damaged the landfill cap integrity. No leachate seeps were identified. All aspects of the access roads that were examined were deemed acceptable (when not covered with snow and/or ice).

Minor repairs to eroded areas in the vicinity of the drainage on the east side of the site (outside the limits of the cap) were completed in June 2005. Additionally, fabric was removed from the inlets of surface water drainage pipes in the area, to enhance inflow to the drainage. The fabric was initially used to keep sediments from entering the drainage pipe through the inlets during landfill construction, and until vegetation was established. Now that the vegetation is well established, there is no longer a concern with excessive sediment entering the drainage pipes. The repaired areas near the drainage pipes are not within the limits of the landfill cap. These areas will continue to be monitored for any changes.

The wetlands were examined visually 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.

Post-construction monitoring of the wetland replacement has been performed annually since 2001. The wetland monitoring report, including photographs, is provided in Appendix E. The wetlands monitoring was completed August 12, 2005. Monitoring results indicate that the wetland creation was successful. The measurable criteria of percent coverage is provided with 10% error in the O&M Manual. The measured coverage (75%) during the 2005 monitoring falls within the range of the provided measurable criteria (80% +/- 10%). The 75% measured coverage may be the result of lower than normal water levels in the wetlands created by lack of rainfall prior to the inspection. The monthly visual inspection of the wetlands noted below normal water levels during June, July, and August. The wetlands monitoring report stated that the wetland area is expected to refill and stay full under normal conditions. The Wetland Frequency Indicator for the 2005 inspection was 1.36, exceeding the fifth year wetland goal of 2.00. Wetland wildlife, and hydrophytic vegetation and hydrology, occur throughout the wetland creation area. Purple loosestrife (Lythrum salicaria) and common reed (Phragmites australis) were two invasive weed species identified during the inspection. Water levels in the wetlands appeared slightly higher during January, February, April, May, November, and December 2005 and slightly lower during June, July, August, and September 2005. This report presents the final annual wetlands inspection results, meeting the goals outlined in the OM&M Manual (CRA, 2000). Monthly visual inspection of the wetlands during the growing season will continue to document general conditions.

All other parts of the landfill system, including 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:

- Periodic pulling, cleaning, and reinstalling the pumps in the wet wells.
- Float switch repairs were completed at wet well B to prevent future malfunctions.
- Weeds and tall grass were trimmed around wells and manholes.

- On August 26, 2005, a truckload of stone was placed in the driveway and used to fill low areas and a few minor potholes.
- On September 1, 2, and 3, 2005, the grass was cut at the landfill using a tractor and brush hog.

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

- On January 5, 2005, the pump in wet well C failed and was replaced, and a hole in the perimeter fence was repaired.
- On March 3 and 5, and August 23, 2005, a faulty float valve was repaired at wet well B.
- A spare pump was placed in wet well A on March 18, 2005. This pump may be placed into service in the event of pump failure.
- A latch on the man-gate near wet well D was repaired on April 9, 2005.
- On May 14, 2005, a fitting between the riser pipe and pump was replaced in wet well C.
- The float switch at wet well B was repaired on May 17 and again on June 8, 2005.
- On June 2, 2005, minor erosion repair was completed near drainage inlets on the east side of the site.
- On October 7, 2005, minor repair to the perimeter fence was completed.
- A failed lock was replaced on the back gate to the site on December 8, 2005.
- New hinge pins were installed in the gate near the control shed on December 17, 2005.

Maintenance Record Logs are included in Appendix F.

2.4 WATER LEVELS

Water level measurements were collected to ensure that water levels inside the landfill are reduced by the operation of the perimeter collection system (Table 2.3). 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 generally collected during the monthly inspections and recorded on water level records (Appendix G). During 2005, water levels were collected from the monitoring wells on ten occasions. Water levels generally varied between 1 and 5 feet over the course of the year. Monthly collection of water level data from the monitoring wells allowed planning for groundwater sampling dates, when the maximum number of wells could be sampled. Low groundwater levels in the wells, or no water in the wells often restricts the ability to sample. Sampling events were conducted, but not all chemical parameters for quality assurance samples could be collected, due to lack of sufficient volume and recharge rates in certain wells.

SECTION 3 SUMMARY AND CONCLUSIONS

The following summary and conclusions were developed based on the data collected during this reporting period (January through December 2005):

- The tenth and eleventh sets of analytical groundwater data have been collected and validated.
- Analytical groundwater results indicate that no VOCs or SVOCs have impacted the groundwater in the immediate vicinity of the landfill. No VOCs or SVOCs exceeded NYSDEC AWQS, NYSDOH MCLs, or USEPA MCLs. SVOCs were not detected in any samples.
- Six inorganic chemicals (aluminum, copper, iron, lead, manganese, and sodium) have been identified above standards, some of which may naturally be present in the silts and clays of the native geologic material. Magnesium also was found above the NYSDEC AWQS guidance value. The Record of Decision (USEPA, 1993) identifies iron and sodium as typically exceeding the MCLs in the regional groundwater. Detected inorganic chemical values are consistent with historical observations.
- Analytical results from this reporting period, including organic and inorganic parameters, are consistent with the previous reporting period, and historical observations.
- 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.
- Semi-annual groundwater sample collection was conducted during this reporting period. Future groundwater sampling will be conducted on an annual basis, as indicated in the OM&M Manual (CRA, 2000) for the site. As indicated in the November 21, 2005 letter from USEPA, groundwater sample analytical parameters will be reduced to inorganic parameters only in 2006. Volatile and semivolatile analyses will be completed every two years, beginning in 2007.
- The landfill was inspected monthly and was appropriately maintained.
- Water levels were collected from the wet wells, monitoring wells, and the locations on top of the landfill on ten occasions during 2005. Water levels generally varied between 1 and 5 feet over the course of the year.
- The fifth and final wetlands inspection was completed in 2005, as required in the OM&M Manual. Wetlands are well established, and target species have shown

substantial growth and propagation. The measurable criteria of percent coverage is provided with 10% error in the O&M Manual. The measured coverage (75%) during the 2005 monitoring falls within the range of the provided measurable criteria (80% +/-10%). It is likely that below normal rainfall amounts prior to the wetlands inspection affected the coverage percentage. The wetland frequency indicator value of 1.36 exceeds the expected value of 1.67.

SECTION 4 REFERENCES

- 1. USEPA, 1993, Record of Decision, Niagara County Refuse Site, Wheatfield, Niagara County, New York; United States Environmental Protection Agency, September 1993.
- 2. 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.

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

														NCR-13S	
City of N. T	onawanda WWTP	Sample ID:				NCR-3S	NCR-4S	NCR-5S	NCR-13S	NCR-3S	NCR-4S	NCR-5S	NCR-13S	Duplicate	TRIP
830 River R	oad	Lab ID:				A541102	A541103	A541104	A541101	A5E62302	A5E62303	A5E62304	A5E62301	A5E62305	A5E62306
North Tonav	vanda, NY	Source:				STL-Buffalo									
C/O Niagara	Co. Refuse Site	SDG:	NYS	NYS	US	A05-4411	A05-4411	A05-4411	A05-4411	A05-E623	A05-E623	A05-E623	A05-E623	A05-E623	A05-E623
Validated G	roundwater	Matrix:	DEC	DOH	EPA	WATER									
Sampling Re	esults	Sampled:	AWQS*	MCL	MCL	5/3/2005	5/3/2005	5/3/2005	5/3/2005	12/23/2005	12/23/2005	12/23/2005	12/23/2005	12/23/2005	12/23/2005
		Validated:				6/20/2005	6/20/2005	6/20/2005	6/20/2005	1/18/2006	1/18/2006	1/18/2006	1/18/2006	1/18/2006	1/18/2006
CAS NO.	COMPOUND	UNITS:													
	VOLATILES														
71-43-2	Benzene	ug/L	1	5	5	1	ND								
108-88-3	Toluene	ug/L	5	5	100	1.8 J	ND								
1330-20-7	Total Xylenes	ug/L	5	5	10000	1.2 J	ND								
	METALS														
7429-90-5	Aluminum	ug/L	100	-	-	1260	17000	3880	563	360	4170	6380	3380		
7440-39-3	Barium	ug/L	1000	2000	2000	51.7	134	148	63.4	65.9	92.4	151	63.2		
7440-43-9	Cadmium	ug/L	5	5	5	ND	ND	ND	ND	ND	1.1	ND	ND		
7440-70-2	Calcium	ug/L	-	-	-	151000	130000	106000	186000	196000	106000	104000	162000		
7440-47-3	Chromium	ug/L	50	100	100	30.6	14.9	26.4	11	21.4	4.8	34.5	23.2		
7440-50-8	Copper	ug/L	5	-	-	23.6	33.1	19	ND	11.6	11.4	24.5	13.6		
7439-89-6	Iron	ug/L	300>	$300^{>}$	-	6590	59600	3190	1310	13600	22400	7840	6870		
7439-92-1	Lead	ug/L	25	25	15	ND	27.2	ND	ND	ND	11.5	8.5	ND		
7439-95-4	Magnesium	ug/L	35000^{+}	-	-	87200	39600	74700	86100	110000	33600	63800	75700		
7439-96-5	Manganese	ug/L	300>	300>	-	564	441	115	103	1870	329	210	34.4		
7440-02-0	Nickel	ug/L	100	-	-	44.7	15.3	26	14.4	55.5	ND	36.2	16.9		
7440-09-7	Potassium	ug/L	-	-	-	2470	12900	1690	2290	2660	18800	2570	2800		
7440-23-5	Sodium	ug/L	20000	20000	-	22800	24700	38700	54500	26900	29300	52800	68700		
7440-62-2	Vanadium	ug/L	14	-	-	ND	9	5.4	ND	ND	ND	12.2	10.3		
7440-66-6	Zinc	ug/L	2000^{+}	5000	-	23.2	1590	30.2	ND	ND	465	61	ND		

* = NYSDEC Ambient Water Quality Standards.

 $^{+}$ = Guidance value. ND = Not detected.

 $^{>}$ = Sum of iron and manganese should not exceed

500 ug/L NYSDEC or 300 ug/L NYSDOH.

 $J = Estimated \ value. \quad \ \ - = No \ standard \ identified.$

Boxed values exceed NYSDEC ambient water quality standrads.

Bold values exceed NYSDOH maximum contaminant levels.

Shaded value exceeds USEPA maximum contaminant level.

Inspection Item	Acceptable	Not Acceptable	Comments
Manholes	X		
Wet Wells	X		Water levels were measured ten times in 2005.
Wetlands	X		Continued growth of target vegetation. A slightly higher than normal water level was noted during the January, February, April, May, November, and December inspections. A slightly lower water level was noted during the June, July, August, and September inspections.
Perimeter Fence	X		Minor repairs were required to the fence and gates in 2005.
Condition of Roads	X		No erosion or other problems. Snow covered in winter months. Minor potholes and low areas were repaired in 2005.
Integrity of the Cap	X		Minor erosion noted. Snow covered February and March.
Drainage Ditches/Swales	X		Snow covered in February and March.
Gas Venting System	X		
Wells	Х		
Culverts	Х		Snow covered in February and March.
Vegetative Cover	X		Height of vegetation on cap noted high on 7/6/05, 8/4/05 and 9/3/05 and low on 1/4/05, 4/2/05, 5/2/05, 10/7/05, 11/6/05, and 12/10/05. Mowed in September 2005. Snow covered 2/3/05, and 3/9/05. Knee high 6/4/05.

Table 2.2 Monthly Site Inspection Results

	Elevation	12/5	/2000	1/8	/2001	2/1	2001	3/8	/2001	4/4	/2001	5/8/	2001	6/5/	/2001	7/2	/2001	8/1	/2001	9/5	/2001
Observation	Top of	Depth to	Elevation																		
Point	Casing	Water	(ft. msl)																		
	(ft. msl)	(ft)																			
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
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
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
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
WW A	-	2.50	-	2.67	-	2.33	-	1.13	-	2.29	-	1.83	-	2.17	-	1.58	-	1.83	-	-	-
WW B	-	2.20	-	2.42	-	1.96	-	1.09	-	1.79	-	2.17	-	1.92	-	1.50	-	2.00	-	1.92	-
WW C	-	1.50	-	2.42	-	1.70	-	0.92	-	2.04	-	2.00	-	1.67	-	1.33	-	2.08	-	2.33	-
WW D	-	1.70	-	-	-	1.50	-	0.99	-	1.08	-	1.50	-	1.33	-	2.0	-	1.25	-	2.25	-
NCR-3S	579.60	-	-	-	-	-	-	-	-	-	-	-	-	3.71	575.89	-	-	dry	-	dry	-
NCR-4S	577.88	-	-	-	-	-	-	-	-	-	-	-	-	4.28	573.60	-	-	dry	-	dry	-
NCR-5S	579.34	-	-	-	-	-	-	-	-	-	-	-	-	9.10	570.24	-	-	dry	-	dry	-
NCR-13S	577.15	-	-	-	-	-	-	-	-	-	-	-	-	7.05	570.10	-	-	7.85	569.30	7.80	569.35

Notes:

- = measurment not collected.

	Elevation	10/4	/2001	11/5	5/2001	12/1	1/2001	1/2/	/2002	2/4/	/2002	3/4/	/2002	4/1	/2002	5/3/	2002	6/4/	2002	7/2	/2002
Observation	Top of	Depth to	Elevation																		
Point	Casing	Water	(ft. msl)																		
	(ft. msl)	(ft)																			
East "A"	598.93	22.61	576.32	22.74	576.19	22.88	576.05	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
East "B"	596.23	19.22	577.01	19.36	576.87	19.44	576.79	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
East "C"	598.69	18.20	580.49	18.80	579.89	18.75	579.94	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
East "D"	593.20	12.24	580.96	12.74	580.46	12.94	580.26	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
WW A	-	1.83	-	2.33	-	2.08	-	1.17	-	2.17	-	1.67	-	2.00	-	2.00	-	2.17	-	1.50	-
WW B	-	1.58	-	1.50	-	2.08	-	1.00	-	2.00	-	1.25	-	1.33	-	1.67	-	2.00	-	1.58	-
ww c	-	1.25	-	2.00	-	1.58	-	1.50	-	1.42	-	1.58	-	1.50	-	1.83	-	1.25	-	1.67	-
WW D	-	2.00	-	2.08	-	1.33	-	1.50	-	1.00	-	1.42	-	1.17	-	1.58	-	1.50	-	1.92	-
NCR-3S	579.60	dry	-	5.10	574.50	4.64	574.96	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
NCR-4S	577.88	dry	-	4.51	573.37	3.92	573.96	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
NCR-5S	579.34	dry	-	dry	-	dry	-	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
NCR-13S	577.15	7.70	569.45	6.65	570.50	6.11	571.04	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

Notes:

- = measurment not collected.

	Elevation	8/7/	2002	9/6/	/2002	10/3	/2002	11/7	/2002	12/3	/2002	1/6	/2003	2/5/	/2003	3/6/	/2003	4/2	/2003	5/5	/2003
Observation	Top of	Depth to	Elevation																		
Point	Casing	Water	(ft. msl)																		
	(ft. msl)	(ft)																			
East "A"	598.93	22.65	576.28	22.78	576.15	28.48	570.45	23.25	575.68	23.36	575.57	23.48	575.45	23.51	575.42	23.65	575.28	23.75	575.18	23.81	575.12
East "B"	596.23	19.40	576.83	19.40	576.83	19.46	576.77	19.35	576.88	-	-	19.53	576.70	19.40	576.83	19.59	576.64	19.61	576.62	19.70	576.53
East "C"	598.69	18.95	579.74	18.92	579.77	18.99	579.70	19.30	579.39	19.35	579.34	18.82	579.87	19.11	579.58	18.99	579.70	19.07	579.62	18.98	579.71
East "D"	593.20	13.81	579.39	13.58	579.62	14.01	579.19	13.2	580.00	13.54	579.66	13.24	579.96	13.52	579.68	13.7	579.50	13.88	579.32	14.15	579.05
WW A	-	2.50	-	1.83	-	1.50	-	1.42	-	2.00	-	1.42	-	1.25	-	1.50	-	1.42	-	1.58	-
WW B	-	1.67	-	1.42	-	1.33	-	1.17	-	1.25	-	1.08	-	1.17	-	1.67	-	1.17	-	0.75	-
ww c	-	2.17	-	1.50	-	1.33	-	1.25	-	1.50	-	1.33	-	1.50	-	1.25	-	1.33	-	1.50	-
WW D	-	2.00	-	1.67	-	2.00	-	1.33	-	1.50	-	1.42	-	1.67	-	1.08	-	1.25	-	1.50	-
NCR-3S	579.60	5.90	573.70	dry	-	5.91	573.69	dry	-	4.46	575.14	3.84	575.76	4.06	575.54	4.55	575.05	4.39	575.21	4.39	575.21
NCR-4S	577.88	dry	-	dry	-	dry	-	dry	-	3.95	573.93	2.91	574.97	-	-	-	-	3.65	574.23	3.60	574.28
NCR-5S	579.34	dry	-	7.95	571.39	8.69	570.65	8.11	571.23	7.66	571.68	8.58	570.76								
NCR-13S	577.15	7.57	569.58	dry	-	7.78	569.37	dry	-	6.40	570.75	5.89	571.26	5.54	571.61	6.16	570.99	6.05	571.10	6.13	571.02

Notes:

- = measurment not collected.

	Elevation	6/5/	2003	7/1	/2003	8/11	/2003	9/2	2003	10/8	3/2003	11/1	2/2003	12/6	/2003	1/2/	2004	2/5/	2004	3/1/	/2004
Observation	Top of	Depth to	Elevation																		
Point	Casing	Water	(ft. msl)																		
	(ft. msl)	(ft)																			
East "A"	598.93	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	23.90	575.03	23.93	575.00	24.00	574.93
East "B"	596.23	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	NA	19.83	NA	NA	NA	NA	NA
East "C"	598.69	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	19.12	579.57	19.79	578.90	19.22	579.47
East "D"	593.20	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	13.9	579.30	14.52	578.68	14.11	579.09
WW A	-	1.33	-	1.33	-	1.17	-	1.42	-	1.33	-	2.00	-	1.33	-	1.58	-	1.17	-	2.17	-
WW B	-	1.25	-	1.42	-	1.50	-	1.50	-	1.17	-	1.42	-	1.67	-	1.33	-	NA	-	1.50	-
ww c	-	1.42	-	1.00	-	1.08	-	1.08	-	1.08	-	1.00	-	1.67	-	1.08	-	1.00	-	1.17	-
WW D	-	1.50	-	1.25	-	1.58	-	1.33	-	1.50	-	1.58	-	1.50	-	1.17	-	1.08	-	1.67	-
NCR-3S	579.60	4.41	575.19	5.80	573.80	5.92	573.68	dry	NA	dry	NA	4.45	575.15	4.24	575.36	4.11	575.49	4.21	575.39	3.19	576.41
NCR-4S	577.88	2.65	575.23	4.05	573.83	3.98	573.90	dry	NA	4.37	573.51	2.93	574.95	2.88	575.00	2.65	575.23	2.72	575.16	2.42	575.46
NCR-5S	579.34	8.08	571.26	9.26	570.08	10.12	569.22	10.95	568.39	dry	NA	10.40	568.94	8.11	571.23	7.53	571.81	8.34	571.00	7.01	572.33
NCR-13S	577.15	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	5.72	571.43	5.95	571.20	5.88	571.27

Notes:

- = measurment not collected.

	Elevation	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	8/2004	1/5	/2005
Observation	Top of	Depth to	Elevation																		
Point	Casing	Water	(ft. msl)																		
	(ft. msl)	(ft)																			
East "A"	598.93	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	24.20	574.73
East "B"	596.23	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	19.68	576.55
East "C"	598.69	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	19.60	579.09
East "D"	593.20	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	14.2	579.00
WW A	-	0.75	-	1.25	-	1.50	-	1.25	-	1.25	-	1.33	-	1.25	-	1.42	-	1.67	-	0.58	-
WW B	-	1.30	-	1.17	-	1.17	-	1.17	-	1.25	-	1.00	-	1.00	-	1.17	-	0.42	-	1.50	-
ww c	-	1.17	-	1.00	-	1.08	-	1.17	-	1.08	-	1.17	-	1.17	-	1.58	-	0.25	-	0.67	-
WW D	-	0.65	-	1.50	-	1.33	-	1.00	-	1.00	-	1.25	-	1.00	-	1.17	-	0.25	-	1.25	-
NCR-3S	579.60	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	1.82	577.78
NCR-4S	577.88	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	2.60	575.28
NCR-5S	579.34	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	5.46	573.88
NCR-13S	577.15	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	3.60	573.55

Notes:

- = measurment not collected.

	Elevation	2/3/	2005	3/9/	2005	4/2/	2005	6/4/	2005	7/6	/2005	8/4/	2005	9/3/	2005	10/7	/2005	12/10)/2005
Observation	Top of	Depth to	Elevation																
Point	Casing	Water	(ft. msl)																
	(ft. msl)	(ft)																	
East "A"	598.93	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	19.52	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	19.42	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	14.35	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	-	1.08	-	0.50	-	1.00	-	1.00	-	1.00	-	1.25	-	1.17	-	1.33	-	1.50	-
WW B	-	1.17	-	0.83	-	1.25	-	1.17	-	1.50	-	1.42	-	0.92	-	1.17	-	1.17	-
WW C	-	1.00	-	1.00	-	1.00	-	1.25	-	0.92	-	1.25	-	1.00	-	1.00	-	0.83	-
WW D	-	1.25	-	1.00	-	1.17	-	1.33	-	0.92	-	1.50	-	1.00	-	1.08	-	1.08	-
NCR-3S	579.60	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	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	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	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

Notes:

- = measurment not collected.

APPENDIX A CITY OF NORTH TONAWANDA INDUSTRIAL WASTEWATER DISCHARGE PERMIT COMPLIANCE SAMPLING RESULTS

ANALYTICAL RESULTS : NIAGARA COUNTY REFUSE SITE: Jan - Dec 2005

PARAMETER		PESULT mal	PESULT mal		PESIII T mal	PESIII T mal		PESULT ma/			PESIII T mal	PESIII T mal	COMP
	6 90	7 /Q	7 57	7 32	7 05	7 01	6 92	7 33	6 97	6.87	7 30	7 24	VES
	32	65	7.57	69	15	157	360	297	219	149	21	224	VES
	12	10	20	30	10	137	56	66	78	46	6	22 A	VES
BOD	8	7	20	17	14	72	15	17	18	18	16		VES
BOD	0.14	0 15	4	0.28	0.19	23	0.3	1.03	0.22	0.19	0.24	0.110	VES
	0.14	0.13	0.09	- 0.014	0.10	0.12	0.5 < 0.000	1.03	0.22	0.18	0.24	0.110	VEQ
PHENOLS	< 0.000	< 0.012	< 0.010	< 0.014	< 0.012	< 0.009	< 0.009	< 0.007	< 0.010	< 0.010	< 0.000	< 0.008	TES
ALUMINUM	< 0.58	< 0.58	< 0.58	***	< 0.55	< 0.55	< 0.55	< 0.50	0.412	0.137	1.024	0.058	YES
CHROMIUM	< 0.05	< 0.05	< 0.05	***	< 0.06	< 0.06	< 0.06	< 0.05	< 0.028	< 0.028	< 0.029	< 0.027	YES
LEAD	0.0798	0.0798	< 0.11	***	< 0.09	0.0942	0.1355	0.1511	< 0.025	< 0.025	< 0.028	< 0.025	YES
NICKEL	< 0.03	< 0.03	0.0506	***	< 0.05	0.0519	0.0519	0.0750	< 0.028	< 0.028	< 0.029	< 0.027	YES
ZINC	0.0894	0.0590	0.0514	***	< 0.02	0.0855	0.1020	0.0951	0.128	0.055	0.059	0.035	YES
IRON	1.8907	1.9603	1.3482	***	< 0.51	14.8636	15.9297	18.5704	14.690	11.730	1.439	0.812	YES
MAGNESIUM	124.00	158.00	156.00	9.80	94.20	172.00	193.00	201.00	184.00	133.00	105.00	130.00	YES
MANGANESE	0.61	0.32	0.32	0.20	0.27	1.20	0.77	0.98	0.72	0.78	0.41	0.29	YES
SODIUM	89.10	223.00	198.00	9.70	55.20	357.00	488.00	626.00	455.00	255.00	87.50	99.50	YES
Benzene	< 0.004	< 0.010	< 0.012	< 0.007	< 0.009	< 0.005	< 0.003	< 0.005	< 0.009	< 0.010	< 0.010	< 0.009	YES
Toluene	< 0.005	< 0.010	< 0.011	< 0.010	< 0.010	< 0.005	< 0.004	< 0.005	< 0.009	< 0.010	< 0.010	< 0.010	YES
Chlorobenzene	< 0.005	< 0.010	< 0.011	< 0.010	< 0.010	< 0.005	< 0.004	< 0.005	< 0.009	< 0.010	< 0.010	< 0.010	YES
Ethylbenzene	< 0.005	< 0.010	< 0.011	< 0.010	< 0.010	< 0.005	< 0.004	< 0.005	< 0.009	< 0.010	< 0.009	< 0.009	YES
Total Xylenes	< 0.010	< 0.020	< 0.022	****	< 0.019	< 0.010	< 0.008	< 0.010	< 0.017	< 0.020	< 0.019	< 0.019	YES
1,3 - Dichlorobenzene	< 0.005	< 0.010	< 0.009	< 0.012	< 0.010	< 0.005	< 0.004	< 0.005	< 0.009	< 0.010	< 0.010	< 0.010	YES
1,4-Dichlorobenzene	< 0.005	< 0.010	< 0.008	< 0.014	< 0.010	< 0.005	< 0.003	< 0.005	< 0.008	< 0.010	< 0.010	< 0.010	YES
1,2 - Dichlorobenzene	< 0.005	< 0.010	< 0.011	< 0.010	< 0.010	< 0.005	< 0.004	< 0.005	< 0.009	< 0.010	< 0.10	< 0.010	YES
Vinyl Chloride	0.028	< 0.010	< 0.011	0.009	0.018	< 0.005	0.036	< 0.005	< 0.007	< 0.009	< 0.007	< 0.010	YES
1,1-Dichloroethene	< 0.003	< 0.010	< 0.009	< 0.010	< 0.008	< 0.005	< 0.005	< 0.005	< 0.009	< 0.010	< 0.008	< 0.010	YES
Methylene chloride	< 0.003	< 0.010	< 0.008	< 0.011	< 0.008	< 0.005	< 0.006	< 0.005	< 0.009	< 0.010	< 0.008	< 0.011	YES
trans-1,2 Dichlorobenzene	< 0.004	< 0.010	< 0.009	****	****	****	****	< 0.005	< 0.009	< 0.010	< 0.009	< 0.010	YES
1,1-Dichloroethane	< 0.003	< 0.010	< 0.010	< 0.011	< 0.008	< 0.005	< 0.005	< 0.005	< 0.009	< 0.010	< 0.009	< 0.010	YES
Chloroform	< 0.003	< 0.010	< 0.010	< 0.012	< 0.008	< 0.005	< 0.005	< 0.005	< 0.009	< 0.010	< 0.009	< 0.010	YES
1,1,1-Trichloroethane	< 0.004	< 0.010	< 0.009	< 0.024	< 0.010	< 0.005	< 0.005	< 0.005	< 0.009	< 0.010	< 0.009	< 0.010	YES
3 CI - ethylene	0.005	< 0.010	< 0.012	0.124	< 0.010	< 0.005	< 0.004	< 0.005	< 0.009	< 0.011	< 0.009	< 0.010	YES
TOTAL FLOW (gallons)	48,100	8,300	13,600	9,200	31,305	2,300	1,800	1,200	1,300	4,000	2,470	14,530	
SAMPLE DATE	1/7/2005	2/3/2005	3/3/2005	4/22/2005	5/6/2005	6/10/2005	7/8/2005	8/5/2005	9/9/2005	10/7/2005	11/11/2005	12/9/2005	
*** Lost 4/22/05 metals sampl	e.	**** poor QC fo	r total Xylenes -	cannot report				Started using	ICP for Total N	letals analysis	in Septembe	r 2005.	

***** Ran trans-1,2 DCB on three month "trial" basis (Jan -Mar). Started analyzing on a "permanent" basis in Aug. 2005.

APPENDIX B ANALYTICAL DATA



STL Buffalo

10 Hazelwood Drive, Suite 106 Amherst, NY 14228

Tel: 716 691 2600 Fax: 716 691 7991 www.stl-inc.com

ANALYTICAL REPORT

Job#: <u>A05-4411</u>

SIL Project#: NY1A8791 Site Name: <u>City of North Tonawanda</u> Task: Niagara County Refuse Site

> Paul Drof City of North Tonawanda 830 River Road North Tonawanda, NY 14120

CC: Eric Felzer

STL Buffalo

Project Manager

05/17/2005

STL Buffalo Current Certifications

STATE	Program	Cert # / Lab ID
Arkansas	SDWA, CWA, RCRA, SOIL	03-054-D/88-0686
California	NELAP SDWA, CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida	NELAP RCRA	E87672
Georgia	SDWA	956
Illinois	NELAP SDWA, CWA, RCRA	200003
lowa	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	NY044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	CWA, RCRA	036-999-337
New Hampshire	NELAP SDWA, CWA	233701
New Jersey	SDWA, CWA, RCRA, CLP	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA	10026
North Carolina	CWA	411
North Dakota	SDWA, CWA, RCRA	R-176
Oklahoma	CWA, RCRA	9421
Pennsylvania	Env. Lab Reg.	68-281
South Carolina	RCRA	91013
USDA	FOREIGN SOIL PERMIT	S-41579
Virginia	SDWA	278
Washington	CWA	C254
West Virginia	CWA	252
Wisconsin	CWA	998310390

SAMPLE DATA SUMMARY PACKAGE

4/437

SAMPLE SUMMARY

				SAMPLED		RECEIVED	
LAB SAMPLE ID	CLIENT	SAMPLE ID	MATRIX	DATE	TIME	DATE	TIME
A5441101	NCR 13S		GW	05/03/2005	12:30	05/03/2005	15:15
A5441101MS	NCR 13S		GWI	05/03/2005	12:30	05/03/2005	15:15
A5441101SD	NCR 13S		GW	05/03/2005	12:30	05/03/2005	15:15
A5441102	NCR 3S		GW	05/03/2005	13:10	05/03/2005	15:15
A5441103	NCR 4S		GW	05/03/2005	13:45	05/03/2005	15:15
A5441104	NCR 5S		GW	05/03/2005	14:30	05/03/2005	15:15

METHODS SUMMARY

Job#: <u>A05-4411</u>

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

PARAMETER	ANALYTICAL METHOD		
METHOD 8260 - SELECT VOLATILE ORGANICS	SW8463 8260		
8270 - SELECT SEMI-VOLATILE ORGANICS	SW8463 8270		
Aluminum - Total	SW8463 6010		
Antimony - Total	SW8463 6010		
Barium - Total	SW8463 6010		
Beryllium - Total	SW8463 6010		
Cadmium - Total	SW8463 6010		
Calcium - Total	SW8463 6010		
Chromium - Total	SW8463 6010		
Cobalt - Total	SW8463 6010		
Copper - Total	SW8463 6010		
Iron - Total	SW8463 6010		
Lead - Total	SW8463 6010		
Magnesium - Total	SW8463 6010		
Manganese - Total	SW8463 6010		
Mercury - Total	SW8463 7470		
Nickel - Total	SW8463 6010		
Potassium - Total	SW8463 6010		
Selenium - Total	SW8463 6010		
Silver - Total	SW8463 6010		
Sodium - Total	SW8463 6010		
Thallium - Total	SW8463 6010		
Vanadium - Total	SW8463 6010		
Zinc - Total	SW8463 6010		

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A05-4411

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

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. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A05-4411

Sample Cooler(s) were received at the following temperature(s); 9.0 °C Samples were received at a temperature of 9°C. These samples were analyzed as per instructions from the client. Based on EPA data validation guidelines, there is no impact on data usability.

GC/MS Volatile Data

All samples were preserved to a pH less than 2.

Initial calibration standard curve A5I0001493-1 exhibited the %RSD of several compounds as greater than 15%. However, the mean RSD of all compounds is 11.25%.

GC/MS Semivolatile Data

No deviations from protocol were encountered during the analytical procedures.

Metals Data

The recovery of sample NCR 13S Post Spike exceeded quality control limits for Calcium, Magnesium, and Sodium. However, the LFB (A5B0641401) was acceptable, therefore, no corrective action was necessary.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected at or above the reporting limit.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank, as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
- P This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- ¹ Indicates coelution.
- Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected at or above the reporting limit.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
- E Indicates a value estimated or not reported due to the presence of interferences.
- Indicates analysis is not within the quality control limits.
- Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

METHOD 8260 - SELECT VOLATILE ORGANICS ANALYSIS DATA SHEET

8/437

Client No.

Lab Name (UIII Duffe) -		NCR 13S	
Lad Name: <u>SIL BUITALO</u> Contract:			
Lab Code: <u>RECNY</u> Case No.: SAS No.:	SDG No.:		
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	<u>A5441101</u>	
Sample wt/vol: _25.00 (g/mL) ML	Lab File ID:	L7962.RR	
Level: (low/med) <u>LOW</u>	Date Samp/Recv:	05/03/2005	05/03/2005
% Moisture: not dec Heated Purge: \underline{N}	Date Analyzed:	<u>05/12/2005</u>	
GC Column: <u>DB-624</u> ID: <u>0.53</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume: (uL)	Soil Aliquot Vol	ume:	_ (uL)
	CONCENTRATION UNITS:		
CAS NO. COMPOUND	(ug/L or ug/Kg)	UG/L	Q
67-64-1Acetone		25 11	
71-43-2Benzene		0.70 U	
75-27-4Bromodichloromethane		1.0 U	
75-25-2Bromoform		1.0 U	
74-83-9Bmmmethane		1.0	
78-93-32-Bitanone			
75-15-0Carbon Digulfide			
56-23-5Carbon Totrachlorido			
100 00-7 Chlombongeno			
124-49-1 Dibromochi ammothana		1.0	
75 00 2 Chlomothana			
CT CC 2 Chlomform			
67-66-3Chloroform			
74-87-3Chioromethane			
75-34-31,1-Dichloroethane		1.0 0	
107-06-21,2-Dichloroethane		1.0 U	
75-35-41,1-Dichloroethene		1.0 U	
540-59-01,2-Dichloroethene (Total)		2.0 U	
78-87-51,2-Dichloropropane		1.0 U	
142-28-91,3-Dichloropropane		1.0 U	
100-41-4Ethylbenzene		5.0 U	
591-78-62-Hexanone		5.0 U	
75-09-2Methylene chloride		5.0 U	
108-10-14-Methyl-2-pentanone		5.0 U	
100-42-5Styrene		1.0 U	
630-20-61,1,1,2-Tetrachloroethane		1.0 U	
127-18-4Tetrachloroethene		5.0 U	
108-88-3Toluene		5.0 U	
71-55-61,1,1-Trichloroethane		1.0 U	
79-00-51,1,2-Trichloroethane		1.0 U	
79-01-6Trichloroethene	······································	5.0 U	
75-01-4Vinyl chloride		2.0 U	
1330-20-7Total Xylenes		5.0 U	
10061-02-6trans-1.3-Dichloropropene		1.0 11	
10061-01-5cis-1.3-Dichloropropene		1.0 1	
			1

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METHOD 8260 - SELECT VOLATILE ORGANICS ANALYSIS DATA SHEET

9/437

Client	No.
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ab Nama. CTT Duff-1-	Comber		NCR 3S	
TTT MAINE: DITI RULLATO	contract:		······	
Lab Code: <u>RECNY</u> Ca	se No.: SAS No.:	SDG No.:		
Matrix: (soil/water) j	WATER	Lab Sample ID:	<u>A5441102</u>	_
Sample wt/vol:	<u>25.00</u> (g/mL) <u>ML</u>	Lab File ID:	L7965.RR	
Level: (low/med) j	LOW	Date Samp/Recv:	05/03/200	<u>)5 05/03/2005</u>
Moisture: not dec.	Heated Purge: N	Date Analyzed:	05/13/200	<u>)5</u>
90 Column: <u>DB-624</u>	ID: <u>0.53</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume: _	(uL)	Soil Aliquot Vol	ume:	(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/L	Q
67-64-171-43-275-27-475-25-274-83-975-15-075-15-075-25-25-275-25-25-25-25-25-25-25-25-25-25-25-25-25	Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon Disulfide Carbon Tetrachloride Carbon Tetrachloride Chlorobenzene Dibromochloromethane Chlorom		25 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	
71-55-6 79-00-5 79-01-6 75-01-4 1330-20-7 10061-02-6 10061-01-5	-1,1,1-Trichloroethane -1,1,2-Trichloroethane -Trichloroethene -Vinyl chloride -Total Xylenes -trans-1,3-Dichloropropene -cis-1,3-Dichloropropene		1.0 1.0 5.0 2.0 1.2 1.0 1.0	U U U J U J
METHOD 8260 - SELECT VOLATILE ORGANICS ANALYSIS DATA SHEET

10/437

Client No.

