

# SEMI-ANNUAL DATA SUMMARY REPORT

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## NIAGARA COUNTY REFUSE DISTRICT SITE

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Wheatfield, Niagara County, New York

(NYSDEC Site No. 9-32-026)

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SUBMITTED TO:



**UNITED STATES  
ENVIRONMENTAL PROTECTION  
AGENCY**



**NEW YORK STATE  
DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION**

SUBMITTED FOR:

**NIAGARA COUNTY REFUSE DISTRICT  
AND PRP GROUP**

PREPARED BY:

**PARSONS**

180 Lawrence Bell Drive, Suite 104  
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(716) 633-7074 Fax (716) 633-7195

**July 2006**

**PARSONS**

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## TABLE OF CONTENTS

### Page No.

<b>SECTION 1 INTRODUCTION.....</b>	<b>1-1</b>
1.1 Procedures .....	1-1
1.1.1 Effluent Sampling.....	1-1
1.1.2 Groundwater Sampling.....	1-1
1.1.3 Water Level Measurements.....	1-1
1.1.4 Site Inspections.....	1-1
<b>SECTION 2 RESULTS .....</b>	<b>2-1</b>
2.1 Effluent Samples .....	2-1
2.2 Groundwater Analytical Results .....	2-1
2.3 Water Levels.....	2-1
2.4 Site Inspections.....	2-1
2.5 Maintenance .....	2-2
2.6 OM&M Oversight .....	2-2
<b>SECTION 3 CONCLUSIONS .....</b>	<b>3-1</b>
<b>SECTION 4 REFERENCES.....</b>	<b>4-1</b>
<b>APPENDIX A CITY OF NORTH TONAWANDA INDUSTRIAL WASTEWATER DISCHARGE PERMIT</b>	
<b>APPENDIX B CORRESPONDENCE</b>	
<b>APPENDIX C WATER LEVEL RECORDS</b>	
<b>APPENDIX D MONTHLY INSPECTION LOGS</b>	
<b>APPENDIX E MAINTENANCE RECORD LOGS</b>	
<b>APPENDIX F COMPACT DISK CONTAINING REPORT</b>	

<b>TABLE OF CONTENTS</b>	
	<b><u>Page No.</u></b>

**LIST OF TABLE**

Table 2.1 Site Inspection Summary .....	2-4
---	-----

**LIST OF FIGURE**

Figure 1.1 Site Plan.....	1-2
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# **SECTION 1**

## **INTRODUCTION**

The Niagara County Refuse Site Potentially Responsible Parties (PRP) Group completed a remedial action at the Niagara County Refuse Site (Site), Wheatfield, New York in 2000. The remedial action was conducted in accordance with the United States Environmental Protection Agency (USEPA) Record of Decision (USEPA, 1993) and the United States District Court Consent Decree (USEPA, 1995). The PRP Group is currently conducting operations, maintenance, and monitoring (OM&M) in accordance with the USEPA-approved OM&M Manual (CRA, 2000). This data report summarizes monitoring activities from April through June 2006.

### **1.1 PROCEDURES**

#### **1.1.1 Effluent Sampling**

One effluent sample per month was collected from Wet Well A, which receives water from the leachate collection system surrounding the landfill. Composite 24-hour samples were collected from Wet Well A using an automated sampler.