I ab Nome, OTT Duffela		NCR 45	3
Lao Nalle: <u>SIL BUITALO</u> Contract:		k	
Lab Code: <u>RECNY</u> Case No.: SAS No.:	SDG No.:		
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	<u>A544110</u>)3
Sample wt/vol: 25.00 (g/mL) <u>ML</u>	Lab File ID:	<u>L7966.F</u>	<u>R</u>
Level: (low/med) <u>LOW</u>	Date Samp/Recv	: <u>05/03/2</u>	<u>005 05/03/2005 05/03</u>
% Moisture: not dec Heated Purge: \underline{N}	Date Analyzed:	05/13/2	2005
GC Column: <u>DB-624</u> ID: <u>0.53</u> (mm)	Dilution Facto	r: <u>1.0</u>	00
Soil Extract Volume: (uL)	Soil Aliquot V	olume:	(uL)
CAS NO. COMPOUND	CONCENTRATION UNIT: (ug/L or ug/Kg)	S: <u>UG/L</u>	Q
71-43-2Benzene $75-27-4Bromodichloromethane$ $75-25-2Bromoform$ $74-83-9Bromomethane$ $78-93-32-Butanone$ $75-15-02-Butanone$ $75-0-32-Butanone$ $75-0-3Carbon Tetrachloride 108-90-7Carbon Tetrachloride 108-90-7Chlorobenzene 75-00-3Chlorobenzene 75-00-3Chlorobenzene 75-34-31, 1-Dichlorobethane 107-06-21, 2-Dichlorobethane 75-35-41, 2-Dichloropethane 78-87-51, 2-Dichloropethane 142-28-91, 3-Dichloropropane 100-41-4Ethylbenzene 591-78-62-Hexanone $		$\begin{array}{c} 0.70\\ 1.0\\ 1.0\\ 1.0\\ 10\\ 1.0\\ 1.0\\ 1.0\\ 1.0$	U U U U U U U U U U U U U U U U U U U
/5-09-2Methylene chloride 108-10-14-Methyl-2-pentanone 100-42-5Styrene 630-20-61,1,1,2-Tetrachloroethane 127-18-4Tetrachloroethane 108-88-3Toluene 71-55-61,1,1-Trichloroethane 79-00-51,1,2-Trichloroethane 79-01-6Trichloroethane 79-01-6Vinyl chloride 1330-20-7Total Xylenes 10061-02-6trans-1,3-Dichloropropene		5.0 5.0 1.0 5.0 1.0 1.0 5.0 2.0 5.0 1.0 1.0 1.0 1.0 1.0 1.0	U U U U U U U U U U U U U U U U U

METHOD 8260 - SELECT VOLATILE ORGANICS ANALYSIS DATA SHEET

11/437

					C.	Lient I
	Contro at a		r	KR 5S		
2						
ase No.:	SAS No.:	SDG No.:				
WATER		Lab Sample	ID: <u>A</u>	44110	<u>4</u>	
_ <u>25.00</u> (g/mL) M	<u>Æ</u>	Lab File I	D: <u>17</u>	967.R	R	-
LOW		Date Samp/	Recv: <u>05</u>	/03/2	<u>005 05</u>	/03/20
Heated	Purge: <u>N</u>	Date Analy	zed: <u>05</u>	/13/2	005	
_ ID: <u>0.53</u> (m	n)	Dilution F	actor:	1.00	<u>)</u>	
		Soil Aliqu	ot Volume	:		(uL)
		-				
COMPOUND		CONCENTRATION (ug/L or ug/K	UNITS: g) <u>UG/</u>	<u>L</u>	Q	
Acetone	····		25		U	7
Benzene			0	.70	U	
Bromodichloro	methane		1	.0	U	
Bromoform			1	.0	U	
Bromomethane			1	.0	ט	
2-Butanone	· · · · · · · · · · · · · · · · · · ·		10		U	
Carbon Disulf	ide		1	.0	U	ł
Carbon Tetrac	hloride		1	.0	U	1 ·
Chlorobenzene			5	.0	Ū	
Dibromochlorr	methane		1	0	ITT	
Chlomethane		·····	1	.°	TT .	
Chloroform			1	0	TT	1
Chloromethane			1	0	11	1
	thane		1	.0	UT IT	
1.2 Dichloroe			1	.0	TT	1
-1,2-Dichloroe	thono		1	.0	10	
1.2 Dichloroe	thene (Total)		2 1	.0		
1,2-Dicilioroe	uleile (10tal)_			.0		
1,2-Diciliorop	ropane		1	.0		
1,3-DICILLOLOD	ropane			.0		
Eurylbenzene	<u> </u>		5	.0		
2-Hexanone			5	.0		
Metnylene chi	oride		5	.0		
4-Methyl-2-pe	ntanone		5	.0	U	
styrene			1	.0	lu I	
1,1,1,2-Tetra	chloroethane		1	.0	U	1
Tetrachloroet	hene		5	.0	U	·
Toluene			5	.0	טן	
1,1,1-Trichlo	roethane		1	.0	טן	1
1,1,2-Trichlo	roethane		1	.0	U	
Trichloroethe	ne		5	.0	U	1
Vinyl chloride	3		2	.0	U	
Total Xylenes			5	.0	U	
trans-1,3-Dic	loropropene		1	.0	U	1
	~ ~		1	0	ITT	1
	Q Q ase No.:	Q Contract:	2 Contract:	P Contract: SDG No.: No.: SDG No.: No.:	g Contract:	P Contract: NRR 5S ase No.:

Client No.

12/437

I ah Nama (MIT Duffa)				NCR 13S
Lab Malle: <u>SIL Bullar</u>		ntract:		
Lab Code: <u>RECNY</u> C	ase No.:	SAS No.:	SDG No.:	
Matrix: (soil/water)	WATER		Lab Sample ID:	<u>A5441101</u>
Sample wt/vol:	<u>1060.0</u> (g/mL) <u>ML</u>	į	Lab File ID:	W02937.RR
Level: (low/med)	LOW		Date Samp/Recv:	05/03/2005 05/03/2005
% Moisture:	decanted: (Y/N)	<u>N</u>	Date Extracted:	05/03/2005
Concentrated Extract	Volume: <u>1000</u> (uL)		Date Analyzed:	05/04/2005
Injection Volume:	<u>1.00</u> (uL)	7	Dilution Factor:	1.00

GPC Cleanup: (Y/N) <u>N</u> pH: <u>6.0</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q
95-50-1	1,2-Dichlorobenzene		9	U
541-73-1	1,3-Dichlorobenzene		9	U
106-46-7	1,4-Dichlorobenzene		9	U
108-95-2	Phenol		9	U
95-48-7	2-Methylphenol		9	U
108-39-4	3-Methylphenol		9	U
106-44-5	4-Methylphenol		9	ប

Client No.

13/437

Lab Nama, CTT Duffala	Contract		NCR 3S
LaD Nalle: 515 Buildio			اور پردان دارد می معاد می بر مربع می معاد می ارد اور اور اور اور اور اور اور اور اور اور
Lab Code: <u>RECNY</u> Case	No.: SAS No.:	SDG No.:	
Matrix: (soil/water) WAT	IER	Lab Sample ID:	<u>A5441102</u>
Sample wt/vol: <u>106</u>	<u>50.0</u> (g/mL) <u>ML</u>	Lab File ID:	W02938.RR
Level: (low/med) LOW	<u>1</u>	Date Samp/Recv:	05/03/2005 05/03/2005
* Moisture: dec	canted: (Y/N) <u>N</u>	Date Extracted:	05/03/2005
Concentrated Extract Vol	Lume:_1000(uL)	Date Analyzed:	05/04/2005
Injection Volume: 1.0	<u>)0</u> (uL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) N	pH: <u>6.0</u>		

_ ____

CAS NO.	COMPOUND	CONCENTRATION UNI (ug/L or ug/Kg)	TS: <u>UG/L</u>	Q
95-50-1 541-73-1 106-46-7 108-95-2 95-48-7 108-39-4 106-44-5	1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Phenol 2-Methylphenol 3-Methylphenol 4-Methylphenol		9 9 9 9 9 9 9	ប ប ប ប ប ប

Client No.

14/437

				NCR 4S
Lab Name: <u>STL Buffal</u>	o Contra	act:		
Lab Code: <u>RECNY</u> C	ase No.: SAS	3 No.:	SDG No.:	
Matrix: (soil/water)	WATER		Lab Sample ID:	<u>A5441103</u>
Sample wt/vol:	<u>1050.0</u> (g/mL) <u>ML</u>		Lab File ID:	W02939.RR
Level: (low/med)	LOW		Date Samp/Recv:	05/03/2005 05/03/2005
% Moisture:	decanted: (Y/N) <u>N</u>		Date Extracted:	05/03/2005
Concentrated Extract	Volume: <u>1000</u> (uL)		Date Analyzed:	05/04/2005
Injection Volume:	1.00 (uL)		Dilution Factor:	1.00

GPC Cleanup: (Y/N) N pH: <u>6.0</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>WG/L</u>	Q
95-50-1 541-73-1	1,2-Dichlorobenzene		10 10	U U
106-46-7	1,4-Dichlorobenzene		10 10	ប ប
95-48-7	2-Methylphenol		10 10	U U
100-44-5	4-metnyipnenol		10	U

Client No.

15/437

				NCR 5S
Lab Name: STL Buffalo	2 Co	ntract:	· .	
Lab Code: <u>RECNY</u> Ca	ase No.:	SAS No.:	SDG No.:	
Matrix: (soil/water)	WATER		Lab Sample ID:	<u>A5441104</u>
Sample wt/vol:	<u>1060.0</u> (g/mL) <u>ML</u>		Lab File ID:	W02940.RR
Level: (low/med)	LOW		Date Samp/Recv:	05/03/2005 05/03/2005
% Moisture:	decanted: (Y/N)	N	Date Extracted:	05/03/2005
Concentrated Extract	Volume: <u>1000</u> (uL)		Date Analyzed:	05/04/2005
Injection Volume:	<u>1.00</u> (വL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N) N	pH: <u>6.0</u>			

CAS NO.	COMPOUND	CONCENTRATION U (ug/L or ug/Kg	NITS: j) <u>UG/L</u>	Q
95-50-1	-1,2-Dichlorobenzene		9	บ
541-73-1	-1,3-Dichlorobenzene		9	บ
106-46-7	-1,4-Dichlorobenzene		9	บ
108-95-2	-Phenol		9	บ
95-48-7	-2-Methylphenol		9	บ
108-39-4	-3-Methylphenol		9	บ
106-44-5	-4-Methylphenol		9	บ

STL BUF	'FALO					
	- <u> </u>	City of North	Tonawanda Waste H20 Treatm -1-	ent Plant		
		INO	RGANIC ANALYSIS DATA SHEET	SAMPLE	NO.	
				NCR 13	S	
Contract:	NY01-078			<u> </u>		
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-4411	
Matrix (so	il/water):	WATER	Lab Sample ID:	AD522062		

Date Received: 5/3/2005

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Concentration Units (ug/L or mg/kg dry weight): UG/L

Level (low/med):

LOW

	Construction of the second				
CAS No.	Analyte	Concentration	C	Q	м
7429-90-5	Aluminum	563	1		P
7440-36-0	Antimony	20.0	υ		P
7440-39-3	Barium	63.4	T		P
7440-41-7	Beryllium	2.0	υ	1	P
7440-43-9	Cadmium	1.0	ח]	P
7440-70-2	Calcium	186000	1		P
7440-47-3	Chromium	11.0	1		P
7440-48-4	Cobalt	4.0	ען	l	P
7440-50-8	Copper	10.0	ש		P
7439-89-6	Iron	1310	1	1	P
7439-92-1	Lead	5.0	ע		P
7439-95-4	Magnesium	86100	1	1	P
7439-96-5	Manganese	103	Ι	1	P
7440-02-0	Nickel	14.4	、		P
7440-09-7	Potassium	2290	1	1	P
7782-49-2	Selenium	15.0	ΠΩ	1	P
7440-22-4	Silver	3.0	<u>α</u>		P
7439-97-6	Mercury	0.200	םן		CV
7440-23-5	Sodium	54500		1	P
7440-28-0	Thallium	20.0	ש		P
7440-62-2	Vanadium	5.0	ען		P
7440-66-6	Zinc	20.0	U		P

Color Before:	COLORLESS	Clarity Before:	CLEAR	Texture:	NONE
Color After:	COLORLESS	Clarity After:	CLEAR	Artifacts:	
Comments:					

	STL	, B	U	FF	7 A	LO
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Citv of North Tonawanda Waste H20 Treatment Plant

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INORGANIC ANALYSIS DATA SHEET

			INUKGANIC ANALYSIS DATA SHEET	SAMPLE	NO.
Contract.	NT101 070			NCR 35	
Contract:	NY01-078				J
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-4411
Matrix (soi	l/water):	WATER	Lab Sample ID;	AD522063	
Level (low/	(med): LOW	1	Date Received:	5/3/2005	

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	С	Q	M
7429-90-5	Aluminum	1260	1	1	P
7440-36-0	Antimony	20.0	ש		P
7440-39-3	Barium	51.7		1	P
7440-41-7	Beryllium	2.0	ប		P
7440-43-9	Cadmium	1.0	ש		P
7440-70-2	Calcium	151000			P
7440-47-3	Chromium	30.6		I	P
7440-48-4	Cobalt	4.0	σ		P
7440-50-8	Copper	23.6			P
7439-89-6	Iron	6590			P
7439-92-1	Lead	5.0	ש		P
7439-95-4	Magnesium	87200			P
7439-96-5	Manganese	564			P
7440-02-0	Nickel	44.7	1		P
7440-09-7	Potassium	2470		1	P
7782-49-2	Selenium	15.0	ם	1	P
7440-22-4	Silver	3.0	ש	1	P
7439-97-6	Mercury	0.200	υ		CV
7440-23-5	Sodium	22800	1	1	P
7440-28-0	Thallium	20.0	ש		P
7440-62-2	Vanadium	5.0	ש		P
7440-66-6	Zinc	23.2			P

Color Before	COLORLESS	Clarity Before:	CLEAR	Texture:	NONE
Color After:	COLORLESS	Clarity After:	CLEAR	Artifacts:	
Comments:	19 				
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STL BUF	FALO				
*=	<u> </u>	City of No	orth Tonawanda Waste H20 Treatme	ent Plant	
			INORGANIC ANALYSIS DATA SHEET	SAMPLI	3 NO.
				NCR 4S	
Contract:	NY01-078			L	
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-4411
Matrix (so	il/water):	WATER	Lab Sample ID:	AD522064	

Level (low/med):

LOW

Concentration Units (ug/L or mg/kg dry weight): UG/L

Date Received: 5/3/2005

the second se					
CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17000	1		P
7440-36-0	Antimony	20.0	ש	1	P
7440-39-3	Barium	134	Ī		P
7440-41-7	Beryllium	2.0	υ	1	P
7440-43-9	Cadmium	1.0	lΩ		P
7440-70-2	Calcium	130000	1	I	P
7440-47-3	Chromium	14.9			P
7440-48-4	Cobalt	4.0	ש	I	P
7440-50-8	Copper	33.1			P
7439-89-6	Iron	59600		1	P
7439-92-1	Lead	27.2		<u> </u>	₽
7439-95-4	Magnesium	39600			P
7439-96-5	Manganese	441			P
7440-02-0	Nickel	15.3			P
7440-09-7	Potassium	12900			₽
7782-49-2	Selenium	15.0	μ		P
7440-22-4	Silver	3.0	ש		P
7439-97-6	Mercury	0.200	σ		CV
7440-23-5	Sodium	24700			P
7440-28-0	Thallium	20.0	<u>σ</u>]	P
7440-62-2	Vanadium	9.0	1		P
7440-66-6	Zinc	1590	1		P

STL BUFFALO

City of North Tonawanda Waste H20 Treatment Plant

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INORGANIC ANALYSIS DATA SHEET

			INORGANIC ANALYSIS DATA SHEET	SAMPLE NO.	
Contract.	NV01-078			NCR 5S	
contract.	MI01-078			·····	
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-4411
Matrix (so:	il/water):	WATER	Lab Sample ID;	AD522065	
Level (low,	/med): <u>LO</u>	W	Date Received:	5/3/2005	

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	С	Q	M
7429-90-5	Aluminum	3880	1	1	P
7440-36-0	Antimony	20.0	ש	1	P
7440-39-3	Barium	148	1	1	P
7440-41-7	Beryllium	2.0	ש		P
7440-43-9	Cadmium	1.0	שן		P
7440-70-2	Calcium	106000	1		P
7440-47-3	Chromium	26.4		ļ	P
7440-48-4	Cobalt	4.0	ש		P
7440-50-8	Copper	19.0			P
7439-89-6	Iron	3190		l	P
7439-92-1	Lead	5.0	σ		P
7439-95-4	Magnesium	74700	1	ł	P
7439-96-5	Manganese	115	1	l	P
7440-02-0	Nickel	26.0			P
7440-09-7	Potassium	1690	1		P
7782-49-2	Selenium	15.0	υ	ł	P
7440-22-4	Silver	3.0	שן		P
7439-97-6	Mercury	0.200	σ		CV
7440-23-5	Sodium	38700	1		P
7440-28-0	Thallium	20.0	۱n		P
7440-62-2	Vanadium	5.4	1		P
7440-66-6	Zinc	30.2			P

Color	Before:	COLORLESS	Clarity Before:	CLOUDY	Texture:	NONE
Color	After:	COLORLESS	Clarity After:	CLOUDY	Artifacts:	
Commen	its:					

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Citv of North Tonawanda Waste H20 Treatment Plant -5B-

POST DIGEST SPIKE SAMPLE RECOVERY

					SAMPLE NO.	
				NCR 135A	L	
Contract:	NY01-078					
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-4411	_
Matrix (so	il/water):	WATER	Level	(low/med):	LOW	

	-							
Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR)	с	Spike Added (SA)	%R	Q	м
Aluminum	75 - 125	11918.22	563.45		10000.0	113.5		P
Antimony	75 - 125	211.41	20.00	U	200.0	105.7		P
Barium	75 - 125	287.93	63.44		200.0	112.2		P
Beryllium	75 - 125	199.22	2.00	υ	200.0	99.6		₽
Cadmium	75 - 125	197.08	1.00	U	200.0	98.5		P
Calcium	75 - 125	204217.80	185931.50		10000.0	182.9	k	P
Chromium	75 - 125	209.50	11.05		200.0	99.2		P
Cobalt	75 - 125	197.68	4.00	υ	200.0	98.8		P
Copper	75 - 125	215.24	10.00	υ	200.0	107.6		P
Iron	75 - 125	11337.08	1312.41		10000.0	100.2		P
Lead	75 - 125	200.73	5.00	υ	200.0	100.4		P
Magnesium	75 - 125	100448.80	86051.86		10000.0	144.0	ł	P
Manganese	75 - 125	308.34	102.96		200.0	102.7		P
Nickel	75 - 125	211.12	14.45		200.0	98.3		P
Potassium	75 - 125	14717.90	2287.12		10000.0	124.3		P
Selenium	75 - 125	205.32	15.00	U	200.0	102.7		P
Silver	75 - 125	54.12	3.00	υ	50.0	108.2		P
Sodium	75 - 125	67908.06	54484.71		10000.0	134.2	t I	₽
Thallium	75 - 125	206.20	20.00	U	200.0	103.1		P
Vanadium	75 - 125	207.77	5.00	υ	200.0	103.9		P
Zinc	75 - 125	200.01	20.00	U	200.0	100.0		P

Concentration Units: ug/L

METHOD 8260 - SELECT VOLATILE ORGANICS WATER SURROGATE RECOVERY

	Lab Name: <u>STL Buffal</u>	2	(Contract	:					
	Lab Code: <u>RECNY</u>	Case No.:		SAS No.	:	-	SDG No.:	·		
	Client Sample ID	Lab Sample ID	BFB %REC #	DCE %REC #	TOL %REC #				 	TOT OUT
12345678	MSB10 NCR 13S NCR 13S NCR 13S NCR 13S NCR 3S NCR 4S NCR 5S VBLK10	A5B0707101 A5441101 A5441101MS A5441101SD A5441102 A5441103 A5441104 A5B0707102	92 86 84 81 83 84 80 86	97 92 95 100 99 99 102 89	96 89 87 89 92 90 94 92					0 0 0 0 0 0 0 0

QC LIMITS

BFB	=	p-Bromofluorobenzene	(73-117)
DCE	~	1,2-Dichloroethane-D4	(72-143)
TOL	=	Toluene-D8	(76-116)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

21/437

8270 - SELECT SEMI-VOLATILE ORGANICS WATER SURROGATE RECOVERY

	Lab Name: <u>STL Buffal</u>	<u>0</u>	1	Contract	:						
	Lab Code: <u>RECNY</u>	Case No.:		SAS No.	:	_	SDG No.:				
	Client Sample ID	Lab Sample ID	2FP %REC #	FBP %REC #	NBZ %REC #	PHL %REC #	TBP %REC.#	TPH %rec #			TOT OUT
1	Motoly Coiks Blank		******	======	232225	2222222	22552222	2222223	=======	*=====	===
2	Method Blank	A580640807	40	87	78	32	92	92			ŏ
3	NCR 13S	A5441101	37	76	68	25	93	73			Ō
4	NCR 3S	A5441102	32	70	59	22	92	70			0
5	NCR 4S	A5441103	40	68	65	29	83	55			0
6	NCR 5S	A5441104	40	79	71	27	92	77			0

QC LIMITS

2FP	=	2-Fluorophenol	(21-120)
FBP	=	2-Fluorobiphenyl	(21-120)
NBZ	=	Nitrobenzene-D5	(52-120)
PHL	=	Phenol-D5	(13-120)
TBP	#	2,4,6-Tribromophenol	(62-133)
TPH	=	p-Terphenyl-d14	(36-138)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

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METHOD 8260 - SELECT VOLATILE ORGANICS WATER MATRIX SPIKE BLANK RECOVERY

Lab Name: STL Buffalo

Contract: Lab Samp ID: A5B0707102

Lab Code: <u>RECNY</u> Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix Spike - Client Sample No.: VBIK10

COMPOUND	SPIKE	MSB	MSB	QC
	ADDED	CONCENTRATION	%	LIMITS
	UG/L	UG/L	REC #	REC.
1,1-Dichloroethene	10.0	8.51	85	65 - 138
Trichloroethene	10.0	9.41	94	71 - 120
Benzene	10.0	9.07	91	67 - 126
Toluene	10.0	9.31	93	71 - 120
Chlorobenzene	10.0	9.41	94	74 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike recovery: ____0 out of ___5 outside limits

Comments: ____

23/437

METHOD 8260 - SELECT VOLATILE ORGANICS WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: <u>STL Buffalo</u>

Contract: _____

Lab Samp ID: <u>A5441101</u>

Lab Code: <u>RECNY</u>

SAS No.: _____

SDG No.: _____

Matrix Spike - Client Sample No.: <u>NCR 135</u>

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	10.0	0	10.3	104	65 - 138
Irichloroethene	10.0	0	10.9	109	71 - 120
Benzene	10.0	0	10.4	105	67 - 126
Toluene	10.0	0	9.58	96	71 - 120
Chlorobenzene	10.0	0	9.32	93	74 - 120

COMPOUND	SPIKE ADDED UG/L	MSD CONCENTRATION UG/L	MSD % REC #	% RPD #	Q RPD	C LIMITS REC.
1,1-Dichloroethene Trichloroethene Benzene Toluene Chlorobenzene	10.0 10.0 10.0 10.0 10.0 10.0	10.6 11.3 11.0 10.1 9.97	106 113 110 101 100	2 4 5 5 7	16 14 11 15 13	65 - 138 71 - 120 67 - 126 71 - 120 74 - 120

Column to be used to flag recovery and RPD values with an asterisk

Case No.: _____

* Values outside of QC limits

RPD: ____O out of ____5 outside limits Spike recovery: ____O out of ____10 outside limits

Comments:

24/437

8270 - SELECT SEMI-VOLATILE ORGANICS WATER MATRIX SPIKE BLANK RECOVERY

 Lab Name:
 STL Buffalo
 Contract:
 Lab Samp ID:
 A5B0640802

 Lab Code:
 RECNY
 Case No.:
 SDG No.:
 SDG No.:

Matrix Spike - Client Sample No.: Method Blank

COMPOUND	SPIKE	MSB	MSB	QC
	ADDED	CONCENTRATION	%	LIMITS
	UG/L	UG/L	REC #	REC.
Phenol	100	27.8	28	16 - 120
1,4-Dichlorobenzene	100	41.4	41	28 - 120

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Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike recovery: ____0 out of ____2 outside limits

Comments:

METHOD 8260 - SELECT VOLATILE ORGANICS METHOD BLANK SUMMARY

26/437

Client No.

Lab Name: <u>STL Buffa</u>	lo Contr	act:	VBUVIO
Lab Code: <u>RECNY</u>	Case No.:	SAS No.: 8	SDG No.:
Lab File ID:	L7960.RR	Lab Sample ID: <u>A</u>	5 <u>B0707102</u>
Date Analyzed: 05	/12/2005	Time Analyzed: 2	1:34
GC Column: <u>DB-624</u>	ID: <u>0.53</u> (mm)	Heated Purge: (Y,	/n) <u>n</u>
Instrument ID:	150L		

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

LAB LAB TIME SAMPLE ID FILE ID ANALYZED	CLIENT SAMPLE NO.
*==== ========= = === ======= = = =	
A5B0707101 L7959.RR 21:02	MSB10
A5441101 L7962.RR 22:41	NCR 13S
A5441101MS L7963.RR 23:13	NCR 13S
A5441101SD L7964.RR 23:45	NCR 13S
A5441102 L7965.RR 00:18	NCR 3S
A5441103 L7966.RR 00:50	NCR 4S
A5441104 L7967.RR 01:22	NCR 5S
A5441101SD L7964.RR 23:4 A5441102 L7965.RR 00:1 A5441103 L7966.RR 00:5 A5441104 L7967.RR 01:2	NCR 135 NCR 3S NCR 4S NCR 5S

Comments:

METHOD 8260 - SELECT VOLATILE ORGANICS ANALYSIS DATA SHEET

27/437

				Client No.
			VBLK10	
Lab Name: <u>SIL BULIA</u>	<u>.o</u> Contract:	···		
Lab Code: <u>RECNY</u> C	ase No.: SAS No.:	SDG No.:	- -	
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>A5B07071</u>	.02
Sample wt/vol:	<u>25.00</u> (g/mL) <u>ML</u>	Lab File ID:	<u>L7960.RR</u>	
Level: (low/med)	LOW	Date Samp/Recv:		
% Moisture: not dec.	Heated Purge: N	Date Analyzed:	<u>05/12/20</u>	05
GC Column: DB-624	ID: <u>0.53</u> (mm)	Dilution Factor	1.00	
Soil Extract Volume.	(11.)	Soil Aliquot Vol		(nT.)
borr incrace voraie.		SOIT ALLQUOL VOI	Louite:	
		CONCENTRATION UNITS	:	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		25	U
71-43-2	Benzene		0.70	Ū
75-27-4	Bromodichloromethane		1.0	U
75-25-2	Bromoform		1.0	U
74-83-9	Bromomethane		1.0	U
78-93-3	2-Butanone	······································	10	U
75-15-0	Carbon Disulfide		1.0	u l
56-23-5	Carbon Tetrachloride		1.0	
108-90-7	Chlombenzene		5 0	UT I
124-48-1	Dibronchlonmethane		1 0	
75-00-3	Chlomothane		1 0	
67-66-3	Chloroform		1.0	
74 97 2	Chloromethano	<u> </u>	1.0	
74-87-3			1.0	
/5-34-3	1, 1-Dichloroethane		1.0	
107-06-2	1,2-Dichloroethane		1.0	U
75-35-4	1,1-Dichloroethene		1.0	
540-59-0	1,2-Dichloroethene (lotal)		2.0	
/8-8/-5	1,2-Dichloropropane		1.0	
142-28-9	1, 3-Dicnioropropane		T.0	
			5.0	
1227-18-0			5.0	
100 10 1	Methylene chioride		5.0	
			5.0	
100-42-5	styrene		1.0	
630-20-6	1,1,1,2-Tetrachloroethane		1.0	
127-18-4	letrachloroethene		5.0	
108-88-3	101uene	- <u></u>	5.0	
/1-55-6	1,1,1-Trichloroethane		1.0	
/9-00-5	1,1,2-Trichloroethane		1.0	U
79-01-6	Trichloroethene		5.0	U
75-01-4	Vinyl chloride		2.0	U
1330-20-7	Total Xylenes		5.0	U
10061-02-6	trans-1,3-Dichloropropene		1.0	ע
10061-01-5	cis-1,3-Dichloropropene		1.0	U
L				L

8270 - SELECT SEMI-VOLATILE ORGANICS METHOD BLANK SUMMARY

Client No.

Lab Name STL Buffal	o Conta	capt.	Method Blank
Bab Rame: <u>DID Dullar</u>		.act;	
Lab Code: <u>RECNY</u> C	ase No.:	SAS No.:	SDG No.:
Lab File ID: <u>W</u>	02935.RR	Lab Sample ID: A	<u>580640802</u>
Instrument ID:	<u>HP5973W</u>	Date Extracted:	05/03/2005
Matrix: (soil/water)	WATER	Date Analyzed:	05/04/2005
Level: (low/med)	LOW	Time Analyzed:	<u>18:08</u>

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	Matrix Spike Blank	A5B0640801	W02934.RR	05/04/2005
2	NCR 13S	A5441101	W02937.RR	05/04/2005
3	NCR 3S	A5441102	W02938.RR	05/04/2005
4	NCR 4S	A5441103	W02939.RR	05/04/2005
5	NCR 5S	A5441104	W02940.RR	05/04/2005

Comments: _____

8270 - SELECT SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

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Client No.

Lab Name: STU, Buffalo Cor	ntract.		Method Blank
Lab Code: <u>RECNY</u> Case No.:	SAS No.:	SDG No.:	
Matrix: (soil/water) WATER		Lab Sample ID:	A5B0640802
Sample wt/vol: <u>1000.0</u> (g/mL) <u>ML</u>		Lab File ID:	W02935.RR
Level: (low/med) LOW		Date Samp/Recv:	
% Moisture: decanted: (Y/N)	N	Date Extracted:	<u>05/03/2005</u>
Concentrated Extract Volume: 1000 (uL)		Date Analyzed:	05/04/2005
Injection Volume: <u>1.00</u> (uL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH: <u>5.0</u>			

CAS NO. COMPOUND	CONCENTRATION U (ug/L or ug/Kg	NITS: j) <u>UG/L</u>	Q
95-50-11,2-Dichlorobenzene 541-73-11,3-Dichlorobenzene 106-46-71,4-Dichlorobenzene 108-95-2Phenol 95-48-72-Methylphenol 108-39-43-Methylphenol 106-44-54-Methylphenol		10 10 10 10 10 10 10	บ บ บ บ บ บ

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STL BUFFALO

City of North Tonawanda Waste H20 Treatment Plant

-3-

BLANKS

Contract:	NY01-078	· · ·	· · · · · · · · · · · · · · · · · · ·				
Lab Code:	STLBFLO	Case No.:	SAS No.:		SDG NO.:	A05-4411	
Preparation	n Blank Matrix	(soil/water)	WATER				
Preparatio	n Blank Concer	ntration Units	(ug/L or mg/kg):	UG/L			

	Initial Calib. Blank	Continuing Calibration Blank (ug/L) Blank								
Analyte	(ug/L) C	1 c	2	с	3	с		с		м
Aluminum	200.0U	200.0 0	200.0	ប	200.0	U	200.000	U		P
Antimony	20.0 U	20.0 U	20.0	υ	20.0	υ	20.000	U		P
Barium	2.0 U	2.0 0	2.0	υ	2.0	ט	2.000	υ	Ì	P
Beryllium	2.0U	2.0 0	2.0	υ	2.0	ש	2.000	U	Ū	P
Cadmium	1.0U	1.0 0	1.0	υ	1.0	ט	1.000	U		Р
Calcium	500.0 ປັ	500.0 U	500.0	υ	500.0	U	500.000	U	\Box	P
Chromium	4.0U	· 4.0 U	4.0	υ	4.0	U	4.000	U	\Box	P
Cobalt	4.0U	4.0 U	4.0	ש	4.0	ע	4.000	υ		P
Copper	10.0U	10.0 U	10.0	υ	10.0	ט	10.000	U	\Box	Ρ
Iron	50.0 U	50.0 U	50.0	U	50.0	ប	50.000	U	\square	₽
Lead	5.0 U	5.0 U	5.0	U	5.0	υ	5.000	U	\Box	P
Magnesium	200.0U	200.0 0	200.0	υ	200.0	ט	200.000	U	\square	P
Manganese	3.0 U	3.0 0	3.0	υ	3.0	U	3.000	U	Ū	Р
Nickel	10.0U	10.0 U	10.0	U	10.0	υ	10.000	υ	Π	Р
Potassium	500.0 U	500.0 U	500.0	υ	500.0	υ	500.000	U	\Box	P
Selenium	15.0 U	15.0 U	15.0	υ	15.0	U	15.000	U	Π	P
Silver	3.0 U	3.0 U	3.0	υ	3.0	υ	3.000	υ	Π	P
Sodium	1000.0U	1000.0 0	1000.0	υ	1000.0	U	1000.000	U	\Box	Р
Thallium	20.0U	20.0 0	20.0	U	20.0	U	20.000	U	\square	P
Vanadium	5.0 U	5.0 0	5.0	U	5.0	υ	5.000	U	Π	P
Zinc	20.0 U	20.0 0	20.0	U	20.0	υ	20.000	U	Π	P

STL BUFFALO

City of North Tonawanda Waste H20 Treatment Plant

-3-

BLANKS

Contract:	NY01-078					
Lab Code:	STLBFLO	Case No.:	SAS No.:		SDG NO.:	A05-4411
Preparation	Blank Matrix	(soil/water):	WATER			
Preparation	Blank Concen	tration Units	(ug/L or mg/kg):	UG/L		
- Leperación		underen Unites	(ug/2 or mg/xg/.	03/11		

	Initial Calib. Blank			Cont	tinuing Calibration Blank (ug/L)				Preparation Blank		
Analyte	(ug/L)	с	1	с	2	С	3	с		c	M
Mercury	0.	. 1 0	0	. 1/0	C	.10	0.	1 0	0.200	U	CV

Comments:

STL BUFFALO

City of North Tonawanda Waste H20 Treatment Plant

-3-

BLANKS

Contract:	NY01-078					
Lab Code:	STLBFLO	Case No.:	SAS No.:		SDG NO.:	A05-4411
Preparation	Blank Matrix	(soil/water):	WATER			
Preparation	Blank Concent	ration Units	(ug/L or mg/kg):	UG/L		

	Initial Calib. Blank			Cont	tinuing Blank (Calibrat ug/L)	tion		Preparation Blank		
Analyte	(ug/L)	с	1	с	2	с	3	с		C	м
Mercury			0	.1/0	0	.10		1			CV

METHOD 8260 - SELECT VOLATILE ORGANICS VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>STL Buffalo</u>	Con	tract:	Labsampid: <u>A</u>	5C0003673
Lab Code: <u>RECNY</u>	Case No.:	SAS No.:	SDG No.	:
Lab File ID (Standard):	<u>L7957.RR</u>	Date	e Analyzed: <u>O</u>	5/12/2005
Instrument ID: 150L		Time	e Analyzed: <u>1</u> 9	9:47
GC Column(1): <u>DB-624</u>	ID: <u>0.530(mm)</u>	Keat	ted Purge: (Y	/N) <u>N</u>

			IS1 (CBZ) AREA #	RT #	IS2 (DCB) AREA #	RT #	IS3 (DFB) AREA #	RT #
		***********	***********				***********	#======
	12 HOUR STD		1475591	16.26	787511	19.91	1932371	11.03
	UPPER LIMIT		2951182	16.76	1575022	20.41	3864742	11.53
j	LOWER LIMIT		737796	15.76	393756	19.41	966186	10.53
		222222222222222	======================	******	======================	======		======
	· CLIENT SAMPLE	Lab Sample ID						
-		***********		=======	=================	======	*************	
1	MSB10	A5B0707101	1380244	16.28	744727	19.93	1844171	11.06
2	NCR 13S	A5441101	1323641	16.29	647144	19.94	1687553	11.08
3	NCR 13S	A5441101MS	1330661	16.29	637476	19.94	1673762	11.09
4	NCR 13S	A5441101SD	1290114	16.30	605844	19.95	1625911	11.08
5	NCR 3S	A5441102	1242011	16.30	609023	19.95	1604297	11.08
6	NCR 4S	A5441103	1195564	16.30	587388	19.95	1560658	11.09
7	NCR 5S	A5441104	1150839	16.29	533734	19.95	1514642	11.09
8	VBLK10	A5B0707102	1300280	16.28	621958	19.93	1774860	11.06

IS1 (CBZ) = Chlorobenzene-D5 IS2 (DCB) = 1,4-Dichlorobenzene-D4 IS3 (DFB) = 1,4-Difluorobenzene

Column to be used to flag recovery values
* Values outside of contract required QC limits

33/437

AREA UNIT QC LIMITS

RT QC LIMITS

(50-200) (50-200) (50-200) -0.50 / +0.50 min -0.50 / +0.50 min -0.50 / +0.50 min

8270 - SELECT SEMI-VOLATILE ORGANICS SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>STL Buffalo</u>	c	Contract:	Labsampid: <u>A5C0003579</u>
Lab Code: <u>RECNY</u>	Case No.:	SAS No.:	SDG No.:
Lab File ID (Standard):	W02925.RR	Dat	e Analyzed: <u>05/04/2005</u>
Instrument ID: <u>HP5973W</u>		Tim	e Analyzed: <u>13:48</u>

			IS1 (ANT) AREA #	RT #	IS2 (CRY) AREA #	RT #	IS3 (DCB) AREA #	RT #
	********************		**********	========	**********	======	===============================	3252222
	12 HOUR STD		271025	11.02	508917	15.70	125058	6.55
	UPPER LIMIT		542050	11.52	1017834	16.20	250116	7.05
	LOWER LIMIT		135513	10.52	254459	15.20	62529	6.05
		==================	************	======	==================	======	================	=======
	CLIENT SAMPLE	Lab Sample ID						
	=======================================	==============================	3222222222222	======	========================	=======	==============================	*******
1	Matrix Spike Blank	A5B0640801	237058	11.02	460517	15.70	110314	6.55
2	Method Blank	A5B0640802	250075	11.02	477880	15.70	118666	6.55
3	NCR 13S	A5441101	246052	11.02	467998	15.70	112239	6.55
4	NCR 3S	A5441102	247634	11.02	477365	15.70	113849	6.55
5	NCR 4S	A5441103	268167	11.02	526009	15.70	121463	6.55
6	NCR 5S	A5441104	256457	11.02	484172	15.70	118609	6.55

IS1 (ANT) = Acenaphthene-D10 IS2 (CRY) = Chrysene-D12 IS3 (DCB) = 1,4-Dichlorobenzene-D4

AREA UNIT	RT
QC LIMITS	QC LIMITS
(50-200)	-0.50 / +0.50 min
(50-200)	-0.50 / +0.50 min
(50-200)	-0.50 / +0.50 min

Column to be used to flag recovery values
* Values outside of contract required QC limits

8270 - SELECT SEMI-VOLATILE ORGANICS SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>STL Buffalo</u>		Contract:	Labsampid: A5C0003579					
Lab Code: <u>RECNY</u>	Case No.:	SAS No.:	SDG No.:					
Lab File ID (Standard):	<u>W02925.RR</u>	Da	te Analyzed: <u>05/04/2005</u>					

Instrument ID: HP5973W

··--·

Time Analyzed: 13:48

			4	1 _			
		IS4 (NPT)	DT #	IS5(PHN)	рт #	ISG (PRY)	DT #
					1		NI 7
_ ===;:::==;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	===================	************	======	22222222222222	=======	*************	
12 HOUR STD		505805	8.42	476409	13.06	553625	16.94
UPPER LIMIT		1011610	8.92	952818	13.56	1107250	17.44
LOWER LIMIT		252903	7.92	238205	12.56	276813	16.44
*===###################################	***********		===#===	=======================================	=======	***********	=======
CLIENT SAMPLE	Lab Sample ID]			
	***********	***********	=======				z#22322
Matrix Spike Blank	A5B0640801	445921	8.42	428361	13.06	528713	16.93
Method Blank	A5B0640802	473182	8.42	444349	13.06	559214	16.93
NCR 13S	A5441101	457849	8.42	440669	13.06	555273	16.93
NCR 3S	A5441102	465904	8.42	445378	13.06	556053	16.93
NCR 4S	A5441103	490027	8.42	481467	13.06	601918	16.93
NCR 5S	A5441104	481069	8.42	467530	13.06	581044	16.93
L	L		AF	REA UNIT	RT QC LIMI		
	12 HOUR STD UPPER LIMIT LOWER LIMIT CLIENT SAMPLE Matrix Spike Blank Method Blank NCR 13S NCR 3S NCR 4S NCR 5S	12 HOUR STD UPPER LINIT LOWER LINITCLIENT SAMPLEMatrix Spike BlankMatrix Spike BlankA5B0640801Method BlankA5B0640802NCR 13SA5441101NCR 4SNCR 5SA5441104	12 HOUR STD 505805 UPPER LIMIT 1011610 LOWER LIMIT 252903 CLIENT SAMPLE Lab Sample ID Matrix Spike Blank A580640801 Method Blank A580640802 NCR 13S A5441101 NCR 4S A5441103 NCR 5S A5441104	12 HOUR STD 505805 8.42 UPPER LIMIT 505805 8.42 LOWER LIMIT 1011610 8.92 CLIENT SAMPLE Lab Sample ID Matrix Spike Blank A5B0640801 445921 8.42 NCR 13S A5441101 457849 8.42 NCR 3S A5441102 465904 8.42 NCR 4S A5441103 490027 8.42 NCR 5S A5441104 481069 8.42	12 HOUR STD 505805 8.42 476409 UPPER LIMIT 1011610 8.92 952818 LOWER LIMIT 252903 7.92 238205 CLIENT SAMPLE Lab Sample ID	12 HOUR STD 505805 8.42 476409 13.06 UPPER LIMIT 505805 8.42 476409 13.06 LOWER LIMIT 1011610 8.92 952818 13.56 LOWER LIMIT 252903 7.92 238205 12.56 CLIENT SAMPLE Lab Sample ID	AREA # RT # AREA # RT # AREA # # # AREA # # # # # # # AREA # <td< td=""></td<>

IS4 (NPT) = Naphthalene-D8 IS5 (PHN) = Phenanthrene-D10 IS6 (PRY) = Perylene-D12

(50-200) -0.50 / +0.50 min (50-200) -0.50 / +0.50 min (50-200) -0.50 / +0.50 min

Column to be used to flag recovery values
* Values outside of contract required QC limits

SAMPLE DATA PACKAGE

SDG NARRATIVE

SAMPLE SUMMARY

						SAMPI	ED	RECEIVE	Ð
LAB	SAMPLE ID	CLIENT	SAMPLE	<u>ID</u>	MATRIX	DATE	TIME	DATE	TIME
A	5441101	NCR 13S			GW	05/03/2005	12:30	05/03/2005	15:15
A	5441101MS	NCR 13S			GW	05/03/2005	12:30	05/03/2005	15:15
A	5441101SD	NCR 13S			GW	05/03/2005	12:30	05/03/2005	15:15
A	5441102	NCR 3S			G₩	05/03/2005	13:10	05/03/2005	15:15
A	5441103	NCR 4S			GW	05/03/2005	13:45	05/03/2005	15:15
A	5441104	NCR 5S			GWI	05/03/2005	14:30	05/03/2005	15:15

METHODS SUMMARY

Job#: A05-4411

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

	ANALYTICAL
PARAMETER	METHOD
METHOD 8260 - SELECT VOLATILE ORGANICS	SW8463 8260
8270 - SELECT SEMI-VOLATILE ORGANICS	SW8463 8270
Aluminum - Total	SW8463 6010
Antimony - Total	SW8463 6010
Barium - Total	SW8463 6010
Beryllium - Total	SW8463 6010
Cadmium - Total	SW8463 6010
Calcium - Total	SW8463 6010
Chromium - Total	SW8463 6010
Cobalt - Total	SW8463 6010
Copper - Total	SW8463 6010
Iron - Total	SW8463 6010
Lead - Total	SW8463 6010
Magnesium - Total	SW8463 6010
Manganese - Total	SW8463 6010
Mercury - Total	SW8463 7470
Nickel - Total	SW8463 6010
Potassium - Total	SW8463 6010
Selenium - Total	SW8463 6010
Silver - Total	SW8463 6010
Sodium - Total	SW8463 6010
Thallium - Total	SW8463 6010
Vanadium - Total	SW8463 6010
Zinc - Total	SW8463 6010

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A05-4411

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

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. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A05-4411

Sample Cooler(s) were received at the following temperature(s); 9.0 °C Samples were received at a temperature of 9°C. These samples were analyzed as per instructions from the client. Based on EPA data validation guidelines, there is no impact on data usability.

GC/MS Volatile Data

All samples were preserved to a pH less than 2.

Initial calibration standard curve A5I0001493-1 exhibited the %RSD of several compounds as greater than 15%. However, the mean RSD of all compounds is 11.25%.

GC/MS Semivolatile Data

No deviations from protocol were encountered during the analytical procedures.

Metals Data

The recovery of sample NCR 13S Post Spike exceeded quality control limits for Calcium, Magnesium, and Sodium. However, the LFB (A5B0641401) was acceptable, therefore, no corrective action was necessary.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

CHAIN OF CUSTODY

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Chain of Custody Record



Severn Trent Laboratories, Inc.

[L-4124 (0901)				·····	
NT WWT	Bill Davi	Show		513105	Chain of Custody Number 194631
Kive Rd	Telephone Number (Area	a Code)/Fax Number - 名てんひ		Lab Number	Page 1 of 2
ity Jorth Tonangenlen NY 14120	Site Contact Rick Becker	Lab Contact	Ana more	lysis (Attach list if space is needed)	
Project Name and Location (State)	Carrier/Waybill Number	convex luc			
Contract/Aurchase Order/Quote No.	Matrix	Containers & Preservatives	let a		Conditions of Receipt
Sample I.D. No. and Description Date	Time	A CI CI SSO4	927		
NCR 35 5/3/05	1310 1				
NCR3S	4 4		\mathbf{V}		
NCR 3S	n V	V			
WCR 45	345 1	V	V		
NCR 45	1345				
NCR 45	1345 1		- V		· · · · · · · · · · · · · · · · · · ·
NCR 55	1430 1		1		
NCR 55	1430 4				
NCR 55	143 1				
NCR 135	1230 V				
NCR 135	230 1				
NCR 135	230 V				
Non-Hazard Flammable Skin Irritant Poison B K	Unknown	OC Bequirements (Specify)	Archive For	(A fee may be as: Months longer than 1 mor	sessed if samples are retained nth)
24 Hours 48 Hours 7 Days 14 Days 21 Days	Other				
Relinquished By Reyley	Date Time	SIS 1. Received By	h_{0}	ST	Date 05/03/05 1515
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SEVERN TRENT STL

Severn Trent Laboratories, Inc.

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Jagara County Repuse Si	te		Carrier/Waybill Number							ises lipe.																Sneci	al In	struc	tions	/
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Sample I.D. No. and Description Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	HND3			ZnAc/	NaOH	821																
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Relinquished By		Date			Tim	ne		-	3. Rec	ceive	d By				<u> </u>									 	Date		ـــــــــــــــــــــــــــــــــــــ	Time		¥
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ISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

ANALYTICAL REPORT

Job#: <u>A05-E623</u>

SIL Project#: NY1A8791 Site Name: <u>City of North Tonawanda</u> Task: Niagara County Refuse Site

> Paul Drof City of North Tonawanda 830 River Road North Tonawanda, NY 14120

CC: Eric Felzer

STL Buffalo

Amy Lynn Haag Project Manager

01/05/2006

1/412

STL Buffalo Current Certifications

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As of 12/28/2005

STATE	Program	Cert # / Lab ID
AFCEE	AFCEE	
Arkansas	SDWA, CWA, RCRA, SOIL	03-054-D/88-0686
California	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida	NELAP CWA, RCRA	E87672
Georgia	SDWA	956
Illinois	NELAP SDWA, CWA, RCRA	200003
lowa	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	NY044
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	SDWA, CWA, RCRA, CLP	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA	10026
Oklahoma	CWA, RCRA	. 9421
Pennsylvania	Env. Lab Reg.	68-281
South Carolina	RCRA	91013
Tennessee	SDWA	02970
USACE	USACE	
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA,RCRA	C254
West Virginia	CWA, RCRA	252
Wisconsin	CWA	998310390
Sample Data Summary Package

4/412

SAMPLE SUMMARY

				SAMPI	ED	RECEIVI	ED
L	AB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE	TIME	DATE	TIME
	A5E62305	FIELD DUP # 1	GW	12/23/2005		12/23/2005	15:10
	A5E62301	NCR 13S	GW	12/23/2005	14:45	12/23/2005	15:10
	A5E62302	NCR 3S	GW	12/23/2005	11:35	12/23/2005	15:10
	A5E62303	NCR 4S	GW	12/23/2005	13:30	12/23/2005	15:10
	A5E62304	NCR 5S	GW	12/23/2005	11:00	12/23/2005	15:10
	A5E62304MS	NCR 5S	GW	12/23/2005	11:00	12/23/2005	15:10
	A5E62304SD	NCR 5S	GW	12/23/2005	11:00	12/23/2005	15:10
	A5E62306	TRIP BLANK	WATER	12/23/2005		12/23/2005	15:10

Job#: <u>A05-E623</u>

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

	ANZ	ALYTICAL
PARAMETER	N	TETHOD
METHOD 8260 - SELECT VOLATILE ORGANICS	SW8463	8260
8270 - SELECT SEMI-VOLATILE ORGANICS	SW8463	8270
Aluminum - Total	SW8463	6010
Antimony - Total	SW8463	6010
Barium - Total	SW8463	6010
Beryllium - Total	SW8463	6010
Cadmium - Total	SW8463	6010
Calcium - Total	SW8463	6010
Chromium - Total	SW8463	6010
Cobalt - Total	SW8463	6010
Copper - Total	SW8463	6010
Iron - Total	SW8463	6010
Lead - Total	SW8463	6010
Magnesium - Total	SW8463	6010
Manganese - Total	SW8463	6010
Mercury - Total	SW8463	7470
Nickel - Total	SW8463	6010
Potassium - Total	SW8463	6010
Selenium - Total	SW8463	6010
Silver - Total	SW8463	6010
Sodium - Total	SW8463	6010
Thallium - Total	SW8463	6010
Vanadium - Total	SW8463	6010
Zinc - Total	SW8463	6010

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

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NON-CONFORMANCE SUMMARY

Job#: A05-E623

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

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. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A05-E623

Sample Cooler(s) were received at the following temperature(s); 2.0 °C All samples were received in good condition.

<u>GC/MS Volatile Data</u>

All samples were preserved to a pH less than 2.

Initial calibration standard curve A5I0002442-1 exhibited the %RSD of the compounds Bromomethane, Chloroethane, Methylene Chloride, and Bromoform as greater than 15%. However, the mean RSD of all compounds is 8.04%.

<u>GC/MS</u> Semivolatile Data

No deviations from protocol were encountered during the analytical procedures.

Metals Data

No deviations from protocol were encountered during the analytical procedures.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.



DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C This flag applies to pesticide results where the identification has been contirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank, as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
- P This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- ¹ Indicates coelution.
- Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- E Indicates a value estimated or not reported due to the presence of interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates the spike or duplicate analysis is not within the quality control limits.
- Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

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Client No.

		FIELD DU	P#1
Lad Name: <u>S11 BUITA10</u> Contract:			
Lab Code: <u>RECNY</u> Case No.: SAS No.:	SDG No.:	-	
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	A5E62305	-
Sample wt/vol: (g/mL) ML	Lab File ID:	<u>59706.RR</u>	
Level: (low/med) <u>LOW</u>	Date Samp/Recv:	<u>12/23/200</u>	5 <u>12/23/2005</u>
% Moisture: not dec Heated Purge: \underline{N}	Date Analyzed:	<u>12/28/200</u>	5
GC Column: <u>DB-624</u> ID: <u>0.18</u> (mm)	Dilution Factor	1.00	
Soil Extract Volume: (uL)	Soil Aliquot Vol	lume:	(uL)
	CONCENTRATION UNITS	:	
CAS NO. COMPOUND	(ug/L or ug/Kg)	UG/L	Q
67-64-1Acetone		25	U
71-43-2Benzene		0.70	σ
75-27-4Bromodichloromethane		1.0	U
75-25-2Bromoform	······································	1.0	Ū I
74-83-9Bromomethane		1.0	Ū I
78-93-32-Butanone		10	- U
75-15-0Carbon Disulfide		1.0	Ū I
56-23-5Carbon Tetrachloride		1.0	- U
108-90-7Chlorobenzene		5.0	u l
124-48-1Dibromochloromethane		1.0	
75-00-3Chlomethane		1 0	u l
67-66-3Chloroform		10	
74-87-3Chloromethane		1 0 1	
75-34-31 1-Dichlomethane		1 0 1	
107-06-21 2-Dichlomethane		1 0	u l
75-35-41 1-Dichlomethene		1 0 1	
540-59-01 2-Dichlomethene (Total)		2 0 1	
78-87-51 2-Dichloropronane		1 0 1	
142-28-91 3-Dichlomonane		1.0	T I
100-41-4Fthylbenzene		5.0 1	T I
591-78-62-Hexanone		5.0	T
75-09-2Methylene chloride		5.0 1	u l
108-10-14-Methvl-2-pentanone		5.0	
100-42-5Styrene		10	
630-20-61.1.1.2-Tetrachlomethane		1.0	T I
127-18-4Tetrachloroethene	· · · · · · · · · · · · · · · · ·	50 1	
108-88-3Toluene		5 0 11	
71-55-61,1,1-Trichlomethane		1.0	
79-00-51,1.2-Trichloroethane		1.0	7
79-01-6Trichloroethene		5.0 1	- -
75-01-4Vinvl chloride		2.0	- -
1330-20-7Total Xvlenes		5.0	1
10061-02-6trans-1.3-Dichloropropene		1.0	- 1 -
10061-01-5cis-1.3-Dichloropropene		1.0	J I
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FORM I - GC/MS VOA

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Client No.

	.		NCR 135	
ad Name: SIL BUITALO	2 Contract:		L	
ab Code: <u>RECNY</u> Ca	ase No.: SAS No.:	SDG No.:		
atrix: (soil/water)	WATER	Lab Sample ID:	A5E62301	
ample wt/vol:	<u>5.00</u> (g/mL) <u>ML</u>	Lab File ID:	<u>S9700.RR</u>	
evel: (low/med)	LOW	Date Samp/Recv:	12/23/20	<u>05 12/23/2005</u>
Moisture: not dec.	Heated Purge: <u>N</u>	Date Analyzed:	<u>12/28/20</u>	05
C Column: <u>DB-624</u>	ID: <u>0.18</u> (mm)	Dilution Factor:	1.00	
oil Extract Volume:	(uL)	Soil Aliquot Volu	ume:	(uL)
		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>JG/L</u>	Q .
67-64-1	Acetone		25	U
71-43-2	Benzene		0.70	υ
75-27-4	Bromodichloromethane		1.0	υ
75-25-2	Bromoform		1.0	υ
74-83-9	Bromomethane		1.0	U I
78-93-3	2-Butanone		10	υ
75-15-0	Carbon Disulfide		1.0	υ
56-23-5	Carbon Tetrachloride		1.0	Ū
108-90-7	Chlorobenzene		5.0	Ū
124-48-1	Dibromochloromethane		1.0	υ
75-00-3	Chloroethane		1.0	U
67-66-3	Chloroform		1.0	Ū
74-87-3	Chloromethane		1.0	Ū
75-34-3	1.1-Dichloroethane		1.0	U I
107-06-2	1.2-Dichloroethane		1.0	U
75-35-4	1.1-Dichloroethene		1.0	Ū
540-59-0	1.2-Dichloroethene (Total)		2.0	Ū
78-87-5	1.2-Dichloropropane		1.0	Ū
142-28-9	1.3-Dichloropropane		1.0	Ū
100-41-4	Ethylbenzene		5.0	U
591-78-6	2-Hexanone		5.0	Ū
75-09-2	Methylene chloride		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	Ū
100-42-5			1.0	Ū
630-20-6	1.1.1.2-Tetrachloroethane		1.0	Ū
127-18-4	Tetrachlomethene		5.0	U
108-88-3	Toluene		5.0	Ū
71-55-6	1.1.1-Trichlomethane		1.0	U
79-00-5	1.1.2-Trichloroethane		1.0	U
79-01-6	Trichloroethene		5.0	Ū
75-01-4	Vinvl chloride		2.0	Ū
1330-20-7	Total Xvlenes		5.0	υ
10061-02-6	trans-1.3-Dichloropopene		1.0	Ū
10061-01-5	cis-1.3-Dichlomonopene		1.0	u
10001-01-2				

FORM I - GC/MS VOA

10/412

Client No.

		ana tatu	NCR 3S		
b Name: <u>STL Buffalo</u>	Contract:				
b Code: <u>RECNY</u> Case No.:	SAS No.:	SDG No.:			
trix: (soil/water) <u>WATER</u>	- 	Lab Sample II	D: <u>A5E62302</u>	2	•
mple wt/vol: 5.00 (g	g/mL) <u>ML</u>	Lab File ID:	<u>S9701.R</u>	2	
vel: (low/med) <u>low</u>		Date Samp/Red	ev: <u>12/23/20</u>	005 12/23/2	2005
Moisture: not dec I	Heated Purge: \underline{N}	Date Analyze	d: <u>12/28/20</u>	005	
Column: <u>DB-624</u> ID: <u>0</u>	<u>.18</u> (mm)	Dilution Fac	tor: <u>1.00</u>	<u>0</u>	
il Extract Volume: (u	1L)	Soil Aliquot	Volume:	(uL)	
CAS NO. COMPOUR	JD	CONCENTRATION UN (ug/L or ug/Kg)	ITS: <u>UG/L</u>	Q	
67-64-1Acetone	2		25	ប	
71-43-2Benzene	2		0.70	U	
75-27-4Bromodi	chloromethane		1.0	U	
75-25-2Bromoto		·	1.0	U	
74-83-9Bromone	ethane		1.0		
78-93-32-Butar	Dimite di		10		
75-15-0Carbon			1.0	U I	
56-23-5Carpon	letrachioride		1.0		
108-90-/Chlorof	enzene		5.0		
124-48-1DIDPOR			1.0		
			1.0		
07-60-3CILOIOI	orm		1.0		
74-87-3Chioron	rethane		1.0		
107.06.2 1.2 Die	nioroethane		1.0		
107-06-21,2-DIC	nioroethane		1.0		
540_59_0 1 2 Di	anoroeulene		1.0		
	hiomonopore		2.0		
142-28-91 2 Di	Thompson		1.0		
100-41-4	anoropropane		E 0		
591-78-6			5.0		
75-09-2Methyle	me chloride	·	5.0		
108-10-14-Meth	zi-2-pentanone		5.0	Ŭ I	
100-42-5Stymene	a a periodicate		1 0		
630-20-61,1,1,1,2	-Tetrachlomethane		1 0	lu	
127-18-4Tetrach	loroethene		5.0	u l	
108-88-3Toluene			5.0	μ U	
71-55-61.1.1-1	richloroethane		1.0	UU I	
79-00-51.1.2-T	richloroethane		1.0	U I	
79-01-6Trichlo	proethene		5.0	U I	
75-01-4Vinvl c	hloride		2.0	UU I	
1330-20-7Total X	ylenes		5.0	UU I	
10061-02-6trans-1	,3-Dichloropropene		1.0	U	
10061-01-5cis-1,3	-Dichloropropene		1.0	υ	
L				J	

11/412

Client No.

Tab Name: STL Buffal	0 Contract.		NCR 4S	
Lab Code, DECNIX C				
	ase NO.: SAS NO.:	SDG NO.:		
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>A5E62303</u>	3
Sample wt/vol:	<u>5.00</u> (g/mL) <u>ML</u>	Lab File ID:	<u>59702.RI</u>	<u>R</u>
Level: (low/med)	LOW	Date Samp/Recv	: <u>12/23/20</u>	<u>005 12/23/2005</u>
* Moisture: not dec.	Heated Purge: N	Date Analyzed:	<u>12/28/20</u>	005
GC Column: DB-624	ID: <u>0.18</u> (mm)	Dilution Facto	r: <u>1.0(</u>	<u>2</u>
Soil Extract Volume:	(uL)	Soil Aliquot V	olume:	(uL)
			œ.	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		25	υ
71-43-2	Benzene		0.70	U
75-27-4	Bromodichloromethane		1.0	ប
75-25-2	Bromoform		1.0	υ
74-83-9	Bromomethane		1.0	U
78-93-3	2-Butanone		10	U
75-15-0	Carbon Disulfide		1.0	U
56-23-5	Carbon Tetrachloride		1.0	U
108-90-7	Chlorobenzene		5.0	U
124-48-1	Dibromochloromethane		1.0	ש
75-00-3	Chloroethane		1.0	Ū
67-66-3	Chloroform		1.0	Ū
74-87-3	Chloromethane		1.0	U I
75-34-3	1.1-Dichloroethane		1.0	U I
107-06-2	1.2-Dichloroethane		1.0	U
75-35-4	1.1-Dichloroethene		1.0	U
540-59-0	1,2-Dichloroethene (Total)		2.0	U
78-87-5	1.2-Dichloropoppane		1.0	u l
142-28-9	1.3-Dichloropropane		1.0	U
100-41-4			5.0	U
591-78-6			5.0	U.
75-09-2	Methylene chloride		5.0	โบ
108-10-1	4-Methyl-2-pentanone		5.0	U
100-42-5	Styrene		1.0	Ū
630-20-6	1.1.1.2-Tetrachloroethane		1.0	U
127-18-4	Tetrachloroethene		5.0	Ū
108-88-3	Toluene		5.0	υ
71-55-6	1.1.1-Trichloroethane		1.0	U
79-00-5			1.0	U
79-01-6	Trichloroethene		5.0	U I
75-01-4			2.0	U
1330-20-7	Total Xvlenes		5.0	U
10061-02-6	trans-1.3-Dichloropropene		1.0	υ
10061-01-5	cis-1,3-Dichloropropene	······	1.0	U
	· · · · ·			1 f

FORM I - GC/MS VOA

12/412

Client No.

		NCR 5S		
Lab Name: STL Buffalo Contract:		L		
Lab Code: RECNY Case No.: SAS No.:	SDG No.:			
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	<u>A5E6230</u> 4	4	
Sample wt/vol: (g/mL) ML	Lab File ID:	<u>S9703.R</u>	R	
Level: (low/med) LOW	Date Samp/Recv:	<u>12/23/2</u>	005 <u>12/</u>	23/2005
% Moisture: not dec Heated Purge: \underline{N}	Date Analyzed:	<u>12/28/2</u>	005	
GC Column: <u>DB-624</u> ID: <u>0.18</u> (mm)	Dilution Factor	:1.0	<u>0</u>	
Soil Extract Volume: (uL)	Soil Aliquot Vo	olume:	(1	uL)
C	ONCENTRATION UNITS	5:		
CAS NO. COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q	
67-64-1Acetone		25	υ	
71-43-2Benzene		0.70	U	ļ
75-27-4Bromodichloromethane		1.0	ט	
75-25-2Bromoform		1.0	U	
74-83-9Bromomethane		1.0	U	
78-93-32-Butanone		10	U	1
75-15-0Carbon Disulfide		1.0	U	
56-23-5Carbon Tetrachloride		1.0	U	
108-90-7Chlorobenzene		5.0	U	
124-48-1Dibromochloromethane		1.0	U	
75-00-3Chloroethane		1.0	U	ļ
67-66-3Chloroform		1.0	U	
74-87-3Chloromethane		1.0	U	
75-34-31,1-Dichloroethane		1.0	U	
107-06-21,2-Dichloroethane		1.0	U	
75-35-41,1-Dichloroethene		1.0	U	
540-59-01,2-Dichloroethene (Total)		2.0	U	
78-87-51.2-Dichloropropane		1.0	U	
142-28-91, 3-Dichloropropane		1.0	U	
100-41-4Ethylbenzene		5.0	U	
591-78-62-Hexanone		5.0	U	
75-09-2Methylene chloride		5.0	U	
108-10-14-Methvl-2-pentanone		5.0	U	
100-42-5Stvrene		1.0	U	
630-20-61,1,1,2-Tetrachloroethane		1.0	U	
127-18-4Tetrachloroethene		5.0	U	
108-88-3Toluene		5.0	υ	
71-55-61,1,1-Trichloroethane		1.0	U	
79-00-51,1,2-Trichloroethane		1.0	Ū	
79-01-6Trichloroethene		5.0	Ū	
75-01-4Vinvl chloride		2.0	Ū	
1330-20-7Total Xvlenes		5.0	Ū	
10061-02-6trans-1.3-Dichloropropene		1.0	U	
10061-01-5cis-1,3-Dichloropropene		1.0	Ū	

13/412

Client No.

ame: <u>STL Buffalo</u> Contract:		TRIP I	BLANK
DUE: <u>KELINI</u> CASE NO.: SAS NO.:	SDG No.:		
x: (soil/water) <u>WATER</u>	Lab Sample ID	A5E623(06
e wt/vol: (g/mL) ML	Lab File ID:	<u>59707.</u> 1	<u>R</u>
: (low/med) <u>LOW</u>	Date Samp/Recv	r: <u>12/23/2</u>	2005 12/23/2
sture: not dec Heated Purge: \underline{N}	Date Analyzed	<u>12/28/2</u>	2005
lumn: <u>DB-624</u> ID: <u>0.18</u> (mm)	Dilution Facto	or: <u>1.(</u>	<u>00</u>
Extract Volume: (uL)	Soil Aliquot V	Volume:	(uL)
	CONCENTRATION UNIT	S:	
CAS NO. COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q
67-64-1Acetone		25	TI
71-43-2Renzene		0 70	
75-27-4Bromydichlowmethane		1 0	HT I
75-25-2Bromoform		1 0	HT I
74_83_9Dromonethane		1.0	
79.02-2	<u>`</u>	10	
75 15 0 Cashan Di 215	·····	TO TO	
IC 02 E Carbon Disuille		1.0	
100 00 7 delevelerer		1.0	
104 40 1 Dilemental		5.0	
124-48-1Ulbromochloromethane	· · · · · · · · · · · · · · · · · · ·	1.0	
/5-00-3Chloroethane		1.0	U
b/-bb-3Chlorolorm	·	1.0	
/4-8/-3Chloromethane		1.0	U
/5-34-31,1-Dichloroethane		1.0	U
107-06-21,2-Dichloroethane		1.0	U
/5-35-41,1-Dichloroethene		1.0	U
[540-59-01,2-Dichloroethene (Total)_		2.0	U
78-87-51,2-Dichloropropane		1.0	U
142-28-91,3-Dichloropropane		1.0	ប
100-41-4Ethylbenzene		5.0	ט
591-78-62-Hexanone		5.0	ប
75-09-2Methylene chloride		5.0	U
108-10-14-Methyl-2-pentanone		5.0	υ
100-42-5Styrene		1.0	υ
630-20-61,1,1,2-Tetrachloroethane		1.0	υ
127-18-4Tetrachloroethene		5.0	ប
108-88-3Toluene		5.0	υ
71-55-61,1,1-Trichloroethane		1.0	ប
79-00-51,1,2-Trichloroethane		1.0	U
79-01-6Trichloroethene		5.0	υ
75-01-4Vinyl chloride		2.0	υ
1330-20-7Total Xylenes		5.0	υ
10061-02-6trans-1,3-Dichloropropene		1.0	ប
			1 1

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14/412

Client No. _____

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		NCR 135
Contract:		L
ase No.: SAS No.:	SDG No.:	
WATER	Lab Sample ID:	<u>A5E62301</u>
<u>1060.0</u> (g/mL) <u>ML</u>	Lab File ID:	V12654.RR
LOW	Date Samp/Recv:	12/23/2005 12/23/2005
decanted: (Y/N) <u>N</u>	Date Extracted:	<u>12/28/2005</u>
Volume: <u>1000</u> (uL)	Date Analyzed:	<u>12/30/2005</u>
<u>1.00</u> (uL)	Dilution Factor:	1.00
	2 Contract: ase No.: SAS No.: <u>WATER</u> <u>1060.0 (g/mL) ML</u> <u>LOW</u> decanted: (Y/N) <u>N</u> Volume: <u>1000</u> (uL) <u>1.00</u> (uL)	2 Contract:

GPC Cleanup: (Y/N) <u>N</u> pH: <u>8.0</u>

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q
95-50-1 541-73-1 106-46-7 108-95-2 95-48-7 108-39-4 106-44-5	1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Phenol 2-Methylphenol 3-Methylphenol		9 9 9 9 9 9 9 9	บ บ บ บ บ บ บ บ บ
L			· · · · · · · · · · · · · · · · · · ·	

Client No.

15/412

		NCR 3S
Lab Name: <u>STL Buffalo</u> Contract:	,	
Lab Code: <u>RECNY</u> Case No.: SAS No.:	SDG No.:	
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	A5E62302
Sample wt/vol: 1060.0 (g/mL) ML	Lab File ID:	<u>V12655.RR</u>
Level: (low/med) LOW	Date Samp/Recv:	<u>12/23/2005</u> <u>12/23/2005</u>
% Moisture: decanted: (Y/N) \underline{N}	Date Extracted:	12/28/2005
Concentrated Extract Volume: 1000 (uL)	Date Analyzed:	<u>12/30/2005</u>
Injection Volume: <u>1.00</u> (uL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH: <u>7.0</u>		

CAS NO.	COMPOUND	CONCENTRATION UNI: (ug/L or ug/Kg)	rs: 	Q
95-50-1	1,2-Dichlorobenzene		9	บ
541-73-1	1,3-Dichlorobenzene		9	บ
106-46-7	1,4-Dichlorobenzene		9	บ
108-95-2	Phenol		9	บ
95-48-7	2-Methylphenol		9	บ
108-39-4	3-Methylphenol		9	บ
106-44-5	4-Methylphenol		9	บ

Client No.

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			NCR 4S
Lab Name: <u>STL Buffalo</u> C	Contract:		
Lab Code: <u>RECNY</u> Case No.:	SAS No.:	SDG No.:	
Matrix: (soil/water) <u>WATER</u>		Lab Sample ID:	<u>A5E62303</u>
Sample wt/vol: <u>1060.0</u> (g/mL) <u>M</u>	<u>11.</u>	Lab File ID:	V12656.RR
Level: (low/med) <u>LOW</u>		Date Samp/Recv:	<u>12/23/2005</u> <u>12/23/2005</u>
% Moisture: decanted: (Y/N	I) <u>N</u>	Date Extracted:	<u>12/28/2005</u>
Concentrated Extract Volume: 1000(uL	(۱	Date Analyzed:	<u>12/30/2005</u>
Injection Volume: <u>1.00</u> (uL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH: <u>7.0</u>			

CONCENTRATION UNITS: <u>UG/L</u> CAS NO. Q COMPOUND (ug/L or ug/Kg) 95-50-1-----1,2-Dichlorobenzene 9 U 541-73-1----1,3-Dichlorobenzene 9 U 106-46-7----1,4-Dichlorobenzene 9 U 108-95-2----Phenol 9 U 95-48-7----2-Methylphenol 9 U 108-39-4----3-Methylphenol U 9 106-44-5----4-Methylphenol U 9

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Client No.