#### **1.1.2 Groundwater Sampling**

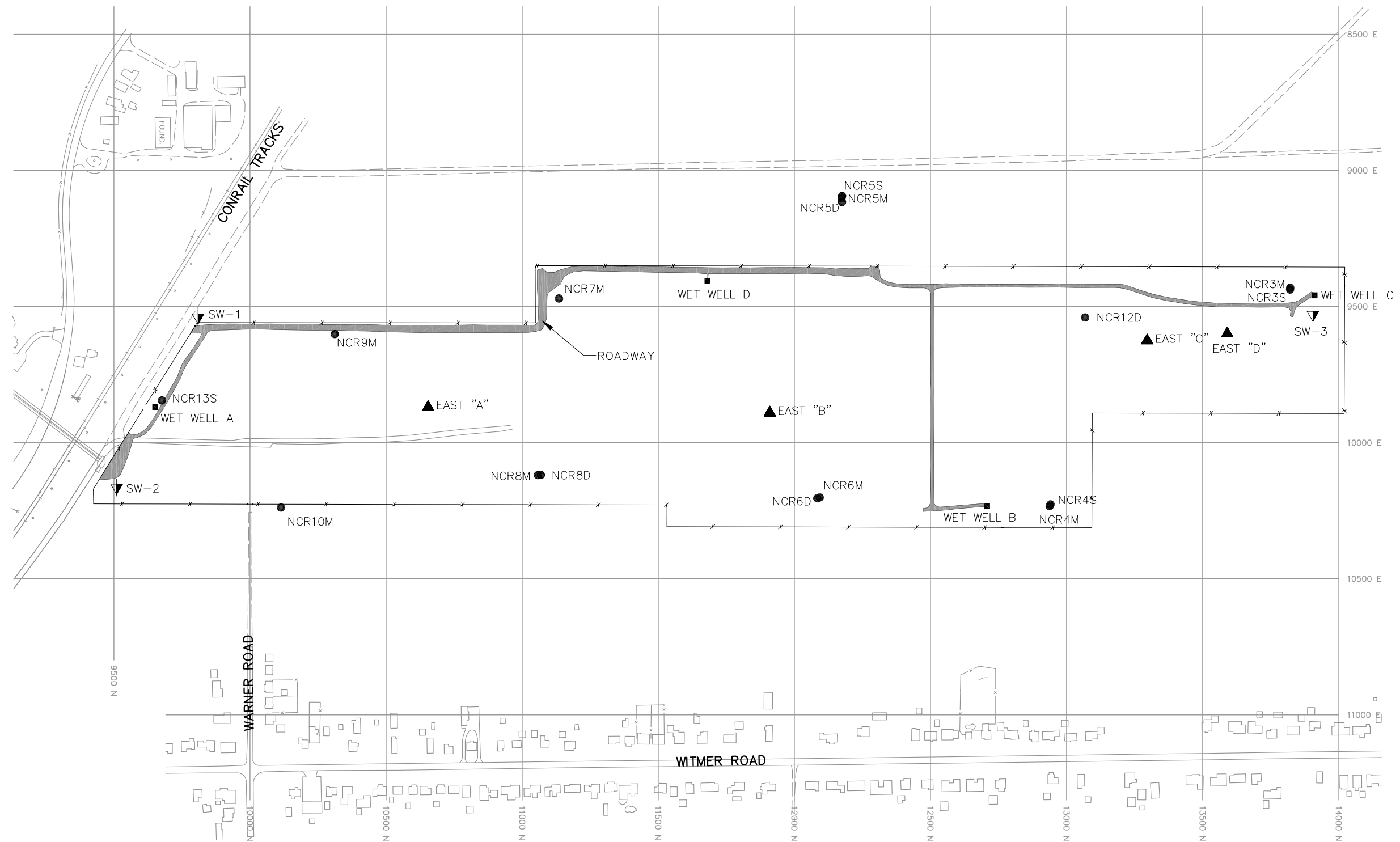
Groundwater samples were not collected during this reporting period. In accordance with the approved OM&M Plan (CRA, 2000), the groundwater sampling frequency was decreased from a quarterly to a semi-annual basis in 2003, and from a semi-annual to an annual basis beginning in 2006. Annual groundwater sample collection will continue for an undetermined time period. The next round of groundwater samples is scheduled to be collected in October 2006.

#### **1.1.3 Water Level Measurements**

Water levels were measured during monthly Site inspections in April, May, and June 2006. Water levels were measured from four observation well locations (piezometers East A, East B, East C, and East D), four effluent monitoring locations (wet wells A, B, C, and D), and four monitoring well locations (NCR-3S, NCR-4S, NCR-5S, and NCR-13S). 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.

#### **1.1.4 Site Inspections**

Monthly Site inspections were conducted on April 8, May 1, and June 7, 2006. During the Site inspections, the manholes, wet wells, landfill cap, wetlands, perimeter fence, drainage ditches, swale outlets, culverts, gas vents, and monitoring wells were each visually inspected.