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Lab Name, CIII. Ruffalo Contract.	NCR 5S
Tab Malle: <u>511 Bullato</u> Contract:	
Lab Code: <u>RECNY</u> Case No.: SAS No.:	SDG No.:
Matrix: (soil/water) WATER	Lab Sample ID: <u>A5E62304</u>
Sample wt/vol: <u>1060.0</u> (g/mL) <u>ML</u>	Lab File ID: <u>V12657.RR</u>
Level: (low/med) <u>LOW</u>	Date Samp/Recv: <u>12/23/2005</u> <u>12/23/2005</u>
$Moisture: \ decanted: (Y/N) N$	Date Extracted: <u>12/28/2005</u>
Concentrated Extract Volume: 1000(uL)	Date Analyzed: <u>12/30/2005</u>
Injection Volume: 1.00 (uL)	Dilution Factor: <u>1.00</u>
GPC Cleanup: (Y/N) <u>N</u> pH: <u>7.0</u>	

CAS NO.	COMPOUND	CONCENTRATION UNIT (ug/L or ug/Kg)	rs: <u>ug/l</u>	Q
95-50-1 541-73-1 106-46-7 108-95-2 95-48-7 108-39-4 106-44-5	-1,2-Dichlorobenzene -1,3-Dichlorobenzene -1,4-Dichlorobenzene -Phenol -2-Methylphenol -3-Methylphenol -4-Methylphenol		9 9 9 9 9 9 9	บ บ บ บ บ บ บ บ

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North Tonawanda Water Works

	-1- INORGANIC ANALYSIS DATA SHEET	SAMDLE	
		SAMPLE	-
078		NCR 13	S
LO Case N	: SAS No.:	SDG NO.:	A05-E623
:): WATER	Lab Sample ID:	AD573697	
LOW	Date Received:	12/23/2005	
	078 LO Case No. r): WATER LOW	-1- INORGANIC ANALYSIS DATA SHEET 078 LO Case No.: SAS No.: r): WATER Lab Sample ID: LOW Date Received:	-1- INORGANIC ANALYSIS DATA SHEET SAMPLE NCR 13 NCR 13 NCR 13 NCR 13 NCR 13 NCR 13 NCR 13 LO LO Case No.: SAS No.: SDG NO.: r): WATER Lob Sample ID: AD573697 LOW Date Received: 12/23/2005

Concentration	Units	(ug/L	or	mg/kg	dry	weight):	UG/L

CAS No.	Analyte	Concentration	C	Q	м
7429-90-5	Aluminum	3380		İ _	P
7440-36-0	Antimony	20.0	U		P
7440-39-3	Barium	63.2			P
7440-41-7	Beryllium	2.0	Ū	1	P
7440-43-9	Cadmium	1.0	טן		P
7440-70-2	Calcium	162000	1		P
7440-47-3	Chromium	23.2	T		P
7440-48-4	Cobalt	4.0	ען	1	P
7440-50-8	Copper	13.6			P
7439-89-6	Iron	6870			P
7439-92-1	Lead	5.0	Ū		P
7439-95-4	Magnesium	75700			P
7439-96-5	Manganese	34.4	1		P
7440-02-0	Nickel	16.9			P
7440-09-7	Potassium	2800		l'	P
7782-49-2	Selenium	15.0	ען		Р
7440-22-4	Silver	3.0	ח		P
7439-97-6	Mercury	0.200	Ū	1	CV
7440-23-5	Sodium	68700	Ι		P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	10.3			P
7440-66-6	Zinc	20.0	U		P

Color Before:	YELLOW	Clarity Before:	CLOUDY	Texture:	NONE
Color After:	YELLOW	Clarity After:	CLOUDY	Artifacts:	
Comments:					

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North Tonawanda Water Worl

STL BUFFALO

-1-

INORGANIC ANALYSIS DATA SHEET

			INORGANIC ANALYSIS DATA SHEET	SAMPLE	NO.
				NCR 3S	
Contract:	NY01-078			L]
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-E623
Matrix (soi	il/water):	WATER	Lab Sample ID:	AD573698	
Level (low/	(med) :	LOW	Date Received:	12/23/2005	

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS NO.	Analyte	Concentration	C	Q	м
7429-90-5	Aluminum	360			P
7440-36-0	Antimony	20.0	ט		P
7440-39-3	Barium	65.9	I		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	ש		P
7440-70-2	Calcium	196000			P
7440-47-3	Chromium	21.4	I		P
7440-48-4	Cobalt	4.0	טן		P
7440-50-8	Copper	11.6			P
7439-89-6	Iron	13600			P
7439-92-1	Lead	5.0	ש		P
7439-95-4	Magnesium	110000			₽
7439-96-5	Manganese	1870			P
7440-02-0	Nickel	55.5			P
7440-09-7	Potassium	2660			P
7782-49-2	Selenium	15.0	ש		P
7440-22-4	Silver	3.0	ש		Р
7439-97-6	Mercury	0.200	ע ו		CV
7440-23-5	Sodium	26900			P
7440-28-0	Thallium	20.0	ש		P
7440-62-2	Vanadium	5.0	ש		P
7440-66-6	Zinc	20.0	ט		P

Color	Before:	COLORLESS	Clarity Before:	CLEAR	Texture:	NONE
Color	After:	COLORLESS	Clarity After:	CLEAR	Artifacts:	
Commen	its:					

	ST	L B	Ul	FF/	4L	0
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North Tonawanda Water Works

			-1- INORGANIC ANALYSIS DATA SHEET		SAMPLE	NO .	
Contract:	NY01-078				NCR 4S]
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDO	; NO.:	A05-E623	
Matrix (soi	1/water):	WATER	Lab Sample ID:	AD573	699	·	
Level (low/	med): La	OW	Date Received:	12/23	/2005		

Concentration	Units	$(u\sigma/L c$	r ma/ka	drv	weight)) :	UG/L
00110611010000		(49/4 4	i mg/ng	u y		• •	~~/~~

CAS No.	Analyte	Concentration	c	Q	M
7429-90-5	Aluminum	4170	T_{-}		P
7440-36-0	Antimony	20.0	σ		P
7440-39-3	Barium	92.4	Γ	[P
7440-41-7	Beryllium	2.0	מן	1	P
7440-43-9	Cadmium	1.1			P
7440-70-2	Calcium	106000	Ϊ	F	P
7440-47-3	Chromium	4.8	T		P
7440-48-4	Cobalt	4.0	ם		P
7440-50-8	Copper	11.4			P
7439-89-6	Iron	22400	Ι	I	P
7439-92-1	Lead	11.5	1		P
7439-95-4	Magnesium	33600	T	1	P
7439-96-5	Manganese	329	Ι		P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	18800	1]	P
7782-49-2	Selenium	15.0	וח	[P
7440-22-4	Silver	3.0	שן		P
7439-97-6	Mercury	0.200	ען		CV
7440-23-5	Sodium	29300	Τ	Ī	P
7440-28-0	Thallium	20.0	ען		P
7440-62-2	Vanadium	5.0	<u>In</u>		P
7440-66-6	Zinc	465	1		P

Color Before:	YELLOW	Clarity Before:	CLOUDY	Texture:	NONE
Color After:	YELLOW	Clarity After:	CLOUDY	Artifacts:	
Comments:					
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North Tonawanda Water Works -1-

INORGANIC ANALYSIS DATA SHEET

			INORGANIC ANALYSIS DATA SHEET	SAMPLE	NO.
• • • • • • •				NCR 55	
Contract:	NY01-078				
Lab Code:	STLBFLO	Case No.:	SAS No.:	SDG NO.:	A05-E623
Matrix (soi	l/water):	WATER	Lab Sample ID:	AD573700	
Level (low/	med): LC	WW	Date Received:	12/23/2005	

Concentration Units (ug/L or mg/kg dry weight): ŬG∕L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6380			P
7440-36-0	Antimony	20.0	ען		P
7440-39-3	Barium	151	1		P
7440-41-7	Beryllium	2.0	ט	1	P
7440-43-9	Cadmium	1.0	ען		P
7440-70-2	Calcium	104000	1	ļ	P
7440-47-3	Chromium	34.5			P
7440-48-4	Cobalt	4.0	ע		P
7440-50-8	Copper	24.5		!	₽
7439-89-6	Iron	7840			P
7439-92-1	Lead	8.5			P
7439-95-4	Magnesium	63800			P
7439-96-5	Manganese	210			P
7440-02-0	Nickel	36.2	1		P
7440-09-7	Potassium	2570	1		P
7782-49-2	Selenium	15.0	ע		₽
7440-22-4	Silver	3.0	ש		₽
7439-97-6	Mercury	0.200	ט		CV
7440-23-5	Sodium	52800			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	12.2			P
7440-66-6	Zinc	61.0	Í		P

Color Before:	GRAY	Clarity Before:	CLOUDY	Texture:	NONE
Color After:	GRAY	Clarity After:	CLOUDY	Artifacts:	- <u></u>
Comments:					
_				<u> </u>	
Color After: Comments:	GRAY	Clarity After:		Artifacts:	

METHOD 8260 - SELECT VOLATILE ORGANICS WATER SURROGATE RECOVERY

Lab Name: STL Buffalo Contract: Lab Code: RECNY Case No.: SAS No.: SDG No.: Client Sample ID Lab Sample ID BFB DCE TOL TOT %REC # XREC # %REC # OUT ****** .== FIELD DUP # 1 A5E62305 0 86 106 95 msb22 A5B2013701 88 0 104 98 83 78 NCR 13S A5E62301 104 92 0 NCR 3S A5E62302 99 0 88 NCR 4S A5E62303 0 85 105 96 NCR 5S A5E62304 84 106 97 94 0 NCR 5S 90 A5E62304MS 81 0 NCR 5S A5E62304SD 81 96 90 0 93 95 TRIP BLANK A5E62306 82 105 0 vbl k22 A5B2013702 86 105 0

QC LIMITS

 BFB
 =
 p-Bromofluorobenzene
 (73-120)

 DCE
 =
 1,2-Dichloroethane-D4
 (72-143)

 TOL
 =
 Toluene-D8
 (76-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

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8270 - SELECT SEMI-VOLATILE ORGANICS WATER SURROGATE RECOVERY

Contract: _____ Lab Name: STL Buffalo

Case No.: _____ SAS No.: _____ SDG No.: _____ Lab Code: <u>RECNY</u>

	Client Sample ID	Lab Sample ID	2FP %REC #	FBP Xrec #	NBZ %rec #	PHL %REC #	TBP %/REC #	TPH %rec #			TOT OUT
1	******************		======	=======	======	******	******	*******	======	=====	===
1 '	Matrix Spike Blank	A5B2005201	41	64	77	31	85	87			0
2	Matrix Spike Blk Dup	A5B2005202	46	75	84	35	91	93			0
3	NCR 13S	A5E62301	34	70	76	24	83	64			0
4	NCR 3S	A5E62302	38	76	79	28	93	70			0
5	NCR 4S	A5E62303	35	64	69	28	72	64			0
6	NCR 5S	A5E62304	38	78	79	28	91	79			0
7	S Blank	A5B2005203	44	75	82	33	89	88			0

QC LIMITS

__

2FP	=	2-Fluorophenol	(21-120)
FBP	=	2-Fluorobiphenyl	(21-120)
NBZ	=	Nitrobenzene-D5	(52-120)
PHL	×	Phenol-D5	(13-120)
TBP	=	2,4,6-Tribromophenol	(62-133)
TPH	=	p-Terphenyl-d14	(36-138)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

METHOD 8260 - SELECT VOLATILE ORGANICS WATER MATRIX SPIKE BLANK RECOVERY

- - --

- - - ---

Contract: Lab Samp ID: A5B2013702

24/412

Lab Name: STL Buffalo

Lab Code: <u>RECNY</u> Case No.: ____

SAS No.:

SDG No.: _____

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Matrix Spike - Client Sample No.: <u>vblk22</u>

COMPOUND	SPIKE	MSB	MSB	QC
	ADDED	CONCENTRATION	%	LIMITS
	UG/L	UG/L	REC #	REC.
1,1-Dichloroethene Trichloroethene Benzene Toluene Chlorobenzene	25.0 25.0 25.0 25.0 25.0 25.0	29.2 27.3 27.2 25.8 25.0	117 110 109 103 100	65 - 142 71 - 120 67 - 126 69 - 120 73 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike recovery: ____0 out of ___5 outside limits

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Conments:

FORM III GC/MS VOA

METHOD 8260 - SELECT VOLATILE ORGANICS WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

25/412

Lab Name: STL Buffalo Contract: _____ Lab Samp ID: A5E62304 . Case No.: ____

Lab Code: RECNY

SAS No.:

SDG No.: ____

Matrix Spike - Client Sample No.: NCR 55

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	25.0	0	30.6	123	65 - 142
Trichloroethene	25.0	0	28.8	115	71 - 120
Benzene	25.0	0	28.9	116	67 - 126
Toluene	25.0	0	27.2	109	69 - 120
Chlorobenzene	25.0	0	25.5	102	73 - 120

	SPIKE ADDED	MSD CONCENTRATION	MSD %	8	Q	C LIMITS
COMPOUND	UG/L	UG/L	REC #	RPD #	RPD	REC.
1,1-Dichloroethene Trichloroethene Benzene Toluene Chlorobenzene	25.0 25.0 25.0 25.0 25.0 25.0	31.0 28.6 28.9 27.0 25.9	124 114 116 108 104	0 0 0 0 2	16 16 13 18 19	65 - 142 71 - 120 67 - 126 69 - 120 73 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: ____0 out of ____5 outside limits Spike recovery: ____0 out of ___10 outside limits

Comments:

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8270 - SELECT SEMI-VOLATILE ORGANICS WATER MATRIX SPIKE BLANK/MATRIX SPIKE BLANK DUPLICATE RECOVERY

Lab Name: SIL Buffalo

Contract: _____ Lab Samp ID: <u>A5B2005203</u>

 Lab Code:
 RECNY
 Case No.:
 SDG No.:
 SDG No.:

Matrix Spike - Client Sample No.: <u>S Blank</u>

COMPOUND	SPIKE	MSB	MSB	QC
	ADDED	CONCENTRATION	%	LIMITS
	UG/L	UG/L	REC #	REC.
Phenol	100	30.7	31	16 - 120
1,4-Dichlorobenzene	100	54.4	54	28 - 120

COMPOUND	SPIKE ADDED UG/L	MSBD CONCENTRATION UG/L	MSBD % REC #	* RPD #	Q RPD	C LIMITS
Phenol	100	34.7	35	12	39	16 - 120
1,4-Dichlorobenzene	100	62.9	63	15	35	28 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: ____0 out of ____2 outside limits Spike recovery: 0 out of 4 outside limits

Comments: _____

METHOD 8260 - SELECT VOLATILE ORGANICS METHOD BLANK SUMMARY

27/412 Client No.

Lab Name: <u>STL_Buffa</u>	alo Co	ntract:	vblk22
Lab Code: <u>RECNY</u>	Case No.:	SAS No.:	SDG No.:
Lab File ID:	<u>S9693.RR</u>	Lab Sample ID	: <u>A5B2013702</u>
Date Analyzed: <u>12</u>	2/28/2005	Time Analyzed	: <u>09:44</u>
GC Column: DB-624	ID: <u>0.18</u> (mm) Heated Purge:	(Y/N) <u>N</u>
Instrument ID:	HP5973S		

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
		===============	================	===========
1	FIELD DUP # 1	A5E62305	S9706.RR	15:00
2	msb22	A5B2013701	S9692.RR	09:19
3	NCR 13S	A5E62301	S9700.RR	12:34
4	NCR 3S	A5E62302	S9701.RR	12:58
5	NCR 4S	A5E62303	S9702.RR	13:22
6	NCR 5S	A5E62304	S9703.RR	13:47
7	NCR 5S	A5E62304MS	S9704.RR	14:12
8	NCR 5S	A5E62304SD	S9705.RR	14:36
9	TRIP BLANK	A5E62306	S9707.RR	15:25

Comments:

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Client No.

		vblk2	2
b Name: <u>STL Buffalo</u> Contract:	<u></u>		
b Code: <u>RECNY</u> Case No.: SAS No.:			
trix: (soil/water) <u>WATER</u>	Lab Sample II	D: <u>A5B201</u>	<u>3702</u>
mple wt/vol:5.00 (g/mL) <u>ML</u>	Lab File ID:	<u>S9693.1</u>	R
vel: (low/med) <u>LOW</u>	Date Samp/Rec	ev:	
Moisture: not dec Heated Purge: \underline{N}	Date Analyzed	l: <u>12/28/2</u>	2005
Column: <u>DB-624</u> ID: <u>0.18</u> (mm)	Dilution Fact	or: <u>1.(</u>	<u>00</u>
il Extract Volume: (uL)	Soil Aliquot	Volume:	(uL)
CAS NO. COMPOUND	CONCENTRATION UNI (ug/L or ug/Kg)	TS: <u>UG/L</u>	Q
67-64-1Acetone		25	U
71-43-2Benzene		0.70	U
75-27-4Bromodichloromethane		1.0	U
75-25-2Bromoform		1.0	ט
74-83-9Bromomethane		1.0	U
78-93-32-Butanone		10	U
75-15-0Carbon Disulfide		1.0	U
56-23-5Carbon Tetrachloride		1.0	U
108-90-7Chlombenzene		5.0	U I
124-48-1Dipromochlommethane		1 0	ŪŪ I
75-00-3Chlomethane		1 0	lu l
67-66-3Chlomform		1 0	u l
74-87-3Chloromethane		1.0	П
75 24 2 1 1 Dichlomothane		1.0	
107.06.0 1.0 Dichlangethang		1.0	
10/-06-21,2-Dichloroethane	··	1.0	U
10-35-41, 1-DICALOROELAENE		1.0	
540-59-01,2-Dichloroethene (Total)	3	2.0	
/8-87-51,2-Dichloropropane		1.0	
142-28-91,3-Dichloropropane		1.0	U
100-41-4Ethylbenzene	/	5.0	U
591-78-62-Hexanone		5.0	U I
75-09-2Methylene chloride		5.0	ע ו
108-10-14-Methyl-2-pentanone		5.0	υ
100-42-5Styrene		1.0	ט ד
630-20-61,1,1,2-Tetrachloroethane		1.0	U
127-18-4Tetrachloroethene		5.0	υ
		5.0	ប
108-88-31010000		1.0	ប
71-55-61,1,1-Trichloroethane	-	1 0	U
71-55-61,1,1-Trichloroethane 79-00-51,1,2-Trichloroethane		1.0	
71-55-61,1,1-Trichloroethane 79-00-51,1,2-Trichloroethane 79-01-6Trichloroethane		5.0	U
71-55-61,1,1-Trichloroethane 79-00-51,1,2-Trichloroethane 79-01-6Trichloroethane 75-01-4Vinyl chloride	·····	5.0 2.0	ប ប
108-88-3101tere 71-55-61,1,1-Trichloroethane 79-00-51,1,2-Trichloroethane 79-01-6Trichloroethane 75-01-4Vinyl chloride 1330-20-7Total Xylenes		5.0 5.0 5.0	U U U
108-88-31010ere 71-55-61,1,1-Trichloroethane 79-00-51,1,2-Trichloroethane 79-01-6Trichloroethane 79-01-6Trichloroethane 75-01-4Vinyl chloride 1330-20-7Total Xylenes 10061-02-6trans-1, 3-Dichloropropere	· · · · · · · · · · · · · · · · · · ·	1.0 5.0 2.0 5.0	บ บ บ

8270 - SELECT SEMI-VOLATILE ORGANICS METHOD BLANK SUMMARY

29/412

Client No.

Lab Name: <u>STL_Buffalo</u>	Contra	ct:	S Blank
Lab Code: <u>RECNY</u> Ca	se No.: Si	AS No.:	SDG No.:
Lab File ID: <u>V1</u>	2653.RR	Lab Sample ID: <u>A</u>	5B2005203
Instrument ID:	<u>HP5973V</u>	Date Extracted:	12/28/2005
Matrix: (soil/water)	WATER	Date Analyzed:	12/30/2005
Level: (low/med)	LOW	Time Analyzed:	21:26

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
1 2 3 4 5 6	Matrix Spike Blank Matrix Spike Blk Dup NCR 13S NCR 3S NCR 4S NCR 5S	A5B2005201 A5B2005202 A5E62301 A5E62302 A5E62303 A5E62304	V12651.RR V12652.RR V12654.RR V12655.RR V12655.RR V12656.RR V12657.RR	12/30/2005 12/30/2005 12/30/2005 12/30/2005 12/30/2005 12/30/2005

Comments:

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Client No.

			S Blank
Lab Name: <u>STL Buffalo</u>	Contract:	_	
Lab Code: <u>RECNY</u> Case No.:	SAS No.:	SDG No.:	
Matrix: (soil/water) <u>WATER</u>		Lab Sample ID:	<u>A5B2005203</u>
Sample wt/vol: <u>1000.0</u> (g/mL)	ML	Lab File ID:	V12653.RR
Level: (low/med) <u>LOW</u>		Date Samp/Recv:	
% Moisture: decanted: (Y/	'N) <u>N</u>	Date Extracted:	12/28/2005
Concentrated Extract Volume: 1000(u	Т)	Date Analyzed:	12/30/2005
Injection Volume: <u>1.00</u> (uL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N) <u>N</u> pH: <u>6.0</u>			

CONCENTRATION UNITS: CAS NO. Q COMPOUND (ug/L or ug/Kg) UG/L 95-50-1-----1,2-Dichlorobenzene 10 U 541-73-1-----1,3-Dichlorobenzene 106-46-7-----1,4-Dichlorobenzene U 10 U 10 108-95-2----Phenol U 10 95-48-7----2-Methylphenol U 10 108-39-4-----3-Methylphenol 106-44-5----4-Methylphenol 10 U 10 U

STL BUFFALO

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North Tonawanda Water Works

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BLANKS

Contract: <u>NY01-078</u> Lab Code: <u>STLBFLO</u> Case No.:

SAS No.:

SDG NO.: A05-E623

- - -----

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

	Initial Calib. Blank		Continuing Calibration Blank (ug/L)							Preparation Blank			
Analyte	(ug/L)	с	1	С	2	с	3	С			С		M
Aluminum	200.0	υ	200.0	σ	200.0	טן	200.0	σ		200.000	ΰ	Ī	P
Antimony	20.0	υ	20.0	U	20.0	ש	20.0	υ		20.000	υ	Ī	P
Barium	2.0	υ	2.0	υ	2.0	υ	2.0	ש		2.000	U	Ī	P
Beryllium	2.0	υ	2.0	υ	2.0	U	2.0	Ū		2.000	σ	Ī	P
Cadmium	1.0	υ	1.0	U	1.0	U	1.0	υ		1.000	υ	Ī	P
Calcium	500.0	υ	500.0	υ	500.0	υ	500.0	υ		500.000	υ	Ī	P
Chromium	4.0	υ	4.0	ប	4.0	ש	4.0	σ		4.000	υ	Ī	P
Cobalt	4.0	U	4.0	υ	4.0	σ	4.0	υ		4.000	υ	Ī	P
Copper	10.0	σ	10.0	ប	10.0	υ	10.0	υ		10.000	U	Ī	P
Iron	50.0	υ	50.0	U	50.0	υ	50.0	ប		50.000	υ	Ī	P
Lead	5.0	υ	5.0	U	5.0	σ	5.0	ΰ		5.000	υ	Ī	P
Magnesium	200.0	ש	200.0	ΰ	200.0	υ	200.0	υ		200.000	υ	Ī	P
Manganese	3.0	υ	3.0	σ	3.0	σ	3.0	U		3.000	ប	j	P
Nickel	10.0	υ	10.0	ט	10.0	σ	10.0	U		10.000	υ	Ī	P
Potassium	500.0	υ	500.0	υ	500.0	υ	500.0	υ		500.000	υ	Ī	P
Selenium	15.0	σ	15.0	υ	15.0	υ	15.0	U		15.000	υ	Ī	P
Silver	3.0	ט ו	3.0	ΰ	3.0	υ	3.0	υ	Ĩ	3.000	U	Ī	P
Sodium	1000.0	ט ו	1000.0	υ	1000.0	υ	1000.0	σ		1000.000	U	Γ	P
Thallium	20.0	ט ן	20.0	υ	20.0	υ	20.0	U		20.000	U	Γ	P
Vanadium	5.0	ן ס	5.0	U	5.0	σ	5.0	υ		5.000	U	Ī	P
Zinc	20.0	ע ו	20.0	σ	20.0	υ	20.0	υ		20.000	U	Γ	P

North Tonawanda Water Works

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BLANKS

Contract:	NY01-078						
Lab Code:	STLBFLO	Case No.:	SAS No		SDG NO.:	A05-E623	
Preparation	Blank Matrix	(soil/water):	WATER				
Preparation	Blank Concent	tration Units	(ug/L or mg/kg):	UG/L			

Initial Continuing Calibration Calib. Preparation Blank (ug/L) Blank Blank (ug/L) Analyte 1 3 С M C С C 2 С Aluminum P 200.0 0 Antimony P 20.0 0 Barium ₽ 2.0 0 P Beryllium 2.0 0 P Cadmium 1.0 0 Calcium P 500.0 U Chromium ₽ 4.0 0 Cobalt P 4.0 0 Copper P 10.0 U ł ₽ Iron 1 50.0 U Lead P 5.0 U ₽ Magnesium 200.0 U P Manganese 3.0 0 Nickel P 10.0 U Potassium P 500.0 U Selenium 15.0 U P ł Silver 3.0 0 P Sodium I 1000.0 U P Thallium 20.0 0 P Vanadium P 1 5.0 U Zinc 20.0 0 ₽

STL BUFFALO

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North Tonawanda Water Works

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BLANKS

Contract: NY01-078

Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A05-E623

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

	Initial Calib. Blank		Continuing Calibration Blank (ug/L)					Preparation Blank				
Analyte	(ug/L)	с	1	С	2	С	3	с		c		м
Mercury	0.	. 1 0	0	.10	().10		0.1 0	0.200	υ	10	$\overline{\mathbf{v}}$

METHOD 8260 - SELECT VOLATILE ORGANICS VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>STL Buffalo</u>	Con	tract:	Labsampid: A5CC	006632
Lab Code: <u>RECNY</u>	Case No.:	SAS No.:	SDG No.:	
Lab File ID (Standard):	<u>\$9691.RR</u>	Da	te Analyzed: <u>12/2</u>	8/2005
Instrument ID: <u>HP5973S</u>		Ti	me Analyzed: <u>08:5</u>	2
GC Column(1): DB-624	ID: 0.180(mm)	Не	ated Purge: (Y/N)	N

			IS1 (CBZ) Area #	RT #	IS2 (DCB) AREA #	RT #	IS3 (DFB) AREA #	RT #
	12 HOUR STD		557609	7.30	290663	9.16	392221	5.09
	UPPER LIMIT		1115218	7.80	581326	9.66	784442	5.59
	LOWER LIMIT		278805	6.80	145332	8.66	196111	4.59
	CLIENT SAMPLE	Lab Sample ID	**************			=======		**=====
1	FIELD DUP # 1	A5E62305	532248	7.30	250290	9.17	368978	5.09
2	msb22	A5B2013701	545359	7.30	253524	9.16	396361	5.09
3	NCR 13S	A5E62301	527175	7.30	247498	9.17	365091	5.09
4	NCR 3S	A5E62302	546062	7.30	259834	9.17	378766	5.09
5	NCR 4S	A5E62303	536064	7.30	256273	9.17	376783	5.09
6	NCR 5S	A5E62304	517189	7.30	245955	9.16	359381	5.09
7	NCR 5S	A5E62304MS	539369	7.30	257768	9.17	383419	5.09
8	NCR 5S	A5E62304SD	541303	7.30	262631	9.17	385354	5.09
9	TRIP BLANK	A5E62306	520252	7.30	249342	9.17	360086	5.09
10	vblk22	A5B2013702	535567	7.30	244360	9.17	375838	5.09:
	han an a		······································	AR		RT		

		QC LIMITS	QC LIMITS
IS1 (CBZ) =	Chlorobenzene-D5	(50-200)	-0.50 / +0.50 min
IS2 (DCB) =	1,4-Dichlorobenzene-D4	(50-200)	-0.50 / +0.50 min
IS3 (DFB) =	1,4-Difluorobenzene	(50-200)	-0.50 / +0.50 min

Column to be used to flag recovery values
* Values outside of contract required QC limits

FORM VIII GC/MS VOA - 1

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8270 - SELECT SEMI-VOLATILE ORGANICS SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>STL Buffalo</u>		Contrac	t:	Labsampid:	A6C0003147
Lab Code: <u>RECNY</u>	Case No.:	SA	S No.:	SDG N	lo.:
Lab File ID (Standard):	<u>V12635.RR</u>			Date Analyzed:	12/30/2005
Instrument ID: <u>HP5973V</u>				Time Analyzed:	<u>13:49</u>

			IS1 (ANT) AREA #	RT #	IS2 (CRY) AREA #	RT #	IS3 (DCB) AREA #	RT #
	 	*************	F2575777777777	*====) == <u>=</u> =================================	======	============	=======
	12 HOUR STD		306764	10.98	468126	15.65	138551	6.50
	UPPER LIMIT		613528	11.48	936252	16.15	277102	7.00
	LOWER LIMIT		153382	10.48	234063	15.15	69276	6.00
		***********	2322222222222	======	22222222222	=======	**********	=======
	CLIENT SAMPLE	Lab Sample ID						
	*********************			======	*********	======		=======
1	Matrix Spike Blank	A5B2005201	299465	10.97	471156	15.65	131132	6.50
2	Matrix Spike Blk Dup	A5B2005202	279838	10.97	434359	15.65	120353	6.50
3	NCR 13S	A5E62301	308172	10.97	479076	15.65	132895	6.50
4	NCR 3S	A5E62302	338696	10.97	527118	15.65	146836	6.50
5	NCR 4S	A5E62303	306761	10.97	475139	15.65	131625	6.50
6	NCR 5S	A5E62304	272066	10.97	425980	15.65	115425	6.50
7	S Blank	A5B2005203	310215	10.97	488341	15.65	135158	6.50
	L		·····	Al	REA UNIT	RT QC LIMI	L	

(50-200)	-0.50 /	+0.50 min		
(50-200)	-0.50 /	+0.50 min		
(50-200)	-0.50 /	+0.50 min		

IS1 (ANT) = Acenaphthene-D10 IS2 (CRY) = Chrysene-D12 IS3 (DCB) = 1,4-Dichlorobenzene-D4

Column to be used to flag recovery values
* Values outside of contract required QC limits

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8270 - SELECT SEMI-VOLATILE ORGANICS SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: <u>STL_Buffalo</u>		Contract:	Labsampid: <u>A6C0003147</u>		
Lab Code: <u>RECNY</u>	Case No.:	SAS No.:	SDG No.:		
Lab File ID (Standard):	V12635_RR	Date	Analyzed: <u>12/30/2005</u>		
Instrument ID: <u>HP5973V</u>		Time	Analyzed: <u>13:49</u>		

		IS4 (NPT) AREA #	RT #	IS5(PHN) AREA #	RT #	ISG (PRY) AREA #	RT #
12 HOUR STD		542379	8.38	481006	13.02	537121	16.87
UPPER LINIT		1084758	8.88	962012	13.52	1074242	17.37
LOWER LIMIT		271190	7.88	240503	12.52	268561	16.37
CLIENT SAMPLE	Lab Sample ID			*==========			*******
Matrix Spike Blank	A5B2005201	538994	8.38	478466	13.02	524603	16.87
Matrix Spike Blk Dup	A5B2005202	494852	8.38	434619	13.01	476624	16.87
NCR 13S	A5E62301	539431	8.38	484005	13.01	537421	16.87
NCR 3S	A5E62302	598817	8.38	522418	13.01	584760	16.87
NCR 4S	A5E62303	534437	8.38	478104	13.01	526671	16.87
NCR 5S	A5E62304	483864	8.38	429551	13.01	475009	16.87
S Blank	A5B2005203	542562	8.38	481352	13.01	533206	16.87
	12 HOUR STD UPPER LINIT LOWER LINIT CLIENT SAMPLE Matrix Spike Blank Matrix Spike Blk Dup NCR 13S NCR 3S NCR 4S NCR 5S S Blank	12 HOUR STD UPPER LINIT LOWER LINIT CLIENT SAMPLE Matrix Spike Blank Matrix Spike Bl Lab Matrix Spike Blk Dup NCR 13S NCR 3S NCR 4S NCR 4S S Blank Matrix Spike Blank A5B2005201 A5E62301 A5E62302 A5E62303 A5E62304 A5B2005203	12 HOUR STD UPPER LINIT LOWER LINIT 542379 1084758 271190 CLIENT SAMPLE Lab Sample ID ASE005201 538994 538994 Matrix Spike Blank Matrix Spike Blk Dup NCR 13S A582005201 538994 4582005202 NCR 13S A5E62301 539431 NCR 4S A5E62303 534437 NCR 5S A5E62304 483864 S Blank A5B2005203 542562	12 HOUR STD UPPER LINIT LOWER LINIT 154 (NPT) AREA RT # 542379 8.38 1084758 8.88 CLIENT SAMPLE Lab Sample ID 7.88 Matrix Spike Blank Matrix Spike Blk Dup NCR 13S A582005201 538994 8.38 NCR 13S A5E62301 539431 8.38 NCR 4S A5E62303 534437 8.38 NCR 5S A5E62304 483864 8.38 S Blank A5B2005203 542562 8.38	IS4 (NPT) IS5(PHN) AREA # RT # 12 HOUR STD UPPER LINIT LOWER LIMIT 542379 8.38 481006 CLIENT SAMPLE Lab Sample ID 7.88 240503 Matrix Spike Blank Matrix Spike Blk Dup NCR 13S A582005201 538994 8.38 478466 NCR 3S A5E62301 539431 8.38 434619 NCR 3S A5E62302 598817 8.38 478104 NCR 4S A5E62304 483864 8.38 429551 S Blank A5B2005203 542562 8.38 48105	IS4 (NPT) AREA IS5(PHN) RT RT RT	IS4 (NPT) AREA RT IS5(PHN) AREA RT # IS6 (PRY) AREA 12 HOUR STD UPPER LINIT LOWER LINIT 542379 8.38 481006 13.02 537121 UPPER LINIT 1084758 8.88 962012 13.52 1074242 CLIENT SAMPLE Lab Sample ID 7.88 240503 12.52 268561 Matrix Spike Blank A5B2005202 494852 8.38 434619 13.01 476624 NCR 13S A5E62301 539431 8.38 522418 13.01 537421 NCR 4S A5E62303 534437 8.38 478104 13.01 526671 NCR 4S A5E62304 48864 8.38 478104 13.01 526671 NCR 5S A5E62303 534437 8.38 478104 13.01 526671 NCR 5S A5E62304 488664 8.38 429551 13.01 475009 S Blank A5B2005203 542562 8.38 481352 13.01 533206

QC LIMITS

AREA UNIT

IS4 (NPT) = Naphthalene-D8 IS5 (PHN) = Phenanthrene-D10

IS6 (PRY) = Perylene-D12

(50-200) -0.50 / +0.50 min (50-200) -0.50 / +0.50 min (50-200) -0.50 / +0.50 min

RT

QC LIMITS

Column to be used to flag recovery values * Values outside of contract required QC limits

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Sample Data Package

SDG Narrative
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SAMPLE SUMMARY

				SAMPI	ED .	RECEIV	SD .
L	AB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE	TIME	DATE	TIME
	A5E62305	FIELD DUP # 1	GW	12/23/2005		12/23/2005	15:10
	A5E62301	NCR 13S	GW	12/23/2005	14:45	12/23/2005	15:10
	A5E62302	NCR 3S	GW	12/23/2005	11:35	12/23/2005	15:10
	A5E62303	NCR 4.S	GW	12/23/2005	13:30	12/23/2005	15:10
	A5E62304	NCR 5S	GW	12/23/2005	11:00	12/23/2005	15:10
	A5E62304MS	NCR 5S	GW	12/23/2005	11:00	12/23/2005	15:10
	A5E62304SD	NCR 5S	GW	12/23/2005	11:00	12/23/2005	15:10
	A5E62306	TRIP BLANK	WATER	12/23/2005		12/23/2005	15:10

METHODS SUMMARY

Job#: <u>A05-E623</u>

SIL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

	ANALYTICAL
PARAMETER	METHOD
METHOD 8260 - SELECT VOLATILE ORGANICS	SW8463 8260
8270 - SELECT SEMI-VOLATILE ORGANICS	SW8463 8270
Aluminum - Total	SW8463 6010
Antimony - Total	SW8463 6010
Barium - Total	SW8463 6010
Beryllium - Total	SW8463 6010
Cadmium - Total	SW8463 6010
Calcium - Total	SW8463 6010
Chromium - Total	SW8463 6010
Cobalt - Total	SW8463 6010
Copper - Total	SW8463 6010
Iron - Total	SW8463 6010
Lead - Total	SW8463 6010
Magnesium - Total	SW8463 6010
Manganese - Total	SW8463 6010
Mercury - Total	SW8463 7470
Nickel - Total	SW8463 6010
Potassium - Total	SW8463 6010
Selenium - Total	SW8463 6010
Silver - Total	SW8463 6010
Sodium - Total	SW8463 6010
Thallium - Total	SW8463 6010
Vanadium - Total	SW8463 6010
Zinc - Total	SW8463 6010

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: <u>A05-E623</u>

STL Project#: <u>NY1A8791</u> Site Name: <u>City of North Tonawanda</u>

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

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. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A05-E623

Sample Cooler(s) were received at the following temperature(s); 2.0 °C All samples were received in good condition.