## LEGEND

- |              |   |
|--------------|---|
| ▲ EAST "A"   | WATER LEVEL MONITORING WELL LOCATION    |
| ▼ SW-2       | SURFACE WATER MONITORING LOCATION       |
| ■ WET WELL A | EFFLUENT MONITORING LOCATION            |
| ● NCR13S     | GROUNDWATER QUALITY MONITORING LOCATION |



SCALE: 1"=400'

FIGURE 1.1

NIAGARA COUNTY REFUSE SITE  
WHEATFIELD, NEW YORK  
SITE PLAN

**PARSONS**

180 LAWRENCE BELL DRIVE, SUITE 104, WILLIAMSVILLE, N.Y. 14221, PHONE: 716-633-7074

## **SECTION 2**

### **RESULTS**

This section describes the results of all OM&M activities conducted from April through June 2006. Activities during this quarter included effluent sampling, water level measurements, Site inspections, and maintenance work.

#### **2.1 EFFLUENT SAMPLES**

Effluent samples were collected monthly by O&M Enterprises, 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. These data are not presented in the quarterly monitoring reports, but will be summarized in the 2006 annual monitoring report. The City of North Tonawanda Industrial Wastewater Discharge Permit (February 2001 through January 2004) has been included in Appendix A. This Industrial Wastewater Discharge Permit will remain in effect until a renewed permit is completed. A renewed permit is currently being developed.

#### **2.2 GROUNDWATER ANALYTICAL RESULTS**

Monitoring wells NCR-3S, NCR-4S, NCR-5S, and NCR-13S were not sampled during this reporting quarter, due to the current annual groundwater sampling schedule specified in the OM&M Manual. Groundwater sample collection is planned for October 2006. The locations of the monitoring wells are provided in Figure 1.1. The USEPA, NYSDOH, and NYSDEC have agreed to reduce the number of analytical parameters monitored in the groundwater samples (see Appendix B). Groundwater samples collected in October 2006 will be analyzed for inorganic parameters (metals) only. Based on the analytical results through 2006, the list of analytes will be re-evaluated prior to groundwater sample collection in 2007.

#### **2.3 WATER LEVELS**

Water levels were collected from the monitoring locations in April, May, and June 2006. The monitoring locations include the four monitoring wells, four observation wells, and the four wet wells. Results of all water level measurements collected during this reporting period are presented in Appendix C. Water levels in the monitoring wells decreased over the reporting quarter.

#### **2.4 SITE INSPECTIONS**

A summary of the findings of the Site inspections is included in Table 2.1. Copies of the Site inspection logs have been included in Appendix D.

Each of the inspections found the manholes to be in good condition. The wet wells were found in good condition during each of the inspections. Water levels were measured in the wet wells during each of the monthly inspection visits.

Examination of the landfill cap vegetative cover included checking for erosion, bare areas, wash-outs, leachate seeps, and height and overall condition of the vegetation. Minor surface erosion was observed in a few small areas within the cap limits during the May 2006 inspection, but currently does not threaten the cap. The minor erosion was not noted in the April or June 2006 site inspection records. The area will continue to be monitored during future site inspections.

The vegetative cover was low (short) in April and May, 2006 but noted as tall in the June 2006 inspection. Grass cutting is planned for September 2006. Additionally, during the examination of the landfill cap, the access roads were examined for erosion, potholes/puddles, and obstructions. All aspects of the access roads that were examined were deemed acceptable. All other parts of the landfill system which were examined, including the drainage ditches, swale outlets, culverts, and gas vents were found to be in acceptable condition.

The wetlands were examined visually to assess the condition of the vegetation, change in water levels, and to observe general conditions. Wetland vegetation was noted to be in good condition during the Site inspections, with normal early spring conditions observed in the April 2006 inspection. No signs of damage to the wetlands due to loss of vegetation were observed during each of the inspections. Post-construction monitoring of the wetland replacement area was performed annually through 2005. The August 2005 wetland inspection completed five years of annual inspections of the wetland replacement area, as required by the OM&M Manual (CRA, 2000). No future annual inspection of the wetland area is currently planned. However, monthly visual assessment of the wetland area during the site inspections will continue. A normal water level was noted in the wetland area during April and May 2006, and the water level was noted as lower than the previous month in the wetland area during the June 2006 Site inspection.

## **2.5 MAINTENANCE**

Occasional unscheduled maintenance at the landfill is required. During this reporting period, the unscheduled maintenance included painting the exterior of the monitoring wells (NCR-3S, NCR-4S, NCR-5S, and NCR-13S) and the piezometers (East A, East B, East C, and East D) on April 28 and installing additional perimeter signs on May 1. Scheduled maintenance during the reporting period included pulling, cleaning, checking the amperage, and reinstalling the wet well pumps on April 28. Maintenance Record Logs are included as Appendix E.