GC/MS Volatile Data

All samples were preserved to a pH less than 2.

Initial calibration standard curve A5I0002442-1 exhibited the %RSD of the compounds Bromomethane, Chloroethane, Methylene Chloride, and Bromoform as greater than 15%. However, the mean RSD of all compounds is 8.04%.

GC/MS Semivolatile Data

No deviations from protocol were encountered during the analytical procedures.

Metals Data

No deviations from protocol were encountered during the analytical procedures.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

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Chain Of Custody Documentation

Chain of Custody Record

Comments



STL-4124 (0901)		Project	Manage												Date	 >				<u> </u>	Chain of	Custody N	umber	
North Tonawarda WW7		K,	IT	Devigi	10	-									1	lı	36	55			2	424	38	
Address River Rd.		Teleph	one Nur	iber (Area C	56	Fax Nu	mber	r							Lab	Numi	ber				Page_	1	_ of _	1
City North Tonawarla NY 1	Code 412U	Site Co Rid	C Ba	uken	L	ab Con		1a.a	-r					Ana more	lysis spa	(Atta ce is	ach li nee	ist if ded)		 				
Project Name and Location (State) Niacyara County Refuse St	le	Carrier, Det	Maybill ME	Number	115	<i>ls</i>	In)(,					2									Special	Instruc	tions/
Contract/Purchase Order/Quote No.				Matrix		1	Con Pres	taine erva	rs & tives		0	20	leta									onditior	ns of R	eceipt
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air Aqueous	Sed. Soil	1 hourse	H2SO4	HNO3	ΗCI	NaOH ZnAc/	HOP	826	.78	1 2											
NCR 35	12/23/05	1135	V	1	/			3			3	í	1											
NCR 45		1330	1.				1	3			3	Ľ	1											
NCR 55		1120	~	1	1	\$	1	3			3	1	1											
NER 55 MS		1100	L	4				2			Z										T			
NCC 55 MSD		1100	L	$1 \square$				2			2									Τ				
NCR 135		1445	~	1			1	3			3	1	1											
Field Dup #1								2			2													
Trip Blank	5. I		v	1				1	_		1									\square				
		·		+					_				+	_		+-				+	_			
			┟─┼╌	╉╌╁╌╂		+-							+	+	+	+	+	+						
						1				-				-†-	╉	+-	-			+				
Possible Hazard Identification	Poison B	Unknow	Sam	ple Disposa	lient		Sispo	sal B	v Lab		Arch	live F	or _	Ł.		onths	 (A lor	fee m	ay be	asse montl	essed if sa	mples are	retained	
Turn Around Time Required	_					100	Req	uirem	ents (Specify)													
24 Hours 48 Hours 7 Days 14 Da	iys 🗌 21 Day		her	Time			Dacai	ivedf	-		4-	~									Onto		Time	
Kelli Becken		12-	23/05		10		1000	\mathbb{Z}	ŗ Ų∆	· {	(Þ	\		5.	<u>) (</u>	<u> </u>				12-	<u>1305</u>		50
2. Reinquished By		Date		Time		2. F	Recei	vedE	Bý .	•		ر	.)								Dale		Tinle (
3. Relinquished By		Date		Time		3. F	Recei	ived E	3y		17	~~	4								Date		Time	

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample: PINK - Field Copy

Job No: A05-E Client: North Project: NY1A8 SDG: Case: SMO No: No. Samps: 6	623 Tonawanda Water 791	Works		Radiation C Custody Chain of Cus Sample Sample Tag Num SMO F C	heck: YES Seal: NO tody: YES Tags: NO bers: NO orms: NO LSIS: NO	Cooler Temperature: 2	.0°C		
								Pre	s log
Sample	Receive	Client Sample ID	Lab ID	Condition	Bottles	Parameters	Lab	Code	PH
12/23/2005 14:45	12/23/2005 15:10	NCR 13S	A5E62301	Good	3-40mlV 1-11GA 1-1607P	TCL VOAS SVOA T-METALS	RECNY	0103	<2 <2
12/23/2005 11:35	12/23/2005 15:10	NCR 3S	A5E62302	Good	3-40mlV 1-11GA	TCL VOAS SVOA	RECNY	0103	<2
12/23/2005 13:30	12/23/2005 15:10	NCR 4S	A5E62303	Good	3-40mLV 1-1LGA 1-16ozP	TCL VOAS SVOA	RECNY	0103	<2
12/23/2005 11:00	12/23/2005 15:10	NCR 55	A5E62304	Good	3-40mLV 1-1LGA 1-1607P	TCL VOAS SVOA	RECNY RECNY RECNY	0103	<2
12/23/2005 11:00 12/23/2005 11:00 12/23/2005 12/23/2005	12/23/2005 15:10 12/23/2005 15:10 12/23/2005 15:10 12/23/2005 15:10	NCR 5S NCR 5S FIELD DUP # 1 TRIP BLANK	A5E62304MS A5E62304SD A5E62305 A5E62306	Good Good Good Good	2-40mlV 2-40mlV 2-40mlV 1-40mlV	TCL VOAS TCL VOAS 8260 8260	RECNY RECNY RECNY RECNY	0103 0103 0103 0103	<2 <2 <2 <2 <2

10mg 12, 24, 12005 Sample Custodian:

Analytical Services Coordinator: /20

Preservation_Code References:

First Digit: Sample Filtration; 1=Filtered, O=Unfiltered Second Digit: Sample Requires Cooling; (4°) 1=Cooled, O=Not Cooled

Third, Fourth Digits - Preservation Types: 00=Nothing added, 01=HN03, 02=H2S04, 03=HCl, 04=Sodium Thiosulfate O5=NaOH, O6=NaOH+Zinc Acetate, O7=Sodium Thiosulfate+HCL, O8=MeOH 09=MCAA (Mono chloroacetic acid)

Volatiles

ITE/PROJECT NAME:	Niagara County I	Refuse Site				
ATE:	0503	05 MM	DD YY)			
REW MEMBERS:	RC B	ecken				
URGING METHOD:	Dedicated Bladde	r Pump				
ELL NUMBER:	NCR-3	5	-			· · ·
NE WELL VOLUME:		.34 gallons	3	.÷.,	1	
VE WELL VOLUMES:		1.69 gallons	• • • • • • • • • • • • • • • • • • •	en de la compañía de	•	
ee Section 4.2.4.1 of the OM&M	Manual and Table	FP-4.1 to calculate v	vell volumes based o	n current water lev	vels.)	
WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	~.3	2.6				
. рН	6,18	6.1				
TEMPERATURE	48.8	48.7				
CONDUCTIVITY	1.17	1.27				
TURBIDITY	26012	4.10		а. С		
, COLOR	clear	clear				
ODOR	none	none				· · · ·
COMMENTS		well dry opp. 1 gel	·			
COLOR ODOR COMMENTS	Clear none	clear none well dry opp. 1 gel		APPLICABLE PROTOCO		

2

. .

SITE/PROJECT NAME:	Niagara County F	lefuse Site				
DATE:	0503	OKIMM	DD YY			
CREW MEMBERS:		Decter.	11 Balas			·
PURGING METHOD:	Dedicated Bladde	Pump Disposi	whe banes	•		
WELL NUMBER:	DUK 43	Ú.	-	•		
FIVE WELL VOLUMES: (See Section 4.2.4.1 of the OM&	M Manual and Table	2.03 gallons	sswell volumes based o	n current water leve	els.)	•
WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	~.4	~,75				
. рН	6,31	6.3				
TEMPERATURE	49.2	49.5				
CONDUCTIVITY	0.90	1.61				
TURBIDITY	442	477				
COLOR	silty	silty				
ODOR	more	pone				•
COMMENTS		welldry 80gel				•
	I CERTIFY THAT SAMP	LING PROCEDURES WERI	E IN ACCORDANCE WITH A	APPLICABLE PROTOCOLS		
DATE	PRINT	NAME	**************************************			SIGNATURE

•

E/PROJECT NAME:	Niagara County I	Refuse Site				
Æ:	051013	505 mm	DD YY)			
W MEMBERS:	RCBe	ecken				
GING METHOD:	Dedicated Bladde	er Pump	.			
L NUMBER:	NCR 12	55	.			•
WELL VOLUME:	£).38 gallon	<u>s</u>		•	
WELL VOLUMES:	1	.88 gallon	5		•••	•
Section 4.2.4.1 of the OM&A	A Manual and Table	FP-4.1 to calculate	well volumes based o	n current water lev	els.)	
WELL VOLUME	1	2	3	4	5	TOT/AVG
OLUME PURGED (total)	3	~1.00	~1.33			
рН	5.9	5.7	5.62			
TEMPERATURE	46.7	46.6	46.0		•	
CONDUCTIVITY	6.68	1.83	1.85			
TURBIDITY	17,43	19.98	23.93	···		
COLOR	Jew	dear	clear			
ODOR	time	none	none			• •
COMMENTS			well. dry			•
	I CERTIFY THAT SAM	PLING PROCEDURES WER	E IN ACCORDANCE WITH A	APPLICABLE PROTOCOLS		
DATE	PRIN	TNAME				SIGNATURE

:

	W	ELL PURGI	NG INFORMA	TION		
SITE/PROJECT NAME:	Niagara County R	lefuse Site				
DATE:	0503	105 mm	(DD YY)		· .	
CREW MEMBERS:	REBE	eken				·
PURGING METHOD:	Dedicated Bladder	r Pump	· ·			
WELL NUMBER:	NCR 5	Ś	-	•		• •
ONE WELL VOLUME:		.64 gallo	ns		•	
FIVE WELL VOLUMES: (See Section 4.2.4.1 of the OM&A	Z A Manual and Table	FP-4.1 to calculate	ns well volumes based o	n current water le	vels.)	
WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	75	-1.25	m 2.0			
рН	6.36	6.03	6.01			
TEMPERATURE	48.3	47.4	49.0			-
CONDUCTIVITY	1.09	1.02	1.05			
TURBIDITY	272	140	34.33			
COLOR	silty	sity	cheur			
ODOR	hone	hone	hone			
COMMENTS			~ 2.5 gal			
	I CERTIFY THAT SAMP	LING FROCEDURES WE	RE IN ACCORDANCE WITH	APTLICABLE PROTOCO	LS	
DATE	PRINT	NAME			<u></u>	SIGNATURE
[*] P-4C						·

÷.

PROJECT NAME:

NIAGARA COUNTY REFUSE SITE

SAMPLING CREW MEMBERS:

Richard C. Becken

DATE OF SAMPLE COLLECTION: 05305(M M D D Y Y)

Sample	Well	Well	Volume	Sample	Sample	Analysis	Chain-of-	Shipping
I.D.	Number	Volume	Purged	Time	Description	Required	Custody	Manifest
Number		(Gallons)	(Gallons)				Number	Number
NCB35	NCR 3S	.34	-1.0	1310	monitoring well	volitiles sent	194631	
NCR 45	NCR 4S	-4	~.8	1345	/ [\]	v ~	11	
NCR 55	NCR 5S	.64	~2.5	1430		h n	N	
NCRIBS	NCR 13S	<i>358</i>	1.33	1230		n n	194632	
NCEISS	(MS/MSD)*	.38	1.33	1232				
	(Duplicate) *							
	(Rinse Blank) *		1					

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

Additional Comments:

FP-5A

CRA 5723 (17)

NIAGARA COUNTY REFUSE SITE

GROUNDWATER PURGING AND SAMPLING • COMPLETION CHECKLIST

BEFORE GOING TO SITE:

- Confirm well numbers, location, and accessibility.
 - Review of project documents (i.e., QAPP, HSCP, and sampling procedures in the OM&M Manual), sampling QA/QC, and site-specific sampling requirements.
- Historical well data; depth, pH, performance and disposition of purge water.
- Site access notification and coordination.
- Coordinated with laboratory.
 - Procured, inventoried, and inspected all equipment and supplies.
 - Prepared, calibrated, and performed required maintenance on equipment.

AT SITE:

- Instruments calibrated daily.
- Sampling equipment decontaminated in accordance with the QAPP.
- Initial well measurements logged.
- Well volume calculated and specified volumes removed.
- Purged water collected.
- Specified samples and QA/QC samples taken per Quality Assurance Project Plan (QAPP).
- Samples properly labeled, preserved, and packed.
- Well was secured after completion of sampling.
- Sample dates, times, locations and sample numbers recorded in applicable log(s).
 - Samples properly stored if not shipped/delivered to lab same day.
 - Samples shipped with complete and accurate Chain-of-Custody record.

AFTER SAMPLING:

- All equipment has been maintained, decontaminated, and returned.
- Sampling information reduced and required sample keys and field data distributed.
- Chain-of-Custody records filed.
- Expendable stock supplies replaced.
- Access keys and well cap keys returned.
- Arranged disposal/treatment for purged water and decontamination fluids.
- Confirm all samples collected.

Completed by:

FP-4B

SITE/PROJECT NAME:	Niagara County R	efuse Site				
DATE:	1223	OS MMI	מיז סג	·	•	
CREW MEMBERS:	RCR	becken				
PURGING METHOD:	Dedicated Bladder	r Pump				•
WELL NUMBER:	NCR 4	<u>s</u>	•	•		•
ONE WELL VOLUME:		334 gallons				
TVE WELL VOLUMES:		121 gallons	• · · ·	•	· · ·	
See Section 4.2.4.1 of the OM&M	Manual and Table	FP-4.1 to calculate w	ell volumes based	on current water le	vels.)	
WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	- ,4	-1 gd				
рН	8.61	7.92				
TEMPERATURE	40.5	38.1				
CONDUCTIVITY	0.85	6.78				
TURBIDITY	52	276				
COLOR	dear	doudy	- 			
ODOR	hone	none	- <u></u>			
COMMENTS		well dry				
	I CERTIFY THAT SAMP	LING PROCEDURES WERE	IN ACCORDANCE WITH	APPLICABLE PROTOCO	ns	
aboli T	Zuchand C	Barton		P	ORB,	i . K

SITE/PROJECT NAME:	Niegars County	Refuse Ste		. •	at a s	
DATE:	122	305 mm	DD YY)			·
CREW MEMBERS:	<u>k</u> B	recken				1
PURGING METHOD:	Dedicated Bladde	er Pump				
WELL NUMBER:	NCE 5	5		•	•	
ONE WELL VOLUME:	• • • • • • • • • • • • • • • • • • •	. 55 gellon	B	•		
TVE WELL VOLUMES:		2.75 gallions	<u>k</u>	, , · · ·	•	
See Section 4.2.4.1 of the OM&N	Manual and Table	PP-4.1 to calculate v	vell volumes based (on current water le	vels.)	
WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	~5	~1.2				
. рН	7.62	7.48				
TEMPERATURE	41.5	43.8				
CONDUCTIVITY	0.95	0.90				
TURBIDITY	45.66	583				
COLOR	addur.	eloudy	7			
ODOR	nere	strong				
COMMENTS		well				. •
• •	i certify that same	"Ling Phoceduxies were	IN ACCORDANCE WITH	APPLICABLE PROTOCOL	8	
12/23/05 7	Ichard (Becker	<u> </u>	Rich	A Backe	RGNATURE

WELL PURGING INFORMATION									
SITE/PROJECT NAME:	Niegare County R	ofum Size		, .					
DATE:	1223	105 mm	מי סס						
CREW MEMBERS:	Rel	recten							
PURGING METHOD:	Dedicated Bladder	Pump	.						
WELL NUMBER:	NCR-3	5	-		• • •				
ONE WELL VOLUME:		275 gallon	8		• •				
FIVE WELL VOLUMES: (See Section 4.2.4.1 of the OM&A	/ A Manual and Table	7-4.1 to calculate	s well volumes based o	n current water len	vels.)	•			
WELL VOLUME	1	2	3	4	5	TOT/AVG			
VOLUME PURGED (total)	~ 3	~ , 5	~.75						
рН	7.27	7.10	7.09		· · ·				
TEMPERATURE	41.6	43.2	43.5						
CONDUCTIVITY	1.43	1.53	1.51						
TURBIDITY	7.49	16.26	23.25						
, COLOR	clear black flakes	clear	clear						
ODOR	none	none	none						
COMMENTS		wettery	welldry						
12/23/05 DATE	ICERTIFY THAT SAMP	ING PROCEDURES WER	E IN ACCORDANCE WITH	ATTLICABLE PROTOCOM	ILB	SICNATURE			
FP-4C						·			

TTE/PROJECT NAME:	Niagara County I	Refuse Site				
ATE:	11223	05 MM	DD YY)	· .		
REW MEMBERS:	RCB	ekc				· · · · · · · · · · · · · · · · · · ·
URGING METHOD:	Dedicated Bladde	r Pump	· ·			
ELL NUMBER:	PCR 13	<u>Ś</u>	-	•		•
NE WELL VOLUME:		-33 gallons	3		· ·	
VE WELL VOLUMES:		.65 gallons	5. 			•
ee Section 4.2.4.1 of the OM&N	I Manual and Table	FP-4.1 to calculate v	vell volumes based o	on current water le	vels.)	
WELL VOLUME	1	2	3	4	5	TOT/AVG
VOLUME PURGED (total)	2.3	~.6	~ .			
. pH	7.23	7,16	7.13			
TEMPERATURE	44.1	43.9	પપ			
CONDUCTIVITY	1-41	(:40	1.42			
TURBIDITY	32.30	81	247			
COLOR	cloudy	cloudy =	cloudy⇒ light brown			
ODOR	none	Nerg	None			
COMMENTS			well dry			•
lastas P	ICERTIFY THAT SAME	eling procedures were Becken	E IN ACCORDANCE WITH	APPLICABLE PROTOCO	rs Raib) J.

•

Chain of Custody Record



Severn Trent Laboratories, Inc.

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STL-4124 (0901)																											
North Tonawarda ww	Γ	Project K	t Manag 	Da	.U19	na	ندرج										D	ate 12	123	510	5			Chain I	2424	^{umber} 38	. <u></u>
Address River Rd.		Teleph 71	ione Nu	imber 69 ²	5-8560						Lab Number					Pag	e/	_ of									
City North Tonawanda NY	Code 1412U	ŝite Co Ki c	ontact	reik	<~~~	-	Lab A	Conta ph.y	act 14a	is can	٢			1	1	Ar mo	nalys re sp	is (A pace	ttac is n	h lis eede	t if ed)			_			
Project Name and Location (State) Niagara County Refuse SI	te	Carrier Ot	r/Waybi M	II Nun Eht		211	sl	5	IN	ς.					~										Special I	Instruction	s/
Contract/Purchase Order/Quote No.1				Ма	trix			Containers & Preservatives			0	02	1eta										Conditior	ns of Recei	pt		
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	seu. Soil		Unpres.	H2SO4	HN03	HCI	ZnAc/	NaOH	524	8	+ +	•											
NCR 35	12/23/05	1135		1			1		1.	3			3	i	1												
NCR 45		1330		4			1		1	3			۲.۵	5	1												
NCR 55		1190		4			1	#	1	3			3	1	1												. * *
NCR 55 MS		1100		4						2			2	-													
NCE 55 MSD		1100		4						Z			2	2								-					
NCR 135		1445		1			1		1	3			3	1	1												
Field Dup #1										2			2	~													
Trip Blank				V						1			1														
														Τ													
															ļ												
Possible Hazard Identification			Sai	nple i	Dispos	al	K										L1			(A fe	ne ma	ay be	asse	ssed	if samples are	retained	
Non-Hazard Hammable Skin Irritant Turn Around Time Required	Poison B			Retu	rn To (Client	<u> </u>	QC F	spos. Requi	al By ireme	Lab nts (3	Speci	J Arc fy)	hive i	-or			Mont	ths	long	er tha	an 1 r	nontr	ר) 	<u> </u>		
24 Hours 48 Hours 7 Days 414 Da	ays 🗌 21 Day	/s 🗌 Oti	her				_						<u></u>														
Reinguished By Berken		Date 2	23/0	5	Time 1 <	510		1. Re	eceiy /	94 B ÿ	r M		U ($\frac{1}{2}$			5	1	<u> </u>					Da /	ite <u>27500</u>	Time	đ
2. Relinquished By		Date			Time			2. Re	eceiv	ed By	, –	4	C	Ĵ										Da	ite	Time	
3. Relinquished By		Date			Time			3. Re	eceiv	ed By	, ,													Da	ite	Time	
Comments							ł																		·	<u> </u>	

OJECT NAME:		NIAGARA COUNTY	REFUSE SITE					
AMPLING CREW	MEMBERS:	Richard C. Becke	n					
DATE OF SAMPLE	COLLECTION:	(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 35	NCR 3S	· 275	~ . 75	1135	monitoring well	volitiles, sent- volitiles Matals	242438	
NCR 45	NCR 4S	.384	-1.0	1330		volitiles, seri- volitiles, metals		
NLR 55	NCR 5S	-2.55	~1.2	112		Volitiles, semi-		
NER 135	NCR 13S	-33	-1.0	1445		volitiles, ser volitiles, metals		
NRE55	(MS/MSD) *	æ		11 20	<u> </u>	volitiles		
NCR 135	(Duplicate) *			1445		volitilet only		
	(Rinse Blank) *					1		
Note: * QA/QC Create a u well num	C sample (see QAP inique sample ID f	P for explanation of J or the blind duplicat AS/MSD" and "Dupl	how to collect and e using NCR 6S fo icate" above	label these sam r the well numb	nples). Collect MS/MSI ber. Write the name of	D and duplicate from or the well where the MS/	ne of the four monitori MSD and duplicate we	ng wells listed above ere actually collected
Addition	al Comments:							

.

APPENDIX C DATA VALIDATION REPORTS

DATA USABILITY SUMMARY REPORT FOR NIAGARA COUNTY REFUSE SITE

Prepared By:

PARSONS

290 Elwood Davis Road, Suite 312 Liverpool, New York 13088 Phone: (315) 451-9560 Fax: (315) 451-9570

REVIEWED AND APPROVED BY:

Project Manager:		
		Date
Technical Manager:		
_		Date
	11 INF 2005	
	JUNE 2003	

PARSONS

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1.2	SAMPLING AND CHAIN-OF-CUSTODY	1-1
1.3	LABORATORY ANALYTICAL METHODS 1.3.1 Volatile Organic Analysis 1.3.2 Semivolatile Organic Analysis 1.3.3 Metals Analysis	1-1 1-2 1-2 1-2
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LIST OF TABLES

Table 2.1-1	Summary of Sam	ple Analyses and	Usability	
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LIST OF ATTACHMENTS

ATTACHMENT A - VALIDATED LABORATORY DATA

SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected from the Niagara County Refuse site in North Tonawanda, New York on May 3, 2005. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- OM&M Manual, and
- USEPA Region II Standard Operating Procedures (SOPs).

The analytical laboratory for this project was Severn Trent Laboratories, Inc. (STL) in Buffalo, New York.

1.1 LABORATORY DATA PACKAGES

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

The data packages received from STL were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the 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 STL within one day of sampling. All samples were received intact and in good condition at STL.

1.3 LABORATORY ANALYTICAL METHODS

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

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

- "N" presumptive evidence at the value given, and
- "R" unusable value.

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

1.3.1 Volatile Organic Analysis

Groundwater samples collected from the site were analyzed for target compound list (TCL) VOCs using the USEPA SW-846 8260B analytical method. Certain reported results for the TCL VOC samples were considered estimated due to noncompliant instrument calibrations. Certain reported results for the TCL VOC samples were considered unusable and qualified "R" due to poor calibration linearity of certain compounds. Therefore, the reported TCL VOC analytical results were 94.3% complete (i.e., usable) for the groundwater data presented by STL. PARCC requirements were met overall.

1.3.2 Semivolatile Organic Analysis

Groundwater samples collected from the site were analyzed for certain SVOCs using the USEPA SW-846 8270C analytical method. The SVOC samples did not require qualification resulting from data validation. Therefore, the reported SVOC analytical results were 100% complete (i.e., usable) for the groundwater data presented by STL. PARCC requirements were met overall.

1.3.3 Metals Analysis

Groundwater samples collected from the site were analyzed for target analyte list (TAL) metals using the USEPA SW-846 6010B/7470A analytical methods. The metals samples did not require qualification resulting from data validation. All of the metals data were considered usable and 100% complete for the groundwater data presented by STL. PARCC requirements were met overall.

SECTION 2

DATA VALIDATION REPORT

2.1 GROUNDWATER DATA

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

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

2.1.1 TCL Volatiles

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

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

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

Initial and Continuing Calibrations

All initial calibrations were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum relative standard deviation (%RSD) of 30% with the exception of acetone (RRF=0.0210) and 2-butanone (RRF=0.0330) in the initial

calibration associated with all groundwater samples. Therefore, sample results for acetone and 2-butanone, which were nondetects, were considered unusable and qualified "R" for the affected samples.

All continuing calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent difference (%D) of \pm 25%, with the exception of acetone (RRF=0.0214), 2-butanone (RRF=0.0347), and carbon disulfide (29%D) on the continuing calibration associated with all groundwater samples. Sample results for acetone and 2-butanone, which were nondetects, were considered unusable and qualified "R" for the affected samples. The nondetected carbon disulfide results were considered and qualified "UJ".

<u>Usability</u>

All TCL volatile sample results were considered usable following data validation with the exception of the nondetected acetone and 2-butanone results for all samples due to poor calibration linearity.

<u>Summary</u>

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness and comparability. The TCL volatile data presented by STL were 94.3% complete (i.e., usable) for groundwater. The validated TCL volatile laboratory data are tabulated and presented in Attachment A.

2.1.2 Semivolatiles

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

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

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

<u>Usability</u>

All semivolatile sample results were considered usable following data validation.

<u>Summary</u>

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

2.1.3 TAL 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
- Sample result verification and identification
- Quantitation limits
- Data completeness

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

<u>Usability</u>

All TAL metals sample results were considered usable following data validation.

<u>Summary</u>

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The metals data presented by STL were 100% complete with all metals data considered valid and usable. The validated TAL 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	TCL		TAL	
<u>SAMPLE ID</u>	<u>MATRIX</u>	DATE	VOCs	<u>SVOCs</u>	<u>METALS</u>	<u>FOOTNOTES</u>
NCR-3S	Water	5/3/05	NO	OK	OK	1
NCR-4S	Water	5/3/05	NO	OK	OK	1
NCR-13S	Water	5/3/05	NO	OK	OK	1
NCR-5S	Water	5/3/05	NO	OK	OK	1
TOTAL SAMPLES			4	4	4	

NOTES:

OK - Sample analysis considered valid and usable.

NO - Sample analysis has noncompliances resulting in unusable data. See appropriate footnote.

FOOTNOTES:

1 Poor volatile calibration linearity for acetone and 2-butanone.

ATTACHMENT A

VALIDATED LABORATORY DATA

City of North	h Tonawanda WWTP	Sample ID:	NCP 38	NCP 48	NCP 58	NCP 135
City of North			NCK-35	NCK-45	NCK-35	NCK-155
830 River Ro	Dad	Lab Sample Id:	A541102	A541103	A541104	A541101
North Tonav	vanda, NY	Source:	STL-Buffalo	STL-Buffalo	STL-Buffalo	STL-Buffalo
C/O Niagara	County Refuse Site	SDG:	A05-4411	A05-4411	A05-4411	A05-4411
Validated G	roundwater Sampling Event	Matrix:	WATER	WATER	WATER	WATER
May 2005		Sampled	5/3/2005	5/3/2005	5/3/2005	5/3/2005
Way 2005		Validate de	5/5/2005 C/20/2005	6/20/2005	6/20/2005	6/20/2005
		Validated:	6/20/2005	6/20/2005	6/20/2005	6/20/2005
CAS NO.	COMPOUND	UNITS:				
	VOLATILES					
67-64-1	Acetone	ug/L	R	R	R	R
71-43-2	Benzene	ng/L	1	071	0711	07 U
75 07 4	Desma dishlaromathana	ug/L	1 11	1.11	1.11	1.11
75-27-4	Biomodicinoromeutane	ug/L	10	10	10	10
15-25-2	Bromoform	ug/L	10	10	10	10
74-83-9	Bromomethane	ug/L	1 U	1 U	1 U	1 U
78-93-3	2-Butanone	ug/L	R	R	R	R
75-15-0	Carbon Disulfide	ug/L	1 UJ	1 UJ	1 UJ	1 UJ
56-23-5	Carbon tetrachloride	ng/L	1 U	1 U	1 U	1 U
108 00 7	Chlorobenzene	ug/L	5 11	5 11	5 11	5 U
108-90-7	Dihararahlararah	ug/L	1 11	1.11	1.11	1 11
124-48-1	Dibromocniorometnane	ug/L	10	10	10	10
75-00-3	Chloroethane	ug/L	1 U	1 U	1 U	1 U
67-66-3	Chloroform	ug/L	1 U	1 U	1 U	1 U
74-87-3	Chloromethane	ug/L	1 U	1 U	1 U	1 U
75-34-3	1.1-Dichloroethane	nø/L	1 11	1 11	1 11	1 II
107.06.2	1.2-Dichloroethane	ug/L ug/I	1 11	1 11	1 11	1 11
75.25.4	1.1 Dishlaws the	ug/L	10	10	10	10
15-35-4	1,1-Dichloroethene	ug/L	10	10	10	10
540-59-0	1,2-Dichloroethene (total)	ug/L	2 U	2 U	2 U	2 U
78-87-5	1,2-Dichloropropane	ug/L	1 U	1 U	1 U	1 U
142-28-9	1,3-Dichloropropane	ug/L	1 U	1 U	1 U	1 U
100-41-4	Fthylbenzene	ng/L	5 U	5 U	5 U	5 U
501 79 6	2 Havanana	ug/L	5 U	5 U	5 U	5 U
391-78-0	2-nexanone	ug/L	50	50	50	50
75-09-2	Methylene chloride	ug/L	50	50	50	50
108-10-1	4-Methyl-2-pentanone	ug/L	5 U	5 U	5 U	5 U
100-42-5	Styrene	ug/L	1 U	1 U	1 U	1 U
79-34-5	1.1.2.2-Tetrachloroethane	ug/L	1 U	1 U	1 U	1 U
127-18-4	Tetrachloroethene	ug/I	5 11	5 11	5 11	5 11
100 00 2	Teluene	ug/L	191	5 U	5 U	5 U
108-88-5	Toluene	ug/L	1.8 J	50	50	50
71-55-6	1,1,1-Trichloroethane	ug/L	1 U	1 U	1 U	10
79-00-5	1,1,2-Trichloroethane	ug/L	1 U	1 U	1 U	1 U
79-01-6	Trichloroethene	ug/L	5 U	5 U	5 U	5 U
75-01-4	Vinvl chloride	ug/L	2 U	2 U	2 U	2 U
1330 20 7	Total Xylenes	ug/L	121	5 11	5 11	5 U
1330-20-7		ug/L	1.2 J	50	50	50
10061-02-6	trans-1,3-Dichloropropene	ug/L	10	10	10	10
10061-01-5	cis-1,3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U
	SEMIVOLATILES					
95-50-1	1,2-Dichlorobenzene	ug/L	9 U	10 U	9 U	9 U
541-73-1	1.3-Dichlorobenzene	ug/L	9 U	10 U	9 U	9 U
106 46 7	1.4 Diclorobenzene	<u>8</u>	0 11	10 U	0 11	0 11
100-40-7	Diaman	ug/L	90	10 U	90	90
108-95-2	Phenol	ug/L	90	10 U	90	90
95-48-7	2-Methylphenol	ug/L	9 U	10 U	9 U	9 U
108-39-4	3-Methylphenol	ug/L	9 U	10 U	9 U	9 U
106-44-5	4-Methylphenol	ug/L	9 U	10 U	9 U	9 U
	METALS					
7429-90-5	Aluminum	nø/L	1260	17000	3880	563
7440 36 0	Antimony	ug/L ug/L	200 11	20 11	2000	20.17
7440-30-0	D - minute	ug/L	20 0	20 0	20 0	20 0
/440-39-3	Darium	ug/L	51.7	154	148	63.4
7440-41-7	Beryllium	ug/L	2 U	2 U	2 U	2 U
7440-43-9	Cadmium	ug/L	1 U	1 U	1 U	1 U
7440-70-2	Calcium	ug/L	151000	130000	106000	186000
7440-47-3	Chromium	ug/L	30.6	14.9	26.4	11
7440 49 4	Cobalt	ug/L	/ IT	4 11	4 11	1 I 1 I I
7440-40-4	Compan	ug/L	40	22.1	40	4 U
7440-50-8	Copper	ug/L	23.0	55.1	19	10 U
7439-89-6	Iron	ug/L	6590	59600	3190	1310
7439-92-1	Lead	ug/L	5 U	27.2	5 U	5 U
7439-95-4	Magnesium	ug/L	87200	39600	74700	86100
7439-96-5	Manganese	ug/L	564	441	115	103
7440.02.0	Nickel	ц <u>е</u> /Г	44.7	15.3	26	14.4
7440-02-0	Detessium	ug/L	44./	13.3	20	14.4
/440-09-/	Potassium	ug/L	2470	12900	1690	2290
7782-49-2	Selenium	ug/L	15 U	15 U	15 U	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	22800	24700	38700	54500
7440-28-0	Thallium	10/L	20 11	20.11	20.11	20.11
7440 62 2	Vonodium	ug/L	200	200	200	200
7440-02-2	v anadium	ug/L	50	9	5.4	50
/440-66-6	Zinc	ug/L	23.2	1590	30.2	20 U

DATA USABILITY SUMMARY REPORT FOR NIAGARA COUNTY REFUSE SITE

Prepared By:

PARSONS

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REVIEWED AND APPROVED BY:

Project Manager:	
	Date
Technical Manager:	
	Date

JANUARY 2006

PA	RSO	NS

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ATTACHMENT A - VALIDATED LABORATORY DATA

SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected from the Niagara County Refuse site in North Tonawanda, New York on December 23, 2005. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- OM&M Manual, and
- USEPA Region II Standard Operating Procedures (SOPs).

The analytical laboratory for this project was Severn Trent Laboratories, Inc. (STL) in Buffalo, New York.

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 18 days on average for the groundwater samples.

The data packages received from STL were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the 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 STL within one day of sampling. All samples were received intact and in good condition at STL.

1.3 LABORATORY ANALYTICAL METHODS

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

- "U" not detected at the value given,
- "UJ" estimated and not detected at the value given,
 - "J" estimated at the value given,
- "N" presumptive evidence at the value given, and

"R" - unusable value.

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

1.3.1 Volatile Organic Analysis

Groundwater samples collected from the site were analyzed for target compound list (TCL) VOCs using the USEPA SW-846 8260B analytical method. Certain reported results for the TCL VOC samples were considered estimated due to noncompliant instrument calibrations. Therefore, the reported TCL VOC analytical results were 100% complete (i.e., usable) for the groundwater data presented by STL. PARCC requirements were met overall.

1.3.2 Semivolatile Organic Analysis

Groundwater samples collected from the site were analyzed for certain SVOCs using the USEPA SW-846 8270C analytical method. The SVOC samples did not require qualification resulting from data validation. Therefore, the reported SVOC analytical results were 100% complete (i.e., usable) for the groundwater data presented by STL. PARCC requirements were met overall.

1.3.3 Metals Analysis

Groundwater samples collected from the site were analyzed for target analyte list (TAL) metals using the USEPA SW-846 6010B/7470A analytical methods. The metals samples did not require qualification resulting from data validation. All of the metals data were considered usable and 100% complete for the groundwater data presented by STL. PARCC requirements were met overall.

SECTION 2

DATA VALIDATION REPORT

2.1 GROUNDWATER DATA

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

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

2.1.1 TCL Volatiles

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

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

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

Continuing Calibrations

All continuing calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent difference (%D) of \pm 25%, with the exception of chloroethane (-74%D) on the continuing calibration associated with all groundwater samples. Sample results for chloroethane, which were nondetects, were considered estimated and qualified "UJ".

<u>Usability</u>

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

Summary

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

2.1.2 Semivolatiles

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

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

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

<u>Usability</u>

All semivolatile sample results were considered usable following data validation.
Summary

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

2.1.3 TAL 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
- Sample result verification and identification
- Quantitation limits
- Data completeness

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

Usability

All TAL metals sample results were considered usable following data validation.