## **2.6 OM&M OVERSIGHT**

Parsons' Quality Assurance (QA) included Parsons' periodic oversight of OM&M activities conducted by O & M Enterprises, review of monthly inspection and monitoring data,



and periodic communications with O & M Enterprises. Upon completion of OM&M activities performed by O & M Enterprises, routine activity report forms were completed. Parsons reviewed the report forms for completeness, and recorded problems, if any, on the forms.

**Table 2.1**  
**Site Inspection Summary**  
**April through June 2006**

<b>Inspection Item</b>	<b>Acceptable</b>	<b>Requires Action</b>	<b>Comments</b>
Manholes	X		
Wet Wells	X		
Wetlands	X		Water level was noted to be normal during April and May 2006, but lower during the June 2006 inspection. Normal vegetative early spring conditions were noted during the April 2006 site inspection.
Perimeter Fence	X		
Condition of Roads	X		
Integrity of the Cap	X		Minor erosion was noted that was not threatening the cap.
Drainage Ditches/Swales	X		
Gas Venting System	X		
Wells	X		
Culverts	X		
Other	X		Grass is planned to be cut in September 2006.

## **SECTION 3**

### **CONCLUSIONS**

The following conclusions were developed based on the data collected during this reporting period:

- The landfill was inspected monthly and is appropriately maintained.
- Minor erosion on the landfill was observed during this reporting period. The erosion does not present a threat to the integrity of the cap at this time. Future monthly inspections will continue to monitor any erosion.
- Wetlands vegetation appeared healthy, and in good condition, based on monthly visual assessments.
- Annual groundwater monitoring will be completed in the fall of 2006, as specified in the OM&M Manual. The groundwater monitoring frequency has been reduced. The current annual groundwater monitoring schedule began in 2006.

## **SECTION 4**

### **REFERENCES**

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

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

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

## **APPENDIX A**

# **CITY OF NORTH TONAWANDA INDUSTRIAL WASTEWATER DISCHARGE PERMIT**

**CITY OF NORTH TONAWANDA**  
4/8/95  
**INDUSTRIAL WASTEWATER DISCHARGE PERMIT**

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**Permit Number: 2628010**

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

**Engineering Department**

**59 Park Avenue**

**Lockport, New York 14094**

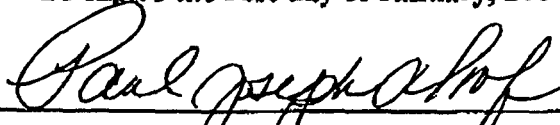
Classified by S.I.C. Number(s): N/A

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

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

**Effective this 1st day of February, 2001**

**To expire the 31st day of January, 2004**



**Treatment Plant Superintendent**

**Signed this 30th day of January, 2001**

**PERMIT NUMBER: 2628010****Part I  
Page 2 of 8****PART I. SPECIFIC CONDITIONS****A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning the effective date of this permit and lasting until the expiration date, discharge from the permitted facility outfall(s) shall be limited and monitored by the permittee as specified below (Refer to attached map for sampling and monitoring sites).

<b>Sample Point</b>	<b>Parameter</b>	<b>Discharge Limitations mg/l except pH Daily Max.</b>	<b>Sampling Period</b>	<b>Sampling Type</b>
001	Total Flow		1 Sampling Day Monthly	
7/	Benzene	Monitor Only	1 Sampling Day Monthly	
7/	2-Butanone	Monitor Only	1 Sampling Day Monthly	
7/	Chlorobenzene	Monitor Only	1 Sampling Day Monthly	
7/	1,1-Dichloroethane	Monitor Only	1 Sampling Day Monthly	
7/	1,2-Dichloroethylene	Monitor Only	1 Sampling Day Monthly	
7/	Ethylbenzene	Monitor Only	1 Sampling Day Monthly	
7/	Methylene Chloride	Monitor Only	1 Sampling Day Monthly	
7/	Styrene	Monitor Only	1 Sampling Day Monthly	