<u>Summary</u>

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

TABLE 2.1-1

SUMMARY OF SAMPLE ANALYSES AND USABILITY

SAMPLE ID	MATRIX	SAMPLE DATE	TCL VOCs	SVOCs	TAL METALS
NCR-3S	Water	12/23/05	OK	OK	OK
NCR-4S	Water	12/23/05	OK	OK	OK
NCR-13S	Water	12/23/05	OK	OK	OK
NCR-5S	Water	12/23/05	OK	OK	OK
Field DUP #1	Water	12/23/05	OK	OK	
Trip Blank	Water	12/23/05	OK		
	TOTAL SAMPLES		6	5	4

NIAGARA COUNTY REFUSE SITE

NOTES: OK - Sample analysis considered valid and usable.

ATTACHMENT A

VALIDATED LABORATORY DATA

							NCR-13S	
City of North	n Tonawanda WWTP	Sample ID:	NCR-3S	NCR-4S	NCR-5S	NCR-13S	Field Duplicate	TRIP BLANK
830 River Ro	bad	Lab Sample Id:	A5E62302	A5E62303	A5E62304	A5E62301	A5E62305	A5E62306
North Topau	uanda NV	Source:	STI Puffalo	STI Puffelo	STI Puffelo	STI Puffelo	STI Puffelo	STI Puffelo
North Tollaw		Source.	STL-Bullalo	STL-Bullato	STL-Bullato	STL-Bullaio	STL-Bullato	STL-Bullato
C/O Niagara	County Refuse Site	SDG:	A05-E623	A05-E623	A05-E623	A05-E623	A05-E623	A05-E623
Validated Gr	oundwater Sampling Event	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
December 20	005	Sampled:	12/23/2005	12/23/2005	12/23/2005	12/23/2005	12/23/2005	12/23/2005
		Validated	1/18/2006	1/18/2006	1/18/2006	1/18/2006	1/18/2006	1/18/2006
CASNO	COMPOUND	UNITE.	1/10/2000	1/10/2000	1/10/2000	1/10/2000	1/10/2000	1/10/2000
CAS NO.	COMPOUND	UNITS.						
	VOLATILES							
67-64-1	Acetone	ug/L	25 U	25 U	25 U	25 U	25 U	25 U
71-43-2	Benzene	ug/L	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
75-27-4	Bromodichloromethane	ng/L	1 U	1 U	1 U	1 U	1 U	1 U
75 25 2	Bromoform	<u>6</u>	1 11	1 11	1 11	1 11	1 11	1 11
73-23-2	Diomotorini	ug/L	10	10	10	10	10	10
74-83-9	Bromometnane	ug/L	10	10	10	10	10	10
78-93-3	2-Butanone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U
75-15-0	Carbon Disulfide	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
56-23-5	Carbon tetrachloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
108 00 7	Chlorobenzene	<u>6</u>	5 11	5 11	5 11	5 11	5 11	5 11
100-90-7	Diharana ahlarana ahlaran	ug/L	1 1	1 U	1 11	1 U	1 U	1 1
124-48-1	Dibromocniorometnane	ug/L	10	10	10	10	10	10
75-00-3	Chloroethane	ug/L	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
67-66-3	Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
74-87-3	Chloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
75-34-3	1 1-Dichloroethane	ng/L	1 11	1 H	1 11	1 11	1 11	1 11
107.06.2	1.2 Dichloroothana	ug/L 110/I	1 11	1 11	1 11	1 11	1 11	1 11
107-00-2	1,2-Dichloroeulane	ug/L	10	10	10	10	10	10
/5-35-4	1,1-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
540-59-0	1,2-Dichloroethene (total)	ug/L	2 U	2 U	2 U	2 U	2 U	2 U
78-87-5	1,2-Dichloropropane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
142-28-9	1 3-Dichloropropane	ng/L	1 11	1 H	1 11	1 11	1 11	1 11
100 41 4	Tthy then gone	ug/L	5 11	5 11	5 11	5 11	5 11	5 11
100-41-4	Euryibenzene	ug/L	50	50	50	50	50	50
591-78-6	2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
75-09-2	Methylene chloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
108-10-1	4-Methyl-2-pentanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
100-42-5	Styrene	ng/L	1 H	1 11	1 U	1 U	1 U	1 11
70 24 5	1 1 2 2 Tatrachlangethang	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
19-34-3	1,1,2,2-Tetrachioroethane	ug/L	10	10	10	10	10	10
127-18-4	Tetrachloroethene	ug/L	50	50	50	5 U	50	50
108-88-3	Toluene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
71-55-6	1,1,1-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
79-00-5	1.1.2-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
79 01 6	Trichloroethene	ug/L	5 U	5 U	5 U	5 11	5 11	5 U
75-01-0		ug/L	50	50	50	50	50	50
/5-01-4	Vinyl chloride	ug/L	20	2.0	20	2.0	2.0	2 0
1330-20-7	Total Xylenes	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
10061-02-6	trans-1,3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
10061-01-5	cis-1.3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U
	SEMIVOLATILES		- +					
05 50 1	SEMIVOLATILES	<i>a</i>	0.11	0.11	0.11	0.11		
95-50-1	1,2-Dichlorobenzene	ug/L	90	90	90	90		
541-73-1	1,3-Dichlorobenzene	ug/L	9 U	9 U	9 U	9 U		
106-46-7	1,4-Diclorobenzene	ug/L	9 U	9 U	9 U	9 U		
108-95-2	Phenol	ug/L	9 U	9 U	9 U	9 U		
95-48-7	2-Methylphenol	10g/I	9 II	9.11	9 11	9.11		
108 20 4	2 Mothylphonol	ug/L	90	0.11	<i>9</i> U	20		
108-39-4	5-ivietnyipnenoi	ug/L	9 U	9 U	90	90		
106-44-5	4-Methylphenol	ug/L	9 U	9 U	9 U	9 U		
	METALS							
7429-90-5	Aluminum	ug/L	360	4170	6380	3380		
7440-36-0	Antimony	ug/L	20 U	20 U	20 U	20 11		
7440 30 2	Barium	ug/L ug/I	65.0	024	151	63.0		
7440-39-3		ug/L	03.9	72.4	151	05.2		
/440-41-7	Beryllium	ug/L	2 U	2 U	2 U	2 U		
7440-43-9	Cadmium	ug/L	1 U	1.1	1 U	1 U		
7440-70-2	Calcium	ug/L	196000	106000	104000	162000		
7440-47-3	Chromium	ug/L	21.4	4.8	34.5	23.2		
7440 48 4	Cobalt	ug/L	 / IT		2.1.5 A 11	 / II		
7440 50 0	Count	ug/L	40	40	40	40		
7440-50-8	Copper	ug/L	11.0	11.4	24.5	13.0		
7439-89-6	Iron	ug/L	13600	22400	7840	6870		
7439-92-1	Lead	ug/L	5 U	11.5	8.5	5 U		
7439-95-4	Magnesium	ug/L	110000	33600	63800	75700		
7439-96-5	Manganese	10/I	1870	320	210	34.4		
7440.02.0	Nistral	ug/L	555	10 11	210	14.4		
/440-02-0	NICKEI	ug/L	55.5	10 U	36.2	16.9		
7440-09-7	Potassium	ug/L	2660	18800	2570	2800		
7782-49-2	Selenium	ug/L	15 U	15 U	15 U	15 U		
7440-22-4	Silver	ug/L	3 U	3 U	3 U	3 U		
7439-97-6	Mercury	10g/I	0.2 11	0.2 11	021	0.2 11		
7440 22 5	Codium	ug/L	20000	20200	52000	(9700		
1440-23-5	Sodium	ug/L	26900	29300	52800	00/80		
7440-28-0	Thallium	ug/L	20 U	20 U	20 U	20 U		
7440-62-2	Vanadium	ug/L	5 U	5 U	12.2	10.3		
7440-66-6	Zinc	ug/L	20 U	465	61	20 U		
L					-			

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APPENDIX D MONTHLY INSPECTION LOGS

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PROJECT NAME: Niagara	a County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTOR(S):	C Becken		· DATE:	101/101410151 (MM DD YY)
Item	Inspect For	Action Required	·	Comments
1. Perimeter Collection	System/Off-Site Forcemain			
Manholes	 cover on securely condition of cover condition of inside of manhole flow conditions 	yes OK OK		
Wet Wells	 cover on securely condition of cover condition of inside of wet well 	yes OK OK		· · · · · · · · · · · · · · · · · · ·
Vegetated Soil Cover	- erosion	minor		
	- pare areas - washouts - leachate seeps	None None		
	- - length of vegetation - dead/dying vegetation	winter kill		

		MONTHLY INSPECTION	LOG	
PROJECT NAME: Niagara	: a County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTOR(S):	c Becke		DATE:	01/101410151 (MM DD YY)
Item	Inspect For	Action Required		Comments
2. Landfill Cap (contin	ued)			
Access Roads	 bare areas, dead/dying veg. erosion potholes or puddles obstruction 	None none none		
3. Wetlands (Area "F")	 - dead/dying vegetation - change in water budget - general condition of wetlands 	winter kill high Devel OK		
4. Other Site Systems				
Perimeter Fence	 integrity of fence integrity of gates integrity of locks placement and condition of 	ok ok ok		repaired area near back go
	signs	<u> </u>		

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ROJECT NAME: Niagara	I County Refuse Site		LOCATION: DATE:	Wheatfield, New York
NSPECTOR(S): <u>R</u>	Becken			(MM DD YY)
ltem	Inspect For	Action Required		Comments
Other Site Systems (c	ontinued)			
Drainage Ditches/	- sediment build-up	none		
	- erosion	more		
-	- condition of erosion protection	OK	···	
	- flow obstructions	noe		
	- dead/dying vegetation	noe		
<u>]</u>	- cable concrete/gabion mats and riprap	OK		
1	- 4 1			.
Culverts	- sediment build-up	noe		
	- erosion	mol		
	- condition of erosion protection	_ok		
	- flow obstructions	none	· · · · · · · · · · · · · · · · · · ·	·
Carl	interest (Annual and			
Gas vents	- intact / damage	OR		
wells	- locks secure	OK		
		·		

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Page 1 of 3 MONTHLY INSPECTION LOG LOCATION: Wheatfield, New York PROJECT NAME: Niagara County Refuse Site DATE: (MM DD YY) INSPECTOR(S): Inspect For Action Required Comments Item Perimeter Collection System/Off-Site Forcemain 1. NZ Manholes - cover on securely - condition of cover - condition of inside of manhole - flow conditions 6K - cover on securely Wet Wells - condition of cover 9000 - condition of inside of wet well an 2. Landfill Cap Anow covere Vegetated Soil Cover - erosion 1n - bare areas 1.1 n - washouts れ 4 - leachate seeps none appono r h - length of vegetation n h - dead/dying vegetation

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JECT NAME: Niagara	County Refuse Site		LOCATION:	Wheatfield, New York
PECTOR(S):	chard Checken		DATE:	(MM DD M)
Item	Inspect For	Action Required		Comments
Other Site Systems (c	ontinued)	D		
Drainage Ditches/	- sediment build-up	snow covered		
Swale Outlets	- erosion	n n		
	- condition of erosion protection	<u>n</u> n	ч.	• ••••••••••••••••••••••••••••••••••••
	- flow obstructions	<i>, l</i>		
	- dead/dying vegetation	N		
	- cable concrete/gabion mats and	n n		
	пргар		0	
Cuiverts	- sediment huild un	Stow sprene		•
	- erosion	n +		
	- condition of erosion protection	h h		
	flow obstructions	540.2		
	- now obsciections	<u>876842</u>		
Gas Vents	- intact /damage	good		
Wells	- locks secure	good		

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			MONTHLY INSPECTION LO	G	
PROJ	ECT NAME: Niagara	County Refuse Site		LOCATION: DATE:	Wheatfield, New York
LINSPI	Item	Inspect For	Action Required		Comments
	Perimeter Collection S Manholes Wet Wells	 cover on securely condition of cover condition of inside of manhole flow conditions cover on securely condition of cover condition of cover condition of cover condition of inside of wet well 	OK good good two apparent flow yes good good good		
2.	Landfill Cap Vegetated Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation dead/dying vegetation 	<u>Anow covered</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u> <u>n</u>		

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		MONTHLY INSPECTION L	OG		
PROJECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York	
INSPECTOR(S):	c Becken		DATE:	(MM DD YY)	
Item	Inspect For	Action Required		Comments	
2. Landfill Cap (contin	ued)				
Access Roads	- bare areas, dead/dying veg.	show covered			
	- erosion	n n			
	- potholes or puddles				
	- obstruction	show	•		
3. Wetlands (Area "F")	- dead/dving vegetation	where kill			
	- change in water budget	normal			
	- general condition of wetlands	good			
4. Other Site Systems					
		٥		. ·	
Perimeter Fence	- integrity of fence	good	· · · · · · · · · · · · · · · · · · ·		
	- integrity of locks	- quorel			
	- placement and condition of	<u></u>		·	
	signs	good		-	
FORM 1					

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	<u> </u>		MONTHLY INSPECTION LO	G	· · · · · · · · · · · · · · · · · · ·
PRO	JECT NAME:	Ningata County Refuse Site	•	LOCATION:	Wheatfield, New York
INSI	ECTOR(S):	RI Becken		DATE:	(MM DD YM
	item	Inspect For	Action Required		Comments
	Other Site S	rsteens (continued)	0		
	Drainage Dit Swale Outlet	ches/ - sediment build-up s - erosion	h h		
		 condition of erosion protection flow obstructions 			·
H		- dead/dying vegetation - cable concrete/gabion mats and riprap	u coverlet		
	Culverts	- sediment build-up	SNOW Covered		<
		- erosion - condition of erusion protection			
	Gas Vents	- flow obstructions	Gool		
	Wells	- locks secure	yes	*****	
FORM 1					

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	MONTHLY INSPECTION LOG							
PROJECT NAM	E: Niagara	County Refuse Site		LOCATION:	Wheatfield, New York			
INSPECTOR(S)	Ri	Backen		DATE:	<u>01410295</u> (MM DD YY)			
Item		Inspect For	Action Required		Comments			
1. Perimete	r Collection S	ystem/Off-Site Forcemain						
Manhole Wet Wel	s is Cap	 cover on securely condition of cover condition of inside of manhole flow conditions cover on securely condition of cover condition of inside of wet well 	OK good moderate flow OK good good					
Vegetate	d Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation dead/dying vegetation 	no no no short winte pilp					
FORM 1								



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ECT NAME: Ningata	County Refuse Site		LOCATION: DATE:	Wheatfield, New York
ECTOR(S):	Becken	Artian Required		(MIM DD YY) Comments
Other Sile Systems (matinued)			
Drainage Ditches/ Swale Outlets	 sediment build-up erosion condition of erosion protection flow obstructions dead/dying vegetation cable concrete/gabion mats and riprap sediment build-up 	none good hone winter kief good home		
Gas Vents Wells	 erosion condition of erosion protection flow obstructions intact /damage locks secure 	yes yes		

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		MONTHLY INSPECTION	LOG	
PROJECT NAME: Niagara	County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTOR(S):	Becken		DATE:	1015102-0151 (MM DD YY)
Item	Inspect For	Action Required	,	Comments
1 Perimeter Collection	System/Off-Site Forcemain			
Manhoies Manhoies Wet Weils Landfill Cap	 cover on securely condition of cover condition of inside of manhole flow conditions cover on securely condition of cover condition of inside of wet well 	OK OK OK OK OK		
FORM 1	 erosion bare areas washouts leachate seeps length of vegetation dead/dying vegetation 	Minor none none short winter kill		

PROJECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTOR(S):	Becken		DATE:	101510124015T (MM DD YY)
Item	Inspect For	Action Required		Comments
2. Landfill Cap (contin	ued)			
Access Roads	- bare areas, dead/dying veg.	none		
	- erosion	none	· · · · · · · · · · · · · · · · · · ·	
	- potholes or puddles	mino		
	- obstruction	none		
3. Wetlands (Area "F")	- dead/dying vegetation	winter kill		
	- change in water budget	high		
	- general condition of wetlands	Good	· · · · · · · · · · · · · · · · · · ·	
4. Other Site Systems				
П		• 14		•
Perimeter Fence	- integrity of fence	DK		۲۰۰۰ - ۲۰۰۰ ۱۹۹۵ - ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲
	- integrity of locks			
	- placement and condition of			
	signs	<u> </u>		
		· · · · · · · · · · · · · · · · · · ·		
ORM 1		. •		

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ECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York
ECTOR(S):	21 Berkan		DATE:	MM DD YY)
Item	Inspect For	Action Required		Comments
Other Site Systems (continued)			
Drainage Ditches/ Swale Outlets Culverts	 sediment build-up erosion condition of erosion protection flow obstructions dead/dying vegetation cable concrete/gabion mats and riprap sediment build-up erosion condition of erosion protection flow obstructions 	none good none none good none good none good none		
Gas Vents	- intact /damage	good		
Wells	- locks secure	good		

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			MONTHLY INSPECTION	LOG	
PROJI	ECT NAME: Niagara (County Refuse Site		LOCATION:	Wheatfield, New York
INSPE	ECTOR(S): RC	Becken		DAIE:	(MM DD YY)
	Item	Inspect For	Action Required		Comments
1.	Perimeter Collection S	ystem/Off-Site Forcemain			
	Manholes	 cover on securely condition of cover condition of inside of manhole flow conditions 	yes good good no flow		
2	Wet Wells Landfill Cap	 cover on securely condition of cover condition of inside of wet well 	yes good good		
	Vegetated Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation dead/dying vegetation 	Minor ND NO None Knee high None		
FORM 1					

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PROJECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York
			DATE:	10 40141951
NSPECTOR(S):	2 c Berken			
Item	Inspect For	Action Required		Comments
Landfill Cap (contin	ued)			
Access Roads	- bare areas, dead/dying yeg.	nd		
	- erosion	nd		
-	- potholes or puddles	none		· · · · · · · · · · · · · · · · · · ·
	- obstruction	none		
Wollande (Area #5%	- dead/duing vegetation	5 mag		
· ····································	- change in water budget	(ow	<u></u>	
	- general condition of wetlands	Good	· · · ·	
			· · ·	
. Other Site Systems				
Perimeter Fence	- integrity of fence	qood	·····	-
-	- integrity of gates	good	•	
-1	- integrity of locks	<u> qovd </u>		
	- placement and condition of signs	good		
M 1				

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ECT NAME: Niagara	a County Refuse Site	Ĩ	LOCATION:	Wheatfield, New York
	RC Becken	· I	DATE:	(MM DD YY)
Item	Inspect For	Action Required		Comments
Other Site Systems (continued)			
Drainage Ditches/	- sediment build-up	none		
Swale Outlets	- erosion	none		
	- condition of erosion protection	900 l	·	a a su a
	- 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 condit	10~	
Walls	- locks secure	yes		

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		MONTHLY INSPECTION	LOG	
PROJECT NAME: Niaga	ara County Refuse Site		LOCATION:	Wheatfield, New York 1017194015 (MM DD YY)
Item	Inspect For	Action Required	·	Comments
1. Perimeter Collectio	n System/Off-Site Forcemain			
Manholes Manholes Wet Wells Landfill Cap	 cover on securely condition of cover condition of inside of manhole flow conditions cover on securely condition of cover condition of inside of wet well 	OK good good wwwflow Ok good good		
Vegetated Soil Cove	er - erosion - bare areas - washouts - leachate seeps - length of vegetation - dead/dying vegetation	more nore high nore		

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PROJECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTOR(S):	Ri Becke		DATE:	1017101610151 (MM DD m)
Item	Inspect For	Action Required		Comments
2. Landfill Cap (contin	ued)			
Access Roads	- bare areas, dead/dying veg.	mone		
	- erosion			
	- potholes or puddles	mont		
	- obstruction	more		
3. Wetlands (Area "F")	- dead/dying vegetation	mone		•
	- change in water budget	low		
	- general condition of wetlands	gural		
4. Other Site Systems				
Π		D		
Perimeter rence	- integrity of gates	Cosel		
	- integrity of locks	good		
	- placement and condition of signs	good		
	~	· · · · ·		
ORM 1				

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	· · ·	MONTHLY INSPECTIO	ON LOG		
	Country D. C. C.				
WINCT WAME. Wagar	a County Keruse Site		LOCATION:	Wheattield, New York	
· .			DATE:	1979992	
SPECTOR(S):	- Ri Becks			(MM DD II)	
Item	Inspect For	Action Required		Comments	
Other Site Systems (d	continued)				
Drainage Ditches/	- sediment build-up				
Swale Outlets	- erosion	mande			
	- condition of erosion protection	good			
	- flow obstructions	nor			
	- dead/dying vegetation	rol			
	- cable concrete/gabion mats and riprap	good	*		
Culverte	andiment hout a	• • •			
	- arosion				
	- condition of energian protection	- D			
	- flow obstructions	good			
	now obstractions	noe	· · · · · · · · · · · · · · · · · · ·	· ·	
Gas Vents	- intact /damage	good			
Wells	- locks secure	Goal			
		· · · ·			
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PROJECT	NAME: Niagara C	County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTO)R(S):	Belles		DATE:	(MM DD YY)
Item	r.	Inspect For	Action Required		Comments
1. Peri	meter Collection Sy	ystem/Off-Site Forcemain			
Man	nholes	 cover on securely condition of cover condition of inside of manhole flow conditions 	6K OK DK no apparent flo	n)	
Wet	Wells	 cover on securely condition of cover condition of inside of wet well 	OK OK		
2. Lan	dfill Cap				
Veg	etated Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation dead/dying vegetation 	minon no no ohat to talp pome due to dry	weathe	
FORM 1					

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		MONTHLY INSPECTI	UN LOG	
ROJECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York
NSPECTOR(S):	2 Beek		DATE:	(MM DD YY)
Item	Inspect For	Action Required		Comments
. Landfill Cap (contin	ued)			
Access Roads	- bare areas, dead/dying veg.	MD		
	- erosion	NO		
]	- potholes or puddles	.000		
	- obstruction	~~>		
Wetlands (Area "F")	- dead/dying vegetation	mo	A- 0	· · · · · · · · · · · · · · · · · · ·
	 change in water budget general condition of wetlands 	OK OK	water leve	¥
Other Site Systems				
י ז	· .			
Perimeter Fence	- integrity of fence	OR		
	- integrity of gates	OK		
	- integrity of locks	OK		
	- placement and condition of signs	OK		-

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		MONTHLY INSPECT	ION LOG		
OJECT NAME: Niaga	ara County Refuse Site	·	LOCATION:	Wheatfield, New York	
SPECTOR(S):	RC Becken		DATE:	MM DD YY	
Item	Inspect For	Action Required		Comments	
Other Site Systems	(continued)				
Drainage Ditches/	- sediment build-up	none			
Swale Outlets	- erosion	mone			
	- condition of erosion protection	OK			
	- flow obstructions	mone			
	- dead/dying vegetation	none			
	 cable concrete/gabion mats and riprap 	OR	· · · · · · · · · · · · · · · · · · ·		
	· • • • •				
Culverts	- sediment build-up	none			
	- erosion	mone			
	- condition of erosion protection	Ok			
	- flow obstructions	mone			
Gas Vents	- intact /damage	jok			
Wells	- locks secure	OK			

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		•	MONTHLY INSPECTION LO	DG	
PRO	JECT NAME: Niagara (County Refuse Site		LOCATION:	Wheatfield, New York
INSI	PECTOR(S): RC	Becken		DATE:	090305 (MM DD YY)
	Item	Inspect For	Action Required		Comments
1.	Perimeter Collection S	ystem/Off-Site Forcemain			
	Manholes Wet Wells Landfill Cap	 cover on securely condition of cover condition of inside of manhole flow conditions cover on securely condition of cover condition of inside of wet well 	yes good good w flow 		
	Vegetated Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation dead/dying vegetation 	wins none none long no		
FORM	1				

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	0		DATE:	<u>ที่สุดั</u> สดุส
INSPECTOR(S):	Becker		-	(ram DD 11)
ltem	inspect For	Action Required		Comments
2. Landfill Cap (continu	ied)	· .		
Access Roads	- bare areas, dead/dving veg.	make		
	- erosioa	mont	· · · ·	
	- potholes or puddles	name		
	- obstruction	none		
3. Wetlands (Area "F")	 dead/dying vegetation 		çanı, ağışın Mira, Mara Bakında Mira (1997) yaşının ayın Bira (1994) - yaşışının Şak	
	- change in water budget	no wet		
	- general condition of wetlands		al Mandres and a state and a state of the design of the state of the	
L. Other Sile Systems				
7		Δ		
Perimeter Fence	- integrity of fence	pool		
	- integrity of locks	- 4000		
	- placement and condition of	<u> </u>		
	signe	good		
RM 1		•		

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			MONTHLY INSPECT	ION LOG	
PROJECT NA	ME: Niagara Co	unty Refuse Site		LOCATION:	Wheatfield, New York
				DATE:	(01910131015) (MM DD YY)
INSPECTOR(5): <u> </u>	L Beck			
A 6 E 778		Inspect For	Action Required		Comments
Other S	ite Systems (conti	nued)			
Drainag Swale C	ze Ditches/ • Dutlets	sediment build-up	more		
-1	-	erosion condition of erosion protection	good		
-	-	flow obstructions	nore		
-]	- - ·	dead/dying vegetation cable concrete/gabion mats and riprap	- gool	······	
Culverts	i - 1	sediment build-up	Mone		
4	- (erosion	more		-
]	- t	low obstructions	good		
Gas Veni	·s - i	ntact /damage	none		
Wells	- 1	ocks secure	1100		
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		MONTHLY INSPECTION L	.0G	
PROJECT NAME: Niagara	County Refuse Site		LOCATION:	Wheatfield, New York
0			DATE:	(MM DD YY)
INSPECTOR(S):	chard (Becken			
Item	Inspect For	Action Required		Comments
1. Perimeter Collection	System/Off-Site Forcemain			
Manholes	 cover on securely condition of cover condition of inside of manhole flow conditions 	yes good good youl		
Wet Wells	 cover on securely condition of cover condition of inside of wet well 	yes good good		
Vegetated Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation 	no no none none ohort		
FORM 1	- dead/dying vegetation	no		

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		<i>.</i>		
OJECT NAME: Niagan	a County Refuse Site	· ·	LOCATION:	Wheatfield, New York
SPECTOR(S):	chard C Becken		DATE:	(MM DD YY)
ltem	Inspect Far	Action Required		Comments
Other Site Systems (c	watinued)			
Drainage Ditches/	- sediment build-up	none		
	erosion	none		-
	- condition of erosion protection	good		ar
	- flow obstructions	none		
	- dead/dying vegetation	more		· · · · · · · · · · · · · · · · · · ·
	- cable concrete/gabion mats and riprap	good a condition		
Culverts	- sediment build-up	mont		
	- erosion	piere		-
	- condition of erosion protection	aovel		
	- Aow obstructions	mone		
Cas Vents	- intact /damage	good anditim		
Wells	- locks secure			an a
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OJECT NAME: Niaga	ra County Refuse Site		LOCATION:	Wheatfield, New York
SPECTOR(S):	have Berken		DATE:	(MM DD YY)
Item	Inspect For	Action Required		Comments
Other Site Systems	(continued)			
Drainage Ditches/ Swale Outlets Culverts	 sediment build-up erosion condition of erosion protection flow obstructions dead/dying vegetation cable concrete/gabion mats and riprap sediment build-up 	more good nore good condition more good condition		
Gas Vents Wells	 erosion condition of erosion protection flow obstructions intact /damage locks secure 	good condition good		

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OJECT NAME: Niagar	a County Refuse Site		LOCATION:	Wheatfield, New York
SPECTOR(S): R	" Beiker		DATE:	(MM DD YY)
Item	Inspect For	Action Required	•	Comments
Perimeter Collection	System/Off-Site Forcemain			
Manholes	 cover on securely condition of cover condition of inside of manhole flow conditions 	OK good good mint flow	2	
Wet Wells Landfill Cap	 cover on securely condition of cover condition of inside of wet well 	Good Good Good		
Vegetated Soil Cover	 erosion bare areas washouts leachate seeps length of vegetation 	none none phort		
	- dead/dying vegetation	worl		

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		MONTHLY INSPECTIO	N LOG
PROJECT NAME: Niagar	a County Refuse Site		LOCATION: Wheatfield, New York DATE: [][]0]6[0]5]
INSPECTOR(S):	chand C Bed	**	- (MM DD YY)
Item	Inspect For	Action Required	Comments
2. Landfill Cap (contin	ued)		
Access Roads	- bare areas, dead/dving veg.	ms	
	- crosion	mone	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	- potholes or puddles	more	
	- obstruction	none	
). Wetlands (Area "P")	 dead/dying vegetation change in water budget general condition of weslands 	mighen Than good	last month
Dither Sile Systems		•	
Perimeter Fonce	- integrity of fence	good	
_	- integrity of gates	far back gate	lock shoot of replaced lock
-1	- integrity of locks	se abore	εν I
	- placement and condition of signs	alot of sign	s massing will replace
RM 1		v	

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		MONTHLY INSPECTION	LOG	
DJECT NAME: Niaga	ra County Refuse Site		LOCATION:	Wheatfield, New York
			DATE:	111060151
PECTOR(S):	20 Beilin			(MM DD YY)
Item	Inspect For	Action Required		Comments
Other Site Systems	(continued)			
Drainage Ditches/	- sediment build-up	non		
Swale Outlets	- erosion	non		
	- condition of erosion protection	good		
	- flow obstructions	none		
	- dead/dying vegetation	none		
	- cable concrete/gabion mats and riprap	good		
Culverts	- sediment build-up	mone		
	- erosion	none		
	- condition of erosion protection	- 9000		
	- flow obstructions	none		
Gas Vents	- intact /damage	good condition	2	
Wells	- locks secure	good		
		t .		
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Page 1 of 3 MONTHLY INSPECTION LOG PROJECT NAME: Niagara County Refuse Site Wheatfield, New York LOCATION: 12/10/05 DATE: (MM DD RC Becken INSPECTOR(S): Item Inspect For **Action Required** Comments Perimeter Collection System/Off-Site Forcemain 1. DK Manholes - cover on securely OK - condition of cover OK - condition of inside of manhole no flow - flow conditions OK Wet Wells - cover on securely DIC - condition of cover good - condition of inside of wet well 2. Landfill Cap Vegetated Soil Cover none - erosion none - bare areas - washouts none - leachate seeps none for - length of vegetation Winter Kill - dead/dying vegetation FORM 1

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OJECT NAME: Niagai	ra County Refuse Site		LOCATION:	Wheatfield, New York
	c Becken		DATE:	(MM DD YY)
Item	Inspect For	Action Required		Comments
Landfill Cap (contin	ued)			
Access Roads	- bare areas, dead/dying veg.	none		
	- erosion	hone	· · · ·	
	- potholes or puddles	_hone	·	·
	- obstruction	none		
Wetlands (Area "F")	- dead/dying vegetation	winter Kill		
	- change in water budget	high		
	- general condition of wetlands	good	· ,	
Other Site Systems		<i></i>		
Perimeter Fence	- integrity of fence	OK		
	- integrity of gates	DIC		
	- integrity of locks	012		
	- placement and condition of signs	no sighs		-
		/		

CRA 5723 (17)

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		MONTHLY INSPECTIO	N LOG	
PROJECT NAME: Niagara	County Refuse Site		LOCATION:	Wheatfield, New York
INSPECTOR(S): <u>K</u> C	Berken		DATE:	(<u>12</u> 10 05 (MM DD YY)
Item	Inspect For	Action Required		Comments
l. Other Site Systems (c	ontinued)			
Culverts	 sediment build-up erosion condition of erosion protection flow obstructions dead/dying vegetation cable concrete/gabion mats and riprap sediment build-up erosion condition of erosion protection flow obstructions 	none good none winter kill or none none good none		
Gas Vents	- intact /damage	no domase		
Wells	- locks secure	yes		

APPENDIX E WETLANDS MONITORING REPORT

FINAL MONITORING REPORT for Tonawanda Landfill Wetland Replacement Area

December 2005

Fifth-Year Monitoring Tonawanda Landfill Wetland Replacement Area Tonawanda, New York

ACOE Permit No. 97-494-0080 (0)



Prepared for: O & M Enterprises Specialist In Treatment Plant Operations 7134 Marigold Drive North Tonawanda, New York 14120 Tel: (716) 694-5322 Fax: (716) 731-5322

Prepared by: Hand-Picked Wetland Plants & Seeds 7135 Olean Rd. South Wales, New York 14139 Tel: (716) 481-8879 Fax: (716) 759-1489

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1.0 INTRODUCTION

1.1 Project History

The project site is located at the former Niagara County Refuse Site (NCRS) located in the town of Wheatfield, Niagara County, New York. This wetland replacement project was designed to alleviate the onsite wetland impacts associated with the capping and restoration of the former landfill site. Construction of the wetland replacement area was completed in the year 2000.

To mitigate wetland losses incurred by the capping, the City of North Tonawanda created 0.17 acres of wetland (Figure 1).

An aerial photograph of the site and surrounding area is shown in Figure 2 and depicts the location of these features.

1.2 Monitoring Requirements

Permit conditions in the Operation, Maintenance, and Monitoring Manual (CRA 2000) for the New York State Department of Environmental Conservation (DEC) Site No. 9-32-026 require post-construction monitoring of the wetland replacement area. This report presents the results of the fifth year (August 2005) monitoring study of the Wetland Replacement Area. Included are descriptions of the methodology used for the study (Section 2.0), vegetation data recorded during the survey (Section 3.0), and conclusions and recommendations (Section 4.0).

2.0 METHODOLOGY

The study involved: 1) mapping wetland plant communities; 2) characterizing plant species composition; 3) documenting presence/absence of nuisance exotic plant species; and 4) recording wetland hydrology parameters. A wetland boundary and plant community map was prepared for the wetland replacement area to show the approximate outer limit of the wetland and the distribution of plant communities within the area (Figure 3). Plant community boundaries were mapped using plant species composition and corresponding water depths observed in the field. Photographs were taken to document current site conditions.

A cumulative plant species list (Table 1) was prepared to document all species identified during a thorough reconnaissance of the wetland replacement area. This list has been updated to include seven new hydrophilic plant species identified in year 2005. In addition, plant species composition and prevalence were documented using ten sample points, 50 feet apart, along two north/south transects (Figure 3). The stakes were installed approximately 3.0 ft. from ground level making them inconspicuous. These will remain in place in the event that future monitoring is required. One-meter square plots centered on the stake at each sample point were used to record species composition data. A visual estimate of percent aerial cover was made for all herbaceous and woody plant species present within each plot. These data were used to calculate the relative frequency for each plant species in the wetland replacement area, the relative density for each species in each plant community and the overall wetland frequency value (Tables 2, 3, and 4). The following formulas were used to calculate these values:

Relative frequency = (number of plots in which species X occurs/total number of plots in the Wetland Replacement Area) x 100.

Relative density = (% aerial cover of species $X / \text{total aerial cover for all species in plant community Y) x 100.$

Wetland Frequency Value = the combined indicator value / total amount of all species in the transects.

As directed, two permanent representative transects have been established using six foot iron posts located at the ends of each transect (Figure 3). The sample plots (1 meter square) were placed at fifty foot intervals along each transect, with sample plot 0+00 on the south side of the wetland creation area. Sample plot work sheets were prepared for each plot to record the number of each plant species, percent cover, relative frequency, water level relative to the normal water pool, soil type, and soil pH (Table 5). Surface-water depths were recorded at each sample point (Table 6).

A thorough search for nuisance exotic plants was conducted in the wetland replacement area. This survey focused primarily on purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*), which are particularly aggressive exotic weed species in wetlands of the northeastern United States. Purple loosestrife plants consisting of flowering and/or juvenile plants were growing in six of the ten plots. For some reason, the Purple loosestrife plants in the wetland creation area were not producing flowers. And for the most part, the leaves appeared pretty well eaten up by something. Common reed, *Phragmites australis*, was found in transect A Stations, 1+00; 1+50 and 2+00. Each spot consisted of approximately 100 stems each. The plant is spreading at a very rapid rate compared to the 2004 monitoring report.

3.0 RESULTS

The following sections present the results of the August 2005 monitoring study of the NCRS in Niagara County, New York. Figures are provided in Appendix A, tables in Appendix B, site photographs in Appendix C, and completed data forms in Appendix D.