**PERMIT NUMBER: 2628010****Part I**  
**Page 3 of 8**

<b>Sample Point</b>	<b>Parameter</b>	<b>Discharge Limitations mg/l except pH Daily Max.</b>	<b>Sampling Period</b>	<b>Sampling Type</b>
7/	Toluene	Monitor Only	1 Sampling Day Monthly	
7/	Xylenes (total)	Monitor Only	1 Sampling Day Monthly	
7/	1,4-Dichlorobenzene	Monitor Only	1 Sampling Day Monthly	
4/	Phenols (4AAP)	5/	1 Sampling Day Monthly	
7/	2-Methylphenol	Monitor Only	1 Sampling Day Monthly	
7/	3&4 Methylphenol	Monitor Only	1 Sampling Day Monthly	
7/	Dibenzofuran	Monitor Only	1 Sampling Day Monthly	
7/	Aluminum	2.0	1 Sampling Day Monthly	
	Chromium	4.7	1 Sampling Day Monthly	
	Lead	4.6	1 Sampling Day Monthly	
	Nickel	3.4	1 Sampling Day Monthly	
4/	Zinc	5/	1 Sampling Day Monthly	



**PERMIT NUMBER: 2628010****Part I**  
**Page 4 of 8**

<b>Sample Point</b>	<b>Parameter</b>	<b>Discharge Limitations mg/l except pH Daily Max.</b>	<b>Sampling Period</b>	<b>Sampling Type</b>
	Iron	10	1 Sampling Day Monthly	
7/	Magnesium	Monitor Only	1 Sampling Day Monthly	
7/	Manganese	Monitor Only	1 Sampling Day Monthly	
7/	Sodium	Monitor Only	1 Sampling Day Monthly	
	pH	Monitor Only	1 Sampling Day Monthly	
7/	BOD	Monitor Only	1 Sampling Day Monthly	
7/	Total Suspended Solids	Monitor Only	1 Sampling Day Monthly	
7/	Total Phosphorous	Monitor Only	1 Sampling Day Monthly	

**PERMIT NUMBER: 2628010****Part I**  
**Page 5 of 8****PART I SPECIFIC CONDITIONS****B. DISCHARGE REPORTING REQUIREMENTS**

During the period beginning the effective date of this permit and lasting until the expiration date, discharge monitoring results shall be summarized and reported by the permittee on the no later than the days specified below.

<b>Sample Point</b>	<b>Parameter</b>	<b>Initial Monitoring Report</b>	<b>Subsequent Monitoring Reports</b>
001	Total Flow		Monthly
	Benzene		Monthly
	2-Butanone		Monthly
	Chlorobenzene		Monthly
	1,1-Dichloroethane		Monthly
	1,2-Dichloroethylene		Monthly
	Ethylbenzene		Monthly
	Methylene Chloride		Monthly
	Styrene		Monthly
	Toluene		Monthly
	Total Xylenes		Monthly
	1,4-Dichlorobenzene		Monthly
	Phenols (4AAP)		Monthly
	2-Methylphenol		Monthly
	3 & 4 - Methylphenol		Monthly
	Dibenzofuran		Monthly
	Aluminum		Monthly
	Chromium		Monthly

**PERMIT NUMBER: 2628010****Part I**  
**Page 6 of 8**

<b>Sample Point</b>	<b>Parameter</b>	<b>Initial Monitoring Report</b>	<b>Subsequent Monitoring Reports</b>
	Lead		Monthly
	Nickel		Monthly
	Zinc		Monthly
	Iron		Monthly
	Magnesium		Monthly
	Manganese		Monthly
	Sodium		Monthly
	pH		Monthly
	BOD		Monthly
	Total Suspended		Monthly
	Total Phosphorous		Monthly

**PERMIT NUMBER: 2628010****Part I**  
**Page 7 of 8****PART I SPECIFIC CONDITIONS****C. SPECIAL REQUIREMENTS**

- 1) This permit is written for a duration of two years. Upon renewal of this permit, all parameters will be re-evaluated to develop a parameter list based on chemical concentrations present in the extracted groundwater.
- 2) Frequency of monitoring is to be re-evaluated after the first year.
- 3) All monitoring reports (initial and subsequent), are to be received by the Superintendent, no later than twenty-eight (28) days after the end of the monitoring period.
- 4) In accordance with Section 75-10 of the North Tonawanda Sewer Use Law, the City is granting a variance for the discharge of four pollutants, Total Phenolic Compounds and, Zinc, Aluminum and Iron respectively. This granting of this variance for these four parameters is based on two factors. The first is that it will cause undue hardship to require the pretreatment of the wastewater before discharge. Secondly the discharge of these pollutants at the proposed concentrations will not cause adverse effects on the receiving stream water quality, the waste water treatment plant or the safety of plant personnel.
- 5) The following mass limits will apply to the discharge of Phenols (4AAP), and Zinc, Aluminum and Iron.  
Phenols (4AAP) - .964 lbs/day  
Zinc - .318 lbs/day  
Aluminum - 1.3 lbs/day  
Iron - 7.14 lbs/day
- 6) It is required that the Permittee have a Site Operations Manual available at all times. All emergency phone numbers must be listed in an appropriate place for easy access by operations personnel. A log of pumping operations must be maintained on site and The permittee shall not discharge to the City of North Tonawanda sewerage treatment works during overflow conditions. The permittee is required to cease all pumping operations