3.1 Plant Community Mapping

The Cowardin *et al.* (1992) wetland classification system was used to assign wetland plant communities within the wetland replacement area. Two wetland plant communities occur in the site, 1) open water, and 2) emergent marsh. Palustrine wetlands are defined as non-tidal wetlands dominated by trees, shrubs or persistent emergent plants, as well as non-vegetated wetlands that are less than 2 m. (6.6 ft.) deep and less than 20 acres in size (Cowardin *et al.* 1992). Emergent marsh is characterized by a semi-permanently flooded water regime with erect, rooted herbaceous plants (e.g., narrow-leaf cattail, *Typha angustifolia*).

3.2 Plant Community Characterization

An overall cumulative list of plant species was formed and is presented in Table 1. Moreover, plant species composition and prevalence data were recorded from ten 1.0-meter square sample plots within the wetland replacement area (Figure 3). The completed data forms are attached in Appendix D. The relative frequencies of each species recorded in the replacement area are presented in Table 2. Relative density data for each species, by plant community, are presented in Table 3.

The wetland replacement area supports a diversity of plants, with a total of 32 species observed in the area (Table 1), and 14 species recorded in sample plots (Tables 2 and 3). All of these plants are classified as facultative wetland species (FACW) to obligate wetland species (OBL). The additional plant species identified in the 2005 monitoring could be due to an increase in plant cover, and reduced grazing by the large duck and muskrat population due to older, less edible plant foliage.

All of the plant species that were recorded in the wetland creation area fell in the range of

facultative wetland species (FACW) to obligate wetland species (OBL) (Table 1). The overall wetland frequency indicator of 1.36 exceeds the expected value of 1.67 for Year 5 of an established wetland (Table 4).

3.3 Invasive/Exotic Plant Survey

Three invasive/exotic aquatic plant species were found within the wetland replacement area. *Lythrum salicaria* (purple loosestrife) was observed in six of the ten sample plots. In addition, *Phragmites communis* (common reed) was found in three sample plot and *Typha angustifolia* (narrow-leaf cattail) was found in the three sample plots. O & M Enterprises removed many of the purple loosestrife seed heads in years 2001, 2002, and 2003 and pulled many plants by hand in the spring of 2003 and 2004. The annual control of purple loosestrife should include hand pulling or selective spraying starting as soon as the plants are identifiable in the spring. The root system will not be fully developed at that time of the season, making them easier to pull.

3.4 Wetland Hydrology

Surface-water depths were recorded at each of the ten plots during the August 2005 survey (Table 6). The water depth in the creation area was down 0.5 inches at the time of the survey. The same loss of hydrology was observed in the adjacent DEC wetland. Evaporation, lack of recent rainfall, and the date of monitoring may have created this reduction in water depth. It is expected that the mitigation area will refill and stay full under normal conditions.

3.5 Wildlife Usage

The wetland replacement area is, and has been, utilized by a number of wildlife species, some of which were seen during the survey. These species included a variety of waterfowl: wood duck (*Aix sponsa*) and mallard (*Anas platyrhynchos*); amphibians: leopard frog (*Rana pipiens*); and extensive signs of mammals: muskrat (*Ondatra zibethicus*). Use of the wetland replacement area by wetland wildlife should continue during the coming years.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The NCRS wetland replacement area is very successful. All the data that were examined for this study show that the hydrologic conditions that were examined in this study are creating a productive and diverse wetland community. The presence of hydrophytic vegetation and wildlife are evident throughout the creation area. There is no evidence that the hydrologic conditions in the replacement area will change, as they match the conditions in the adjacent DEC wetland.

A diverse array of wetland plants (a total of 32 species recorded during the August 2005 survey) has become established, with 100% of the species classified as FACW or OBL. The wetland is successful with minimal exposed bare ground in the non–open water areas. Most of the OBL plant species have a high quality rating and were dropping mature seed at the time of the survey. It is expected that this year's seed cast will fill in the remaining areas that have minimal vegetation.

It should be noted that purple loosestrife, an invasive/exotic aquatic plant species, was found in six of the ten transects. O & M Enterprises had removed the seed heads of purple loosestrife before maturity in the 2001, 2002, and 2003 growing seasons and hand pulled many purple loosestrife plants in 2003 and 2004. Now it appears that something is eating the foliage which will slow down and/or reduce the competition with the more desirable plants. Common reed was found in three of the ten transects. Visually, it appears that this plant is spreading at a very rapid rate. To reduce the strong possibility of the plant colonizing a large portion of the wetland, some actions should be taken now. This control could include hand brushing Round-up on the leaves starting when the new plant growth starts in the spring.

Over all, the wetland mitigation area is established and is serving nature as intended.

5.0 REFERENCES

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- Ohio Environmental Protection Agency. 1999. Ohio Rapid Assessment Method for Wetlands. Version 4.0 Draft. January 5, 1999. Ohio EPA Division of Surface Water. Columbus, Ohio.
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Monitoring field person: Josh Brown

APPENDIX A

FIGURES



Figure 1. Site Location



Figure 2. Aerial



Figure 3. Plant Communities and Transect Locations 2005 Monitoring Program

APPENDIX B

TABLES

Scientific Name	Common Name	Indicator
		Status
Agrostis alba	red top	FACW
Alisma plantago-aquatica	water plantain	OBL
Aster novae-angliae	New England aster	FACW
Bidens cernua	nodding bur-marigold	OBL
Eupatorium perfoliatum	boneset	FACW
Carex lacustris	lakebank sedge	OBL
Carex vulpinoidea	fox sedge	OBL
Cicuta maculata	water hemlock	OBL
Eleocharis palustris	creeping spikerush	OBL
Cyperus esulentus	nut grass	FACW
Iris versicolor	blueflag	OBL
Leersia oryzoides	rice cutgrass	OBL
Juncus effusis	soft rush	FACW
Lythrum salicaria	purple loosestrife	FACW
Minulus ringens	monkey flower	OBL
Nymphaea tuberosa	white water lily	OBL
Peltandra virginica	arrow arum	OBL
Penthorum sedoides	ditch stone crop	OBL
Pontederia cordata	pickerel weed	OBL
Phragmites communis	common reed	FACW
Rumex verticillatus	water dock	OBL
Sagitarria latifolia	arrow-head	OBL
Sagitarria rigida	sessile-fruited arrowhead	OBL
Scirpus cyperinus	wool grass	FACW
Scirpus validus	soft-stem bulrush	OBL
Sium suave	hemlock water parsnip	OBL
Sparganium americanum	eastern burreed	OBL
Sparganium eurycarpum	giant burreed	OBL
Typha angustifolia	narrow-leaf cattail	OBL
Typha latifolia	broad-leaf cattail	OBL

 Table 1. Comprehensive List of Plants Observed in the Wetland Replacement Area.

Table 2. Relative Frequency* of Plants Recorded in Wetland Mitigation Area

Scientific Name		PEM										
		Sample Plots									Relative	
	A0+00	A0+50	A1+00	A1+50	A2+00	B0+00	B0+50	B1+00	B1+50	B2+00	Frequency	Frequency
Carex lacustris					1						1	3.57%
Eleocharis palustris							1				1	3.57%
Juncus effusus	1	1		1	1						4	14.29%
Lythrum salicaria	1	1	1	1	1	1					6	21.43%
Nymphaea tuberosa							1		1	1	3	10.71%
Peltandra virginica							1				1	3.57%
Phragmites communis			1	1							2	7.14%
Scirpus validus			1	1							2	7.14%
Sparganium eurycarpus	1	1	1				1	1	1	1	7	25.00%
Typha angustifolia	1										1	3.57%
Typha latifolia					1	1					2	7.14%

Monitoring Year 2005 (5th year)

Total Frequency of all Species 28

Relative Frequency*= number of plots in which Species X occurs / total number of plots in the Wetland Replacement Area x 100

Table 3. Relative Density* of Plants Recorded in Wetland Mitigation

Scientific Name		PEM							Relative			
		Sample Point									Density	
	A0+00	A0+50	A1+00	A1+50	A2+00	B0+00	B0+50	B1+00	B1+50	B2+00	total	%
Carex lacustris					20						20	2.8
Eleocharis palustris							40				24	30.0
Juncus effusus	5	10		84	30						40	19.5
Lythrum salicaria	20	10	10	10	40	50					140	19.9
Nymphaea tuberosa							10		65	40	115	16.3
Peltandra virginica							20				20	2.8
Phragmites communis			25	1							1	0.1
Scirpus validus			60	5							65	9.2
Sparganium eurycarpus	10	50	5				10	5	5	40	125	17.7
Typha angustifolia	25										25	31.3
Typha latifolia					10	10					20	25.0
% Aerial Cover	60	70	100	100	80	60	80	5	70	80	705	
% Bare ground	40	40	0	0	0	0	0	0	0	0	80	
% Open Water	0	0	0	0	0	40	20	95	30	20	205	

Relative Density* = (% aerial cover of species / total aerial cover for all species in plant community Y) x 100.

Table 4. Wetland Frequency Indicator*

Scientific Name		Sample Plots										Wetland Frequency
		A0+00	A0+50	A1+00	A1+50	A2+00	B0+00	B0+50	B1+00	B1+50	B2+00	Indicator
Agrostis alba		5										2.0
Eleocharis palustris						24						2.0
Juncus effusus					40							2.0
Lythrum salicaria		5		5	20	15	5					2.0
Nymphaea tuberosa								39	15	55	30	1.0
Pontederia cordata											5	1.0
Potamogeton sp.								1				1.0
Phragmites communis				1								2.0
Sagitarria latifolia			20			1		10				1.0
Scirpus validus				50	40	55				5		1.0
Sparganium eurycarpus		10	33					5	35	5	30	1.0
Sagitarria rigida			2					5		25	15	1.0
Typha angustifolia		20				5	5					1.0
Typha latifolia		50		44			65					1.0
Wetland Frequency Indica	tor	*= comb	ined indi	cator valu	ue / total	number o	of all spec	cies in the	e transect	s Tot	al Value	19.0

Total species 14.0

Wetland Frequency Indicator 1.36

Table 5.

Hydrology and Soil Data Within the Replacement Area

Sample Point	Sub-surface Depth	Soil Type	Soil	Soil	
	(from normal water pool	(unified soil	(ph)	(depth)	
	elevation 100.00)	classification)			
Transect A					
0+00	99.7	OL	6.8	> than 12 inches	
0+50	95.5	OL	6.8	> than 12 inches	
1+00	99.5	OL	6.8	> than 12 inches	
1+50	99.9	OL	6.8	> than 12 inches	
2+00	99.8	OL	6.8	> than 12 inches	
Transect B					
0+00	100.0	OL	6.8	> than 12 inches	
0+50	99.5	OL	6.8	> than 12 inches	
1+00	98.7	OL	6.8	> than 12 inches	
1+50	99.0	OL	6.8 > than 12 inche		
2+00	98.6	OL	6.8	> than 12 inches	

OL = Organic Loam

Table 6

Hydrology Measurements Within the Wetland Replacement Area

Sample Point	Water	Water	*Water
	Depth	Depth	Depth
	Year 2001	Year 2002	Year 2003
A 0+00	+ 4 inches	0	0
A 0+50	-2 inches	0	3 inches
A 1+00	0.0 inches	0	0
A 1+50	+5 inches	0	0
A 2+00	+5 inches	0	0
B 0+00	+5 inches	0	0
B 0+50	-5 inches	0	3 inches
B 1+00	-1.3 inches	3 inches	9 inches
B 1+50	-1.0 inches	1 inches	8 inches
B 2+00	-1.4 inches	1 inches	9 inches

Normal water pool elevation was set at elevation 100.00

*The Water Level in the Creation Area was for the most part drained (see photos).

Water	*Water
Depth	Depth
Year 2004	Year 2005
0	
3 inches	
0	
0	
0	
0	
3 inches	
9 inches	
8 inches	
9 inches	

APPENDIX C

PHOTOGRAPHS



Photograph 1. Transect A - Station 0+00, - looking East



Photograph 2. Transect A - Station 0+50, - looking East



Photograph 3. Transect A - Station 1+00, - looking East



Photograph 4. Transect A - Station 1+50, - looking East



Photograph 5. Transect A – Station 2+00, - looking East



Photograph 6. Transect A - Station 2+50, - looking East



Photograph 1. Transect B – Station 0+00, - looking North



Photograph 2. Transect B - Station 0+50, - looking North



Photograph 3. Transect B – Station 1+00, - looking North



Photograph 4. Transect B – Station 1+50, - looking North



Photograph 5. Transect B – Station 2+00, - looking North



Photograph 6. Transect B – Station 2+50, - looking North

APPENDIX D

DATA FORMS

DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Project Site:	Tonawanda Landfill Wetland Replacement Area				Date:	: 8/12/2005		
Applicant/Owner:	O & M Enterprises				Coun	ty: Nia	Niagara	
Investigator:	J. Brown			State	: <u>New</u>	York		
Do Normal Circumstances exist on the site?YesIs the site significantly disturbed (Atypical Situation)?YesIs the area a potential problem area?Yes(If needed explain on reverse.)Yes				Yes No Yes No Yes No	Comr Trans Plot II	munity ID: sect ID: D:	A 0+00	
VEGETATION								
Dominant Plant Species	20%	<u>Stratum</u>	Indicator FACW	<u>Domi</u> Q	nant Plant Species		<u>Stratum</u>	Indicator
2 Typha angustifolia	25%		OBL	10.				
3 Sparganium eurycarpu	<i>n</i> 10%		OBL	11.				
4 Juncus effusis	5%		FACW	12.				
5 <u>.</u> 6 Duran (0. juni)	000/			13.				
O Percent Coverage	<u>60%</u>			14.				
8 Percent Bare Ground	40%			16.				·
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 4/4 = 100%								
Remarks: Created Wetland Area 100% of the plant species are classified as FACW or OBL								

HYDROLOGY

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:				
Stream, Lake, or Tide Gauge	Primary Indicators:				
Aerial Photographs	Inundated				
Other	X Saturated in the Upper 12 Inches				
X No Recorded Data Available	X Water Marks				
	Drift Lines				
Field Observations:	Sediment Deposits				
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands				
	Secondary Indicators (2 or more required):				
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches				
	Water-Stained Leaves				
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data				
	FAC-Neutral Test				
	Other (explain in Remarks)				
Remarks:	•				
The dry summer has lowered the water elevation in the wetland creation area					

DATA FORM ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Project Site:	Tonawanda Landfill Wetland Re	Date:	8/12/2005	5		
Applicant/Owner:	O & M Enterprises	County:	Niagara			
Investigator:	J. Brown	State:	New York			
	_					
Do Normal Circumstances exist on the site? Yes No			No	Community	/ ID:	
Is the site significantly disturbed (Atypical Situation)?			No	Transect ID):	A
Is the area a potential problem area?			No	Plot ID:	0+	+50
(If needed explain on						

VEGETATION

Dominant Plant Species		<u>Stratum</u>	Indicator	Dominant Plant Species	<u>Stratum</u>	Indicator	
1 Lythrum salicaria	10%		FACW	9			
2 Sparganium eurycarpun	50%		OBL	10.			
3 Juncus effusis	10%		FACW	11.			
4.				12.			
5.				13.			
6 Percent Coverage	70%			14.			
7 Percent Open Water	0%			15.			
8 Percent Bare Ground	30%			16.			
Percent of Dominant Species that are OBL, FACW, or FAC							
(excluding FAC-)				3/3 = 100%			
Remarks:	Created Wetl	and Area	a				
100% of the plant species are classified as FACW or OBL							

HYDROLOGY

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:					
Stream, Lake, or Tide Gauge	Primary Indicators:					
Aerial Photographs	Inundated					
Other	X Saturated in the Upper 12 Inches					
X No Recorded Data Available	X Water Marks					
	Drift Lines					
Field Observations:	Sediment Deposits					
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands					
	Secondary Indicators (2 or more required):					
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches					
	Water-Stained Leaves					
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data					
	FAC-Neutral Test					
	Other (explain in Remarks)					
Remarks:						
The dry summer has lowered the water elevation in the wetland creation area						
Project Site:	Tonawanda Landfill Wetland Replacement Area		Area	Date:	8/12/2	2005
---	---	-----	---------	----------	--------------	-------------
Applicant/Owner:	O & M Enterpris	ses		County:	Niag	ara
Investigator:	J. Brown			State:	<u>New Y</u>	<u>′ork</u>
Do Normal Circumstances	Yes	No	Communi	ty ID:		
Is the site significantly disturbed (Atypical Situation)?		Yes	No	Transect	ID:	Α
Is the area a potential problem area?		Yes	No	Plot ID:		1+00
(If needed explain on re						

VEGETATION

Dominant Plant Species		<u>Stratum</u>	Indicator	Dominant Plant Species	<u>Stratum</u>	Indicator
1 Lythrum salicaria	10%		FACW	9		
2 Scirpus validus	60%		OBL	10.		
3 Sparganium eurycarpum	5%		OBL	11.		
4 Phragmites communis	25%		FACW	12.		
5.				13.		
6 Percent Coverage	100%			14.		
7 Percent Open Water	0%			15.		
8 Percent Bare Ground	0%			16.		
Percent of Dominant Species that	at are OBL, FAC	W, or FAC				
(excluding FAC-)				4/4 = 100%		
Remarks:	Created Wetl	and Area	a			
100% of the plant species	are classified	d as FAC	W or OBL	-		

Recorded Data (Describe in Remarks):		Wetland Hydrology Indicators:		
Stream, Lake, or Tide Gauge		Primary Indicators:		
Aerial Photographs		Inundated		
Other		X Saturated in the Upper 12 Inches		
X No Recorded Data Available		X Water Marks		
		Drift Lines		
Field Observations:		Sediment Deposits		
Depth of Surface Water:	0(in.)	Drainage Patterns in Wetlands		
		Secondary Indicators (2 or more required):		
Depth to Free Water in Pit:	(in.)	Oxidized Root Channels in upper 12 inches		
		Water-Stained Leaves		
Depth to Saturated Soil:	12 (in.)	Local Soil Survey Data		
		FAC-Neutral Test		
		Other (explain in Remarks)		
Remarks:				
The dry summer has lowered the water elevation in the wetland creation area				

Project Site:	Tonawanda Landfill Wetland Re	Tonawanda Landfill Wetland Replacement Area			8/12/2	2005
Applicant/Owner:	O & M Enterprises			County:	Niag	ara
Investigator:	J. Brown			State:	<u>New Y</u>	<u>′ork</u>
Do Normal Circumstanc	es exist on the site?	Yes	No	Communit	y ID:	
Is the site significantly disturbed (Atypical Situation)?		Yes	No	Transect I	D:	Α
Is the area a potential p	Yes	No	Plot ID:		1+50	
(If needed explain on reverse.)						

VEGETATION

Dominant Plant Species		<u>Stratum</u>	Indicator	Dominant Plant Species	Stratum	Indicator
1 Lythrum salicaria	10%		FACW	9.		
2 Scirpus validus	5%		OBL	10.		
3 Juncus effusis	84%		FACW	11.		
4 Phragmites communis	1%		FACW	12.	• <u> </u>	
5.				13.		
6 Percent Coverage	100%			14.		
7 Percent Open Water	0%			15.		
8 Percent Bare Ground	0%			16.	·	
Percent of Dominant Species	that are OBL, FAG	CW, or FA	C			
(excluding FAC-)				4/4 = 100%		
Remarks:	Created Wetl	and Area	a			
100% of the plant species are classified as FACW or OBL						

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:			
Stream, Lake, or Tide Gauge	Primary Indicators:			
Aerial Photographs	Inundated			
Other	X Saturated in the Upper 12 Inches			
X No Recorded Data Available	X Water Marks			
	Drift Lines			
Field Observations:	Sediment Deposits			
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands			
	Secondary Indicators (2 or more required):			
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches			
	Water-Stained Leaves			
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data			
	FAC-Neutral Test			
	Other (explain in Remarks)			
Remarks:	·			
The dry summer has lowered the water elevation in the wetland creation area				

Project Site:	Tonawanda Landfill Wetland Replacement Area			Date:	8/12/2	2005
Applicant/Owner:	O & M Enterprises	O & M Enterprises			Niag	jara
Investigator:	J. Brown			State:	<u>New Y</u>	<u>ork</u>
Do Normal Circumstance	es exist on the site?	Yes	No	Community	y ID:	
Is the site significantly disturbed (Atypical Situation)?		Yes	No	Transect II	D:	Α
Is the area a potential pr	Yes	No	Plot ID:		2+00	
(If needed explain on reverse.)						

VEGETATION

Dominant Plant Species		<u>Stratum</u>	Indicator	Dominant Plant Species	Stratum	Indicator
1 . Lythrum salicaria	40%		FACW	9		
2. Carex lacustris	20%		OBL	10.		
3. Juncus effusis	30%		FACW	11.		
4 . <i>Typha latifolia</i>	10%		OBL	12.		
5.				13.		
6. Percent Coverage	100%			14.		
7. Percent Open Water	0%			15		
8. Percent Bare Ground	0%			16.		
Percent of Dominant Species t	hat are OBL, FAC	W, or FAC				
(excluding FAC-)				4/4 = 100%		
Remarks:	Created Wetl	and Area	a			
100% of the plant species are classified as FACW or OBL						

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
Stream, Lake, or Tide Gauge	Primary Indicators:
Aerial Photographs	Inundated
Other	Saturated in the Upper 12 Inches
X No Recorded Data Available	X Water Marks
	X Drift Lines
Field Observations:	Sediment Deposits
Depth of Surface Water: 0 (in	.) Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth to Free Water in Pit: (in	.) Oxidized Root Channels in upper 12 inches
	Water-Stained Leaves
Depth to Saturated Soil: 12 (in	.) Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in Remarks)
Remarks:	-
The dry summer has lowered the	water elevation in the wetland creation area

Project Site:	Tonawanda Landfill Wetland Replacement Area		ea	Date:	8/12/2	2005
Applicant/Owner:	O & M Enterpris	O & M Enterprises		County:	Niag	ara
Investigator:	J. Brown			State:	<u>New Y</u>	<u>′ork</u>
Do Normal Circumstances	Yes N	lo	Commun	ity ID:		
Is the area a potential pro (If needed explain on re	Yes N	lo	Plot ID:	ID.	2+50	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	<u>Stratum</u>	Indicator
1. Lythrum salicaria 30%		FACW	9.		
2. Juncus effusis 20%		FACW	10		
3 . <i>Typha latifolia</i> 10%		OBL	11.		
4. <i>Phragmites communis</i> 40%		FACW	12.		
5.			13.		
6. Percent Coverage 100%			14.		
7. Percent Open Water 0%			15.		
8. Percent Bare Ground 0%			16.		
Percent of Dominant Species that are OBL, FA (excluding FAC-)	CW, or FAC				
Remarks: Created We	tland Area	a			

Recorded Data (Describe in Remarks):		Wetland Hydrology Indicators:
Stream, Lake, or Tide Gauge		Primary Indicators:
Aerial Photographs		Inundated
Other		Saturated in the Upper 12 Inches
X No Recorded Data Available		Water Marks
		Drift Lines
Field Observations:		Sediment Deposits
Depth of Surface Water:	(in.)	Drainage Patterns in Wetlands
		Secondary Indicators (2 or more required):
Depth to Free Water in Pit:	(in.)	Oxidized Root Channels in upper 12 inches
		Water-Stained Leaves
Depth to Saturated Soil:	(in.)	Local Soil Survey Data
		FAC-Neutral Test
		Other (explain in Remarks)
Remarks:		

Project Site:	Tonawanda	Landfill	Wetland F	Repla	cement Area	Date:	8/12/	2005
Applicant/Owner:	O & M Enterprises					County:	Nia	gara
Investigator:		J	J. Brown			State:	New `	York
Do Normal Circumstanc	es exist on the	e site?			Yes No	Commur	nity ID:	
Is the site significantly d	isturbed (Atypi	ical Situa	ation)?		Yes No	Transect	ID:	В
Is the area a potential pr (If needed explain on r	oblem area? reverse.)				Yes No	Plot ID:		0+00
VEGETATION								
Dominant Plant Species		<u>Stratum</u>	Indicator	<u>Domir</u>	nant Plant Species		Stratum	Indicator
1 Lythrum salicaria	50%		FACW	9.				
2 Typha latifolia	10%		OBL	10.				
3.				11.				
4.				12.				
5.				13.				
6 Percent Coverage	60%			14.				
7 Percent Open Water	0%			15.				
8 Percent Bare Ground	40%			16.				
Percent of Dominant Species	that are OBL, FA	CW, or FA	C					
(excluding FAC-)				2/2 = 1	100%			
Remarks:	Created Wetl	and Area	a					
100% of the plant specie	es are classifie	ed as FA	CW or OB	BL				

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:					
_Stream, Lake, or Tide Gauge	Primary Indicators:					
Aerial Photographs	Inundated					
Other	X Saturated in the Upper 12 Inches					
X No Recorded Data Available	X Water Marks					
	Drift Lines					
Field Observations:	Sediment Deposits					
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands					
	Secondary Indicators (2 or more required):					
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches					
	Water-Stained Leaves					
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data					
	FAC-Neutral Test					
	Other (explain in Remarks)					
Remarks:						
The dry summer has lowered the water elevation in the wetland creation area						

Project Site:	Tonawanda Landfill Wetland Re		Date:	8/12/2	2005		
Applicant/Owner:	O & M Enterprises		County:	Niag	jara		
Investigator:	J. Brown				State:	New Y	<u>ork</u>
Do Normal Circumstanc	es exist on the site?	Yes	No	-	Communit	ty ID:	
Is the site significantly di	sturbed (Atypical Situation)?	Yes	No		Transect I	D:	В
Is the area a potential pr	oblem area?	Yes	No		Plot ID:		0+50
(If needed explain on r	everse.)						

VEGETATION

Dominant Plant Species		<u>Stratum</u>	Indicator	Dominant Plant Species	<u>Stratum</u>	Indicator
1 Eleocharis palustris	40%		FACW	9		
2 Sparganium eurycarpun	10%		OBL	10.		
3 Nymphaea tuberosa	10%		FACW	11.		
4 Peltandra virginica	20%		OBL	12.		
5.				13.		
6 Percent Coverage	80%			14.		
7 Percent Open Water	0%			15.		
8 Percent Bare Ground	25%			16		
Percent of Dominant Species	that are OBL, FA	CW, or FA	C			
(excluding FAC-)				4/4 = 100%		
Remarks:	Created Wetl	and Area	a			
100% of the plant speci	es are classifie	ed as FA	CW or OE	BL		

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:						
Stream, Lake, or Tide Gauge	Primary Indicators:						
Aerial Photographs	Inundated						
Other	X Saturated in the Upper 12 Inches						
X No Recorded Data Available	X Water Marks						
	Drift Lines						
Field Observations:	Sediment Deposits						
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands						
	Secondary Indicators (2 or more required):						
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches						
	Water-Stained Leaves						
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data						
	FAC-Neutral Test						
	Other (explain in Remarks)						
Remarks:							
The dry summer has lowered the water elev	The dry summer has lowered the water elevation in the wetland creation area						

Project Site: Applicant/Owner:	Tonawanda	Landfill O & N	Wetland F /I Enterpri	Repla ses	cement Area	Date: County:	8/12/ Niag	/2005 gara
Investigator:		,	J. Brown			State:	New	York
Do Normal Circumstance Is the site significantly di Is the area a potential pr (If needed explain on r	es exist on the sturbed (Atypi oblem area? everse.)	e site? ical Situa	ation)?		Yes No Yes No Yes No	Commur Transect Plot ID:	nity ID: : ID:	B 1+00
Dominant Plant Species 1. Sparganium eurycarp 2. 3. 4. 5. 6 Percent Coverage 7 Percent Open Water 8 Percent Bare Ground Percent of Dominant Species (excluding FAC-) Remarks: 100% of the plant species	5% 5% 0% 95% that are OBL, FA	Stratum	Indicator FACW	Domin 9. 10. 11. 12. 13. 14. 15. 16.	nant Plant Species		Stratum	

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
Stream, Lake, or Tide Gauge	Primary Indicators:
Aerial Photographs	Inundated
Other	X Saturated in the Upper 12 Inches
X No Recorded Data Available	X Water Marks
Γ	Drift Lines
Field Observations:	Sediment Deposits
Depth of Surface Water: 0 (in.) Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth to Free Water in Pit: (in.) Oxidized Root Channels in upper 12 inches
	Water-Stained Leaves
Depth to Saturated Soil: 12 (in.) Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in Remarks)
Remarks:	
The dry summer has lowered the	ne water elevation to expose bare ground

Project Site:	Tonawanda	Landfill	Wetland F	Replac	cement Area	Date:	8/12/	/2005
Applicant/Owner:	O & M Enterprises					County:	Nia	gara
Investigator:		J	I. Brown			State:	New	York
Do Normal Circumstanc Is the site significantly d Is the area a potential pr (If needed explain on r	es exist on the isturbed (Atypi oblem area? reverse.)	e site? ical Situa	ntion)?		Yes No Yes No Yes No	Commu Transec Plot ID:	nity ID: t ID:	B 1+50
VEGETATION								
Dominant Plant Species		Stratum	Indicator	Domir	ant Plant Species		Stratum	Indicator
1. Sparganium eurycarp	5%		FACW	9.				
2. Nymphaea tuberosa	<u>65%</u>		OBL	10.				
3.				11.				
4.				12.				
5.				13.				
6 Percent Coverage	70%			14.				
7 Percent Open Water	0%			15.				
8 Percent Bare Ground	30%			16.				
Percent of Dominant Species (excluding FAC-)	that are OBL, FA	CW, or FA	C 2	2/2 = '	100%			
Remarks:	Created Wetl	and Area	a					
100% of the plant specie	es are classifie	ed as FA	CW or OB	L				
<u> </u>								

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
Stream, Lake, or Tide Gauge	Primary Indicators:
Aerial Photographs	Inundated
Other	X Saturated in the Upper 12 Inches
X No Recorded Data Available	X Water Marks
	Drift Lines
Field Observations:	Sediment Deposits
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches
	Water-Stained Leaves
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in Remarks)
Remarks:	
The dry summer has lowered the w	ater elevation to expose bare ground

Project Site:	Tonawanda	Landfill	Wetland F	Replac	cement Area	_	Date:	8/12/	2005
Applicant/Owner:	O & M Enterprises					_	County:	Nia	gara
Investigator:			J. Brown			_	State:	New `	York
Do Normal Circumstanc	es exist on the	e site?			Yes No		Commu	nity ID:	
Is the site significantly d	isturbed (Atypi	ical Situa	ation)?		Yes No		Transec	t ID:	B
Is the area a potential pr (If needed explain on i	oblem area? reverse.)				Yes No		Plot ID:		2+00
VEGETATION									
Dominant Plant Species		<u>Stratum</u>	Indicator	Domir	ant Plant Spec	ies_		<u>Stratum</u>	Indicator
1. Sparganium eurycarp	40%		FACW	9.					
2. Nymphaea tuberosa	40%			10.					
3 <u>.</u>				11.					
4.				12.					
5.				13.					
6 Percent Coverage	80%			14.					
7 Percent Open Water	0%			15.					
8 Percent Bare Ground	20%			16.					
Percent of Dominant Species	that are OBL, FA	CW, or FA	C	I					
(excluding FAC-)			2	2/2 = 2	100%				
Remarks:	Created Wetl	and Area	a						
100% of the plant specie	es are classifie	d as FA	CW or OB	BL					

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
Stream, Lake, or Tide Gauge	Primary Indicators:
Aerial Photographs	Inundated
Other	X Saturated in the Upper 12 Inches
X No Recorded Data Available	X Water Marks
	Drift Lines
Field Observations:	Sediment Deposits
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth to Free Water in Pit:(in.)	Oxidized Root Channels in upper 12 inches
	Water-Stained Leaves
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in Remarks)
Remarks:	
I he dry summer has lowered the w	ater elevation to expose bare ground

Project Site:	Tonawanda	Landfill	Wetland F	Repla	cement /	Area	Date:	8/12/	2005
Applicant/Owner:	O & M Enterprises						County:	Nia	gara
Investigator:		J	. Brown				State:	<u>New</u>	<u>York</u>
Do Normal Circumstance	es exist on the	e site?			Yes	No	Commu	nity ID:	
Is the site significantly di	sturbed (Atypi	cal Situa	tion)?		Yes	No	Transec	t ID:	В
Is the area a potential pr (If needed explain on r	oblem area? everse.)				Yes	No	Plot ID:		2+50
VEGETATION									
Dominant Plant Species		<u>Stratum</u>	Indicator	<u>Domi</u>	nant Plant	Species		<u>Stratum</u>	Indicator
1. Nymphaea tuberosa	5%		FACW	9.					
2. Eleocharis palustris	40%		OBL	10.					
 Alisma plantago-aquati 	5%		OBL	11.					
4. Sparganium eurycarp	20%		OBL	12.					
5 <u>.</u>				13.					
6 Percent Coverage	70%			14.					
7 Percent Open Water	0%			15.					
8 Percent Bare Ground	30%			16.					
Percent of Dominant Species t (excluding FAC-)	hat are OBL, FA	CW, or FA	C 4	4/4 =	100%				
Remarks:	Created Wetl	and Area	a						
100% of the plant specie	s are classifie	ed as FA	CW or OE	SL					

Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
Stream, Lake, or Tide Gauge	Primary Indicators:
Aerial Photographs	Inundated
Other	X Saturated in the Upper 12 Inches
X No Recorded Data Available	X Water Marks
	Drift Lines
Field Observations:	Sediment Deposits
Depth of Surface Water: 0 (in.)	Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth to Free Water in Pit: (in.)	Oxidized Root Channels in upper 12 inches
	Water-Stained Leaves
Depth to Saturated Soil: 12 (in.)	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in Remarks)
Remarks:	•
The dry summer has lowered the water	elevation to expose bare ground

APPENDIX F MAINTENANCE RECORD LOGS

MAINTENANCE REC	CORD LOG	
PROJECT NAME: Niagara County Refuse Site	LOCATION: Wheatfield, New York	
CREW MEMBERS: RC Becken		
1. Date: 0 8 5 5 0 5 (MM DD YY)		
Time: 1100 (HH mm) Scheduled/Unscheduled: Unscheduled Type of Maintenance Performed: Teplace pump	ρ	
2. Company Performing Maintenance		
Name: Orm Enterprises lux.		
Address: 7134 Marigold Dr.		
North Tonawala, NY	14/20	
Contact Name: Richard Recken		
Removed de Goulds pump re Grunfos pump	placed with new	
Description of Material Removed:		
prone	·	
•		
<u></u>		
Problems/Comments:		
pone		
15/05 Richard C Becker	INSPECTOR'S SIGNATI IRE	
ORM 2	HADE ECTOR 3 DIGITAL LOVE	

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	MAINTENANCE RECORD LOG	
PRO	OJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York	
CR	EW MEMBERS: RC Becken	
1.	Date: 010505 (MM DD YY)	
	Time: 1400 (HH mm)	
	Scheduled/Unscheduled: Unscheduled	_
	Type of Maintenance Performed: repair fence	
2.	Company Performing Maintenance	
	Name: Orth Enterprises INC.	
	Address: 7134 Manigold Dr.	
	North Tonananda, MI 14120	
	Contact Name: Richard Becken	
3.	Methods Used:	
	repair fence	-,-
	·	
		_
	Description of Material Removed:	
	none	
		_
		_
	Problems/Comments:	-
	kone	
		-
		~
	15/05 Richard Berken Juli Chelr	
ለኮ	DATE INSPECTOR INSPECTOR'S SIGNATURE	

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MAINTENANCE RECORD LOG
OJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York
EW MEMBERS: RC Becken
Date: 030305 (MM DD YY)
Time: 1030 (HH mm)
Scheduled/Unscheduled: Unscheduled
Type of Maintenance Performed: <u>float switch</u> to stuck
Company Performing Maintenance
Name: Ut M Exterprises INC.
Address: <u>7134 Wlavigold Dr.</u>
North Ionana da 19 19100
Kothade Liend:
Personed a high level alarm for WWB had to take tractor
to site to plow a path in the saw to wwB. Float switch
was stuck on something, when I hat it with a long piece
of PUC conduct it freed itself and pump turned on
Description of Material Removed:
none
Problems/Comments:
NONE
3/3/05 RC Becker Kill Kecher
RM 2

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	MAINTENANCE	RECORD LO	G	
OJBCT NAMI	: Niagara County Refuse Site	LOCATION:	Wheatfield, New York	
	PrZI			
BM MEMBEI	8: <u>FC Deifer</u>	یک در ^{این ر} اید بر بردیا اف میرون ^{و و رو} به ما این از او می رو	میں بند کا ایک اور بندی کا ایک اور ایک کا میں ایک کا ایک میں ایک کا ایک میں ایک کا ایک کا ایک کا ایک کا ایک کا ایک کار ایک کا ایک کا ایک کار ایک کار ایک کا ایک کا ایک کار ایک کار ایک کار ایک کار ایک کار کا ایک کار ایک کار ا	
Date: O	30505 (MM DD Y	m		
Time: 0	960 (HH mm)	•		-
Scheduled/	Inscheduled: Unschedule	d		
Type of Ma	ntenance Performed: WWB f(loat switch s	twik	
Company P	rforming Maintenance			
Name:	Otm Enterprises lu	<u> </u>		
Address:	7134 Marigold Dt.			
	North Tonanda,	MY MIZU	مېر و مېر و مېر و ورو و ۱۹۹۵ مېږي. د د د و وې و و و و و و و و و و و و و و	
Contact Nat	no: <u>RI Decken</u>			
Description	of Material Removed:			
nore				
والمري الأفاد بيرين الدامية معرفه والمع				
			۵٬۵۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ -	
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		ور به به به به به به المناسب و موان المناسب و به موان المعالية الم		[
Problems/C	omments:		Tot cott	
	- need to see w	ucer this ser	low is yearing	
none				<
hung up	, on, but can't see u	had alabe	is pumped down	
hopeful	non, but can't see us in I will see it on	Werl 3/9/05	usen 1 do montfly 1.	nspect
hopeCul 315/05	on, but can't see us in I will see it on F R B	Wed 3/9/05	usen 1 do mortfly). Check	nspord
none hung uy hopeCul 315/05 DAT RM 2	on, but can't see un y will see it on F R B INSPECTOR	Wed 3/9/05	uhen 1 de mortfily). Chech NSPECTOR'S SIGNATURE	nspora
hopeful bopeful 315/05 DAT	on, but can't see us y I will see it on F R B INSPECTOR	Wed 3/9/05	ushen 1 do montfily). Check NSPECTOR'S SIGNATURE	n-spora

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MAINTENANCE RECORD LOG
PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York
CREW MEMBERS: RC Becken
1. Date: 031805 (MM DD YY)
Time: 1030 (HiH mm)
scheduled/Unscheduled: Unscheduled
Type of Maintenance Performed: replace pump (spare) in Wet Well A
2. Company Performing Maintenance
Name: <u>O+M Enterprises INC.</u>
Address: 7134 Marigold Dr.
North Tonowanda, NY 14120
Contact Name: Kichard C Becken
3. Methods Used:
pulled old Gould's pump installed new brundfos
pump
Description of Material Removed:
old Goulds pump
Problems/Comments:
11520
3/18/05 KCDerka Julitan
DATE INSPECTOR INSPECTOR'S SIGNATURE FORM 2

	MAINTENANCE RECORD LOG
)	PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York
	CREW MEMBERS: RC Becker
:	1. Date: 040905 (MM DD YY)
	Time: 0960 (HH mm)
	Scheduled/Unscheduled: unscheschlast
	Type of Maintenance Performed: repaired was gette
	2. Company Performing Maintenance
	Name: Otin Enterprises luic
	Address: <u>9134 Manipold Da</u>
	Contact Name Duck Back
	2 Mathede Head
	reques latch on man gate way well D
	Description of Material Removed:
	hour
	Problems /Comments:
	Misma-
<u> </u>	Malin Richard Becken St. DORate
	DATE INSPECTOR INSPECTOR'S SIGNATURE
	IUXM 2

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PROJ	BCTNAME	Niegara County Rehue Sib	LOCATION	Wheatfield, New York
CREV	v meiabers:	Pr Backen		
1. I	Date: 0	51405 MM	DD YY)	
1	non 1/14	(HH mm)	Δ	
\$	iciwiluled/Ur	whether UNSCH	reduled	au - y mar a thair
3	lype of Maint	enance Performed: <u>repair</u>	r pump conne	ction
2. (Company Peri	forming Maintenance		
1	Name:	DYM Est.	والمحاوي والمحافظ	
i	Áðdrupi	1134 Marigold D		nganan (aking palawan na ang mananan ng pang na milang palawan ng pang ng pang pang pang pang pang p
	and Santast Name	Rick Rock	<u> </u>	<u>₩</u> , 94,00 ^{,00} ,000,000,000,000,000,000,000,000
1 I	Vernede Liege	and the second	an ghunada in ngagagan sa da in ngana prabuga pulona in dani gunganaka sa s	Ĩĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸ
	Pallad	pump from well	retighting can	lock fitting to
•	funy (onnected hose	and turned p	my back on
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		وي بين الماريس بي معرف الماريس و بر الفتي اين الماريس الماريس و الماريس و الماريس و الم	۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰	antine per meru cana a la de como da de cinto de la competitiva de la competitiva de la competitiva de la compe
3	Description of	Material Removed:		
-	none	and the second		
•2		1974 - Andrew M. M. Martin, M. Martin, M. Martin, M. M 1975 - Andrew M. Martin,		an a
-	\$J]`YA ^{Y+} YAYÊ J E~YAPIPI	a a filing a sa an an an a san an a	and in the second s	
•		ᄡᆐᇪᇞᇞᄣᆍᅖᇔᆤᅐᇑᅂᄾᆇᅋᆂᅕᅚᅕᆙᆺᄫᄤᆆᅝᄰᅕᇧᄱᅸᇊᅕᅑᅘᆑᇤᄣᅶ	Ω Φ200 () Η 19 1 ^{το} 19 4 Η 1994 το το το <u>του, το πολογο</u> ιο το του.	
-	B 1.1			ىرىمىيەت سەرىمىي كەنىڭ بەر <u>ئىلىنىڭ ئەرىمىيەت ئىلىنىڭ بەر مەرىمىيەت بىلىنى بەر بىلىمىيەت بەر بىلىمىيەت بەر بەر</u>
2	r TODIERIS/CO	THEFETTE:		
-	none			
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***	2/11	PrK.L.	$\sum_{i \geq a}$	Pr. R. D.
-	5/14/0" DATE) Decken	PECTOR	INSPECTOR'S SIGNATURE
FCRM	42	and a state in the same of the first the first the state of the same of the same of the same of the same of the	. <u>1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 19</u>	an an air an tha ann an thair an an thair an ann an tha tha an ann an tha an tha ann an tha ann an tha ann an t

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PRC	DJBCT NAME: Niagar	a County Refuse Site	LOCATION: W	neatfield, New York
CRI	IV MEMBERS: R(Beiken		
	- 101-11-	1 del accon	Caller of Call	
1.	Date: UD		1)	
	Time: 1105	(HH mm)	0	
	Scheduled/Unactabilities	erformed: flout sw	the stuck mi	wet Well B you
2	Company Performing N	Maintenance		
-	Name: 0+m	EL		مى بىرىنى بى يىرىنى بىرىنى
	Addmer:	Marigold Dr.		*****
	Nort	- Innusandant		
	Mathada Licada		an a	
. 3.	moved floa	t switch sligh	they to free	
	الم			
		۵٬۰۰٬۰۰۰ ۲۰٬۰۰٬۰۰۰ ۲۰٬۰۰٬۰۰۰ ۲۰٬۰۰٬۰۰۰ ۲۰٬۰۰۰ ۲۰٬۰۰۰ ۲۰٬۰۰۰ ۲۰٬۰۰۰ ۲۰٬۰۰۰ ۲۰٬۰۰۰		Quanza an 1937 Ta'ny a tha Ta'n Carllen an ta'n 1977 a tha an 1977 a tha 1977 a tha 1977 a tha 1977 a tha 1977
			<u> </u>	**************************************
	Description of Material	Removed:	، در بار بار بار بار بار بار بار بار بار با	
	None			والمتكون والمراجع وا
	ويراكره والمعادي المعاولين الراجع فراور المراجع والمراجع والمعادي والمعاد		<u> </u>	
	مین د مستقر این است این بر بین میش میک شد. بر بین میشود <mark>است و این کارش و م</mark> ین و میرو		8760 668 8 7 876 777 84 999 999 900 1999 90 1999 1999 1999	**************************************
	Problems/Comments:			
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	ىنە. م <u> </u>			1-5
				//_\ / A
	5/17/05	KC Berken	. Jul	_ VC Beh-

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		MAINTENANCE	e record loc	3
PROJECT NA	ME: N	liagara County Refuse Site	LOCATION:	Wheatfield, New York
CREW MEM	BERS:	RC Berken		
1. Date:	261	205 MM DD.	m	
Then as	161	0 6 (HH mm)		
Schedule	d/Unsch	eduled: = schedul	ed	
Type of I	Maintena	nce Performed: repair er	osion near d	rainage inlets
2. Compan	y Perform	sing Maintenance		
Name:	۔ 	Am Enterprises	Iwc.	a state and a state of the state
Address	: <u> </u>	134 Manyald De		
	N	orth Toneward	and	anan arabahang di Kang Sang Dan di Kang Dan Ang Sang Dan Sang Pang Pang Pang Pang Pang Pang Pang P
Contact	Name: _	Rick Berken		
	D. Johl	Jen on sult	۵٬۰۰۰ می در دور می دور می دو این دو این می دو این می دو در می دو این می واند کرد. می در می دو این می دو این دو این می دو ای می دو این می دو این م	الله بي المكون على بين المكون بين المكون br>والمكون المكون المكون بين المكون ال والمكون المكون
Descript No	tion of Mi	iterial Removed:	المالة العلى بين المالية المالي 	
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Problem	s/Comm		1 1 1	
Problem	s/Comm	enss: / not enough on	site soil to	> USR

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	MAINTENANC	E RECORD LOG
OJBCT NAM	(E: Niagara County Refuse Site	LOCATION: Wheatfield, New York
REW MEMB	RE Beckon	
Date:	60805 MM DD	m
Time: 2	1900 (HH mm) /Unscheduled: Unschedu	le D
Type of M	aintenance Performed: moviel	grass around perimeter
. Company	Performing Maintenance	
Name:	7134 Marialla	
Aggi un :	North Inawanda	. K Y
Contact N	eme: Richard Berke	y
. Methods I	Jaed:	A
move	I gross/wedo aroun	l'perimeter fence
		Ŭ
<u></u>		
Description	n of Material Removed:	
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	· · · · · · · · · · · · · · · · · · ·	
Problems,	Comments:	
in	re	
والشامي المتزوي ومنت	<u>من المربس الالمربسة "مرباً مواجعة المرباً من محمد المربعة المربعة المربعة المربعة ما المربعة من المربعة المربعة</u>	
6 10/0	5 RCBerken	Relikel
DA	TE INSPECTO	R INSPECTOR'S SIGNATURE

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MAINTENANCE RECORD LOG
MARAI DIVARCE RECORD 200
PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York
CREW MEMBERS: PC Reden
1 Date 1016101810151 MM DD YM
Time: $\left[\begin{array}{c} \left[\begin{array}{c} 4 \end{array} \right] \\ \left[\begin{array}{c} 4 \end{array} \\ \\ \\ \\ \left[\end{array} \end{array} \\ \left[\begin{array}{c} 4 \end{array} \right] \\ \left[\begin{array}{c} 4 \end{array} \end{array} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \end{array} \\ \\ \\ \\ \\$
Scheduled/Unicheduled: UNSCHEduler
2 Company Performing Maintenance
Name: Orm Enterprises INC.
Address: 7134 Marigsle Dr.
North Tonawander NY
Contact Name: Kichard C Serker
3. Methods Used:
which is used will not hang up or get and to caught on
the old switch
Description of Material Removed:
and float quile
Problems/Comments:
nore
6/8/05 RCBocken Vich UPSent
DATE INSPECTOR INSPECTOR'S SIGNATURE

MAINTENANCE RECORD LOG
PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York
CREW MEMBERS: 2 Oleven
1. Date: 072803 (MM DD YM
The the transfer that the transfer that the the the the the the the the the th
Time of Maintenance Performed: "DUMO Main (Pro Ance)
· Je ve manner Berlorming Maintenance
Nome DAM Futerouses
Address DIRU Minigold Dr.
Marth Tonumanle b-1
Contact Name: Rick berker
3. Vellissile lised:
Pulled pomps, deaned, checked and checked
and draw
Description of Material Ranoved:
، موسید از
Problems/Comments:
7/28/05 RC Baken Kill Kall
DATE INSPECTOR INSPECTOR'S SIGNATURE

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			MAINTEN	ANCE RE	CORD LOO	3	
PRO	JECT NAM	E: Niaga	ra County Refuse	Site	LOCATION:	Wheatfield, New Yor	k
CRE	W MEMBE	rs: <u>R</u> ¢	: Berken	-			
1.	Date: 0	805	505 M	im dd yy)			
	Time:	930) (HH mm)				
	Scheduled/	Unschedul	ed: Unsc	hedre			
	Type of Ma	intenance F	erformed: Mo	vel grav	ss around	perimeter	
2.	Company F	Performing	Maintenance				
	Name:	Oth	n Enterpris	ises luc-			
	Address:	7134	Marigol	<u>e pr-</u>			
		Nort	h Tonamen	La NY			
	Contact Na	me: <u>[</u>]	ick Decke	<u>~</u>		<u></u>	
3.	Methods U	sed:					
	trate	v + mo	ver				
		,,,,,,, _					
	Description	of Materia	l Removed:				
	non	<u> </u>			ويبين بجرجانك والشريعين إعتاد المتراج		
				*,			
	Duchisme ff						
	rrobiems/	comments:					
	hor	u					
	01.1-			l. a	$\int $	A STO A	
		/					
	X15105	 E	KICK D	NSPECTOR	Vich	INSPECTOR'S SIGNATION	35

		MAINTENANCE	RECORD LO	G
PRO)	JBCT NAME:	Niagara County Refuse Site	LOCATION:	Wheatfield, New York
CRE	w members:	RC Becken		
1. 1	Date: 02	2305 MM DD Y	Ŷ	
1	Time: 15 Scheduled/Un Type of Mainte	OD (HH mm) scheduled: UNSChedu mance Performed: Wet We	leD IBFloatsi	witch stuck
2 (Company Perf	orming Maintenance		
1	Nanw:	0+m Enterprises	142.	
•	Address:	1134 Marigold D	1.14 14/2)
	 Contact Name	Rick Beck		₽ ₩ ₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩
 	Description of	Material Removed:	ی عالم اور این می این می این این این این این این این این این ای	معادرة عنها المعرف من مواليا المعرف المعرف المعرف المعرف المعرف من مالي المعرف المعرف المعرف المعرف المعرف الم المعرف المعرف br>المعرف المعرف
-	None			
-				
	······································			
1	Problems/Com	ments:		
••• 	8/23/0	5 Richard C Beck	n Rub	liber

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MAINTENANCE RECORD LOG
PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York
CREW MEMBERS RC Berlon
1. Date: 082405 (MM DD YM
Time: 0900 (HH mm)
Scheduled/Unscheduled: Scheduled
Type of Maintanance Performed: repaired float Switch in Wet Well B
2. Company Performing Maintenance
Name: Orm Enterprises Wis
Address: 7134 Marigo bel Dr.
North Tonanzala Nº1
Contact Name: Rick Beck
3. Methods Used:
Removed the renainder of use ties holding Float switch to
the well wall the attached wieght to float switch
wre and lowered back into well
Description of Material Removed:
none
Problems/Comments:
none
alily Rule DC Bala PODR. A
DATE INSPECTOR INSPECTOR'S SIGNATURE
FORM 2

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BCT NAME: Niagara County Refuse Site	LOCATION: Wheatfield, New York
W MEMBERS: RC Becker	
Date: 082605 (MGM DD	(YY)
Time: 1500 (HH mm) Scheduled/Unscheduled: Unsched	sle D
Type of Maintenance Performed:	ed stone
Company Performing Maintenance)
Name: ONM CARPIS	? S /W C. \/.
North Toneway	la N-1 14120
Contact Name: Rick Becking	
Methods Used:	
Recieved one truck los	I of crushed stone for
potheles and low spots	in arive way
Description of Material Removed:	
enter none	
Problems/Comments:	
hore	ومحور المتحد ومراجع والأرب بالمراجع ومحاجب المتروم المتحر والمتحر والمتحر والمتحر المحرور ومحاجم والمحاجب
والمراجع والمحاجب المستحد فالجين والمحاجة الأكام المتحاج والمتحافي والمحاج والمحاج والمحاج والمحاج والمتحاد والمتحا	

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		MAINTENANCE	RECORD LOG
MÖ	Hect NAME	Niagara Courry Kertine Site	
CRE	w Mimbers	RC Beck	
1.	Dates 09	UIOS MON DDY	'n
	Time: 09	10 0 (HH man) scheduled: Schedulent)
	Type of Maini	enance Performed: Mon gr	6445
2	Company Per	torming Maintenance	l.s.
	Name:	7134 Manaple D	
		North Tonguend	= NY 1412U
	Contact Nam	Rick Berk	
\$.	Mothods Use More	& grass using tra	ton and , 6' maren
		······································	
			ĸĹſŦŀŎſĬĸĸĸĊĸĊĸŎĸŎŢĸĸŎĬĊĬŎĿĊŎŊĬĬĨĬŎĿĿĿŎĬĬĬĬŔĸĸŔĊĸĿĿĿĿŎĿŎĿĬĬĬĬĬŎĿĿŎĬĬĬĬĬĬŎĿŔŎĬŎŎŎŎŎŎŎŎ
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	mon		
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	Problems/Co	gestervie:	
	mon		
			99
	glibe	Richard CR.	1 Do Do Rol
			The work with the

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MAINTENANCE	RECORD LOG
NOTICE NAME: Niagara County Refuse Sim	LOCATION: Whentield, New York
RIW MEMBERS: Rick Becks	
Date 040205 CHEN DD	m
Time 0900 (FSH mon) Scheduled: Scheduled:	l
Type of Maintenance Performed: Mons of	yne fe
Neme Orm Enterprise	2 < (p.) < .
Contract Rick Revise	
Methode Used:	to + bit move
printer great wang see	the second s
Description of Material Removed:	₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩
<u>MAX</u>	۵۰۰ ۵۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲
Froblems/Commerile:	
Mont	

		MAIP	VTENANCE I	Record Loc	3	
BOjik	TNAME	Niagara County	Refuse Site	LOCATION:	Wheatfield, New York	
	MEMBERS:	REB	r fr			والترقيات
. De	04	0305	MAN DD YY)		
Ti	ne 08	000	(H mm)			
Sc Ty	heduled/Un type of Mainte	nance Performed	mo gr			- الجن اللية جاليين اللين
L CI N	Internet Parl	orthing Maintonia O+M E	nes	Le		
A				۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰	، به «مراجع میرون این از میرون این این اور این میرون بر این	
C	minet Name	Kick A	x.b-	alle sinta let tangen gette lagandet in and se		
3. M	wower	grass i	with track	Ft bft	mare	
	and a state of the	Material Bastova	d:			
	non					
			**************************************		***	
ም	weleuns/Con	nen ervis:				
					₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩	
••••• (11365	· R(Bricken	RI	PCR.D	
	DATE	and the first of the second states of the second	NIPSCTOR		INEPECTOR'S SIGNATURE	

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	MAINTENANCE	RECORD LOG	3
PROJECT NAME: N	agani County Refuse Site	LOCATION:	Wheetfield, New York
CREW MEMBERS:	2C Backan	مەربىيەن بەربىيەن مەربىيەن مە	nan an
1. Dates 09	1705 MAN DDY	n	
Time 080	co Performed: V	y Maintena	heddled
2. Company Perform	ing Maintenance]	
Name: OH Address: <u>11</u>	m Eiterprises 34 Marigold Dr orth Tonawards	in the	
Contact Name:	Rick Beck		
S. Methods Vesdi <u>pull pom</u> <u>pump in</u>	e, clean + check	e pump,	reinstall
Description of Ma	ierial Removed:		
Problems/Comm		،	
CLITIOS DATE FORM 2	Richard C Backs	- Ra	I Bel

PRO	BCT NAME: Ningers County Refuse	Site LOI	CATION:	Wheatfield, New York	
CRB	WMEMBERS: RCBecla				
1.	Date: 160705 M	im dd yy			
	Time 14115 (HH mm)	010			
	Scheduled/Unscheduled:	cain dence			
2	Company Performing Maintenance		an a	<u></u>	
	Address: 7134 Marigo	ld D.			
	Contact Name: Rick Beck				
3.	Methods Used: repaire l'art in fer		والي الجار من عن من المراجع الم		
	Description of Material Removed:				
	Problems/Comments:				

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	MAINTENANCE	uecord log	
PROJECT NAME	Nisgara County Robust Sila	LOCATION: Wheat	eid, New York
CREW MEMBER	RC Becken		
1. Dava 1	20805 MM 00 m)	
Time 1	2115 AHH MURIS Inortherdister: Unscheduled) ectrus lock on to	k act
Type of Mal	storming Mathtabures	stand on u	och gern
Nesse: Address:	DAM Enterprises luc 7134 Manigdel Dr- North Tonuala, M		1999 - 1999 - 1999 - 1997 -
Contact Na	Rick Beck		
3. Matheds U			
	می این این این این این این این این این ای		
		ngan-ngangangangang ini ka-ngangangang tigi 14 gini 18 da ka	n an
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old lo	of Matarial Romoved:		an a
		99-007-007-007-00-00-00-00-00-00-00-00-00-	
المیں بین اور			
Problems/C	Commentin:	######################################	₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩
\$ 1 " al \$ 1 % + 2 * 2 * 2 * 2		۲۰۰۵ میلی دو دو او د مرود او دو دو دو دو دو مرود او دو او د	
12/8/	05 Richard C Ber	e Pul	Re
dhu i mir u			ors Agnature

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	MAINTENANCE	RECORD LOG	
PROJECT NAME: Nisga	ra County Refuse Site	LOCATION: Wheatfield, New)	íor k
CREW MEMBERS:	21 Beck		
1. Date: 121-	05 MM DD Y	ი	
Time: 0900	(HH mm)	\cap	
Scheduled/Unschedu	ed: Unschelled	to at control she	میں دور وار اور اور اور
2 Company Performing	Maintenance		
Name: 0+1	n Enterprises 1	~ .	
Address: 713	+ Manigolal Dr	· · · · · · · · · · · · · · · · · · ·	
Contact Nama:	(Bedun	<u>, P. I. 1 (100</u>	اقلا مرد پر در میرد بر میرد.
Description of Materia	il Removed:		
none		۵۰ هم بد من ما هم بر معر بند با مر می افتر این این از <mark>این این این این این ا</mark> ین ما این این این این این این این این	
			^ر الأخص ميكنا الأرواني
			
		<u> </u>	
Problems/Comments			
المراجع br>المراجع المراجع			
12/17/05	RiBecken	Kahl Rach	
DATE	INSPECTOR	INSPECTOR'S SIGNA	TURE

APPENDIX G WATER LEVEL RECORDS

	NIAGARA COUNTY REFUSE SITE
	WATER LEVEL MEASUREMENT EQUIPMENT AND SUPPLY CHECKLIST
	,
	INSTRUMENTS:
	Z Electronic water level indicator
	SUPPLIES: PERSONAL PROTECTIVE EQUIPMENT:
	Foil Vitrile gloves
	U Paper towels
	Deionized water
	Non-phosphate soap OSHA-approved prescription lenses
	Tap water
	10% Nitric Acid (ultrapure) L(/ First-aid kit
	Hexane
	I Arash bags
	Plastic spray bottles
İ	Scrub brush
	Shallow tubs/buckets
	DOCHAENTATION.
	Well logs
	FP-3
	Previous well readings
	J Site map
	O&M Manual
	MISCELLANEOUS:
	Well cap keys and Site access keys
	Bolt cutters
	Spare locks/keys
	U/Spare batteries for instruments
	$(\Lambda, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,$
	Completed by: Like Beck Date: 1/5/05
	FP-3A
1	

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WATER LEVEL RECORD PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York 010505 DATE: (MM DD YY) **CREW MEMBERS:** Richard C. Becken Observation Time of Top of Casing Depth to Water Level Well Measurement Elevation Water Elevation A В A-B feet feet feet 598.93 574.73 24.2 East "A" 1110 596.23 19.68 1100 576.55 East "B" 598.69 19.6 579.09 East "C" 1040 1412 1035 593.20 East "D" 579.0 1.82 577-78 0930 579.60 NCR-3S 2.6 09:45 591.88 589.28 NCR-4S 591.88 597.34 5.46 NCR-5S 1000 589.55 1025 593.15 3.6 NCR-13S

Wet Wells

WWA	8:52	~7'	high level	
WWB	10:05	~ 18 "		
WWC	9:35	~ 8'	highlevel	pump down.
WWD	9:15	~15"		

Total System	
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Time of

Flow	Measurement	
22498600	8:55	

NIAGARA COUNTY REFUSE SITE				
WATER LEVEL MEASUREMENT EQUIPMENT AND SUPPLY CHECKLIST				
ISTRUMENTS: Electronic water level indicator				
UPPLIES: PERSONAL PROTECTIVE FOULPMENT: 61 Ditrile gloves aper towels Vyveks Decontamination Fluids Vork gloves (cotton and chemical resistant) Deionized water Safety glasses/or side shields on Non-phosphate soap SHA-approved prescription lenses Tap water Work boots 10% Nitric Acid (ultrapure) First-aid kit Hexane Respirators Plastic spray bottles Scrub brush Abrasive pads (sponge type pads) Shallow tubs/buckets				
OCLIMENTATION: Well logs EP-3 Previous well readings Site map O&M Manual				
MISCELLANEOUS: Well cap keys and Site access keys Bolt cutters Knife Spare batteries for instruments Lock de-icer (winter)				
Completed by Le Checken Date: 2/03/05				
FP-3A				

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WATER LEVEL RECORD PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York 1012101210151 DATE: (MM DD **CREW MEMBERS:** Richard C. Becken Observation Time of Top of Casing Depth to Water Level Well Measurement Elevation Water Elevation В A-B А feet feet feet 598.93 21.21 577,72 East "A" 19.52 596.23 576.71 East "B" 19.42 598-69 East "C" 579.27 14.35 578.85 593.20 East "D" 576.21 579,60 3.39 NCR-3S 588.80 591.88 3.08 NCR-4S 597.34 6.57 590.77 NCR-5S 593-15 5.14 588.01 NCR-13S

Wet Wells

WWA	~13"	
WWB	~14"	
WWC	~12"	
WWD	 ~15"	

Total System

Time of

Flow	Measurement	
23445700	0730	

NIAGARA COUNTY REFUSE SITE

WATER LEVEL MEASUREMENT • COMPLETION CHECKLIST

BEFORE GOING TO SITE:

- Confirmed well numbers, location, and accessibility.
- Reviewed of project documents (i.e., QAPP, HSCP, and sampling procedures in the OM&M Manual).
- Checked historical well depths and water level measurements.
- Procured, inventoried, and inspected all equipment and supplies (complete FP-3A).
- Prepared and performed required maintenance on equipment.

AT SITE:

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- Equipment decontaminated in accordance with the QAPP and FP-2.
- ✓ Well inspected (complete FP-3C).
- Initial well measurements logged on FP-3D.
- /Well secured after measurements.
- Measurement dates, times, locations, and results have all been recorded on FP-3D.
- Water levels in wet wells and total flows from wet well pumps recorded on FP-3D.

AFTER LEAVING SITE:

- All equipment has been maintained and returned.
- Water elevation data is reduced and checked on FP-3D.
- Expendable stock supplies replaced.
- Access keys and well cap keys returned.
 - Confirm all measurements taken with previous well readings.

Completed by

Date: 3/9/05

FP-3B

WATER LEVEL RECORD PROJECT NAME: Niagara County Refuse Site Wheatfield, New York LOCATION: 1013101910151 DATE: (MM DD CREW MEMBERS: Richard C. Becken Observation Time of Top of Casing Depth to Water Level Well Measurement Elevation Water Elevation A-B В А feet feet feet 19.45 579-48 598.93 1300 East "A" 1245 596.23 19.79 576-44 East "B" 579.36 1230 598.69 19.33 East "C" 579.31 1220 13.89 East "D" 593.20 576-49 1415 579.60 3-11 NCR-3S 589-38 1400 591.88 Frozen 2.5 NCR-4S 591.20 1335 597.34 6.14 NCR-5S 588.81 1320 593.15 4,34 NCR-13S

Wet Wells

Dorth of Water

WWA	1525	~6'	
WWB	1510	~ (6"	
WWC	1455	~124	
WWD	1430	~ 12"	

Total System

Time of

Flow	Measurement	
24452100	1530	

NIAGARA COUNTY REFUSE SITE

WATER LEVEL MEASUREMENT • COMPLETION CHECKLIST

BEFORE GOING TO SITE:

- Confirmed well numbers, location, and accessibility.
- Reviewed of project documents (i.e., QAPP, HSCP, and sampling procedures in the OM&M Manual).
 - Checked historical well depths and water level measurements.
 - Procured, inventoried, and inspected all equipment and supplies (complete FP-3A).
 - Prepared and performed required maintenance on equipment.

AT SITE:

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- Equipment decontaminated in accordance with the QAPP and FP-2.
- Well inspected (complete FP-3C).
- Initial well measurements logged on FP-3D.
- Well secured after measurements.
- /Measurement dates, times, locations, and results have all been recorded on FP-3D.
- Water levels in wet wells and total flows from wet well pumps recorded on FP-3D.

AFTER LEAVING SITE:

- All equipment has been maintained and returned.
- Water elevation data is reduced and checked on FP-3D.
- Expendable stock supplies replaced.
- Access keys and well cap keys returned.
 - Confirm all measurements taken with previous well readings.

Kih Completed by?

Date: 4/02/05

FP-3B

WATER LEVEL RECORD PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York 0H01210151 DATE: (MM DD **CREW MEMBERS:** Richard C. Becken Time of Top of Casing Depth to Water Level Observation Elevation Water Well Measurement Elevation A-B Α В feet feet feet 576.72 22.21 598-93 East "A" 19.66 576-57 596.23 East "B" 598-69 579.54 19.15 East "C" 578.91 593.20 14.29 East "D" 1.5 579.60 578.1 NCR-3S 2.51 589.37 591.88 NCR-4S 6.36 590.98 597.34 NCR-5S 589.96 3.19 593.15 NCR-13S

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Wet Wells

death of water

WWA	~12"			
WWB	~15"			
WWC	212"			
WWD	~14"			

Total System

Time of

Flow Measurement

WATER LEVEL RECORD Niagara County Refuse Site Wheatfield, New York LOCATION: PROJECT NAME: DATE: 0601 (MM DD CREW MEMBERS: Richard C. Becken Top of Casing Water Level Observation Time of Depth to Elevation Well Measurement Water Elevation B A-B Α feet feet feet 576.74 598.93 1100 22.19 East "A" 19.97 576.26 596.23 1120 East "B" 578.98 598.69 1135 19.71 East "C" 14.68 578-52 1150 593.20 East "D" 579.60 5.93 3.67 1025 NCR-3S 5 3-87 591-88 288.01 NCR-4S 1005 (97.34 1045 8,10 589.24 NCR-5S 6.59 0930 593-15 NCR-13S 586.56 Wet Wells ~12 WWA 091< 1411 0955 ~ **WWB**

15 %

182

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Total System	Time of	
Flow	Measurement	
26499000	0915	

1020

0945

WWC

WWD

WATER LEVEL RECORD Niagara County Refuse Site PROJECT NAME: LOCATION: Wheatfield, New York 601060 DATE: (MM DD **CREW MEMBERS:** Richard C. Becken Observation Time of Top of Casing Depth to Water Level Measurement Well Elevation Water Elevation В A-B A feet feet feet 1315 598.93 575.69 23.24 East "A" 1300 576.34 596.23 East "B" 80 598.69 1240 578-93 East "C" 9.16 593.20 \$ 578.56 1230 East "D" 14.64 579.60 **43**1130 NCR-3S đru 591.88 1110 NCR-4S NCR-5S 1050 10.60 586.74 597-34 585.63 593.15 7.52 NCR-13S 1030

Wet Wells

WWA	1025	2124	
WWB	1115	~18"	
WWC	1145	-11"	
WWD	1200	~114	

Total Systen	n

Time of

Flow	Measurement
26582600	1025

WATER LEVEL RECORD PROJECT NAME: Níagara County Refuse Site Wheatfield, New York LOCATION: 1016101410151 DATE: (MM DD YY) CREW MEMBERS: Richard C. Becken Top of Casing Time of Depth to Water Level Observation Elevation Measurement Water Elevation Well А B A-B feet feet feet 575.44 1430 598.93 23.49 East "A" 450 16.23 9.96 576.27 East "B" 510 G 257 East "C" 12 ጽ 1530 .62 93-20 East "D" 8.58 .96 15 273-4 NCR-3S 19.60 91.88 NCR-4S 205 Q ng 1420 dry NCR-5S 34 585.36 0935 7.79 593.15 NCR-13S Wet Wells depth of water Г Т 202 *****

WWA	0730	1~15	
WWB	1215	~17"	
WWC	1120	~ 15"	
WWD	1005	~ 18"	

Total System	Time of
Flow	Measurement

- -----

26623430	0930

WATER LEVEL RECORD PROJECT NAME: Niagara County Refuse Site LOCATION: Wheatfield, New York (MM DD YY) DATE: **CREW MEMBERS:** Richard C. Becken Top of Casing Observation Time of Depth to Water Level Well Elevation Water Measurement Elevation A-B Α В feet feet feet 23.57 598.93 de. 575.36 East "A" 576.53 596.23 19.7 East "B" 579,18 598.69 East "C" 20 593. 578-73 East "D" - u " 579.60 dry NCR-3S 591.88 dry NCR-4S dre NCR-5S 597-34 593-15 dru NCR-13S

Wet Wells

Depth of water

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WWA	~14 "
WWB	~ (1 "
WWC	~ 1211
WWD	~124

Total System	Time of
Flow	Measurement
	26648670

WATER LEVEL RECORD

PROJECT NAME:	Niagara County Refuse Site	LOCATION:	Wheatfield, New York
		DATE:	(MM DD YY)
CREW MEMBERS:	Richard C. 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"		598,43	24.07	574,86
East "B"		596.23	19.51	576.72
East "C"		598.69	19.65	579.04
East "D"		593.20	14.4	578.80
NCR-3S		579.60	5.63	573.97
NCR-4S		591.88	3.69	588.19
NCR-5S		597.34	dry	
NCR-13S		393.15	7.21	585.94

Wet Wells

Depth of water

WWA	~164
WWB	~14"
WWC	~ 124
WWD	~ 13 "

Total System	Time of
Flow	Measuroma

ment		Flow
		26907900
	Τ	

WATER LEVEL RECORD PROJECT NAME: Niagara County Refuse Site Wheatfield, New York LOCATION: 121005 DATE: (MM DD \overline{YY} **CREW MEMBERS:** Richard C. Becken Observation Time of Top of Casing Depth to Water Level Elevation Well Measurement Water Elevation В A-B Α feet feet feet Sill 598.93 24.47 574.46 East "A" 1050 596.23 \$76.73 19.5 East "B" 1035 579.30 598.69 East "C" 19.39 1015 593.20 578.96 East "D" 14.24 305 4.21 575.39 599.60 NCR-3S 299 920 591-88 588.89 NCR-4S 940. 597.34 589.17 NCR-5S 8.17 6,06 832 593.15 587.09 NCR-13S

Wet Wells

WWA	950	-187	
WWB	925	~19"	
WWC	Gue	~10×	
WWD	845	- 13"	

Total System

Time of

Flow	Measurement
28128381	0950

NIAGARA COUNTY REFUSE SITE

WATER LEVEL MEASUREMENT • COMPLETION CHECKLIST

BEFORE GOING TO SITE:

- - Confirmed well numbers, location, and accessibility.
 - Reviewed of project documents (i.e., QAPP, HSCP, and sampling procedures in the OM&M Manual).
 - Checked historical well depths and water level measurements.
 - Procured, inventoried, and inspected all equipment and supplies (complete FP-3A).
 - Prepared and performed required maintenance on equipment.

AT SITE:

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- / Equipment decontaminated in accordance with the QAPP and FP-2.
- Well inspected (complete FP-3C).
- / Initial well measurements logged on FP-3D.
- / Well secured after measurements.
- / Measurement dates, times, locations, and results have all been recorded on FP-3D.
- Water levels in wet wells and total flows from wet well pumps recorded on FP-3D.

AFTER LEAVING SITE:

- / All equipment has been maintained and returned.
- ✓ Water elevation data is reduced and checked on FP-3D.
- / Expendable stock supplies replaced.
- Access keys and well cap keys returned.
- Confirm all measurements taken with previous well readings.

Bach Completed by:

Date: 11/06/05

FP-3B