**PERMIT NUMBER: 2628010****Part I  
Page 8 of 8**

upon verbal request of the North Tonawanda Wastewater Treatment Plant Superintendent or his assigns. Pumping operations shall not recommence until approved by the North Tonawanda Wastewater Treatment Plant Superintendent or his assigns.

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

**NYS New Discharge Form**  
for new or increased discharges  
Niagara County Landfill

<b>1. POTW NAME AND SPDES PERMIT NUMBER</b>				<b>2. NAME AND ADDRESS OF PROPOSED DISCHARGE</b>							
City of North Tonawanda Wastewater Treatment Plant				Niagara County Refuse Site							
850 River Road											
North Tonawanda, New York 14120											
SPDES #NY0026280				Discharge of 5 gallons/minute = 7,200 g/d							
<b>3. LOCATION OF PROPOSED DISCHARGE</b>											
Warner Road sanitary sewer											
Discharge = 7200 gallons/day											
Discharge would commence upon approval.											
<b>4. Substance</b>	<b>NT</b>	<b>4. Flow</b>	<b>5. Prop.</b>	<b>6. Pres.</b>	<b>7. Prop.</b>	<b>8. Pres.</b>	<b>9. Non</b>	<b>10. Pres.</b>	<b>11. Allow.</b>	<b>12. Proj.</b>	<b>13. Proj.</b>
	<b>Reg</b>		<b>Max. Dis.</b>	<b>POTW</b>	<b>Addit.</b>	<b>Perm.</b>	<b>Ind.</b>	<b>Hdwks.</b>	<b>Hdwks.</b>	<b>Hdwks.</b>	<b>Effluent</b>
	<b>Limit</b>		<b>Conc.</b>	<b>Rem.</b>	<b>Loading</b>	<b>Loading</b>	<b>Loading</b>	<b>Loading</b>	<b>Loading</b>	<b>Loading</b>	<b>Loading</b>
	<b>(PPM)</b>	<b>(MGD)</b>	<b>(PPM)</b>	<b>% **</b>	<b>Max lbs.</b>	<b>Tot. lbs.</b>	<b>lbs.</b>	<b>lbs.</b>	<b>Max. lbs.</b>	<b>Max. lbs.</b>	<b>Max. lbs.</b>
			<b>@ 5gpm</b>								
Acetone		0.0072	0.0019		0.000114					0.000	0.000
Benzene /3		0.0072	0.0110	0.74	0.000661	0.05		0.05	0.48	0.051	0.013
Chlorobenzene /2 /4		0.0072	0.0180	0.83	0.001081	1.00		1.00	3.65	1.002	0.170
1,1-Dichloroethane		0.0072	0.0029		0.000174			0.00	0.51	0.000	0.000
1,2-Dichloroethylene /4		0.0072	0.0035	0.76	0.000210					0.000	0.000
1,4-Dichlorobenzene /2 /4		0.0072	0.0081	0.80	0.000486	1.00		1.00	5.00	1.001	0.200
Ethylbenzene /3		0.0072	0.0052	0.68	0.000312	0.05		0.05	0.78	0.050	0.016
Methylene Chloride (Dichloromethane) /2 /4		0.0072	0.1200	-0.34	0.007206	1.00		1.00	3.43	1.008	1.351
4-Methyl-2-pentanone		0.0072	0.0051		0.000308					0.000	0.000
Styrene		0.0072	0.0050		0.000300					0.000	0.000
Naphthalene /3		0.0072	0.0010	0.91	0.000060	0.05		0.05	0.17	0.050	0.005
2-Methylphenol		0.0072	0.4200		0.025220					0.025	0.025
Bis (2-Ethylhexyl) Phthalate		0.0072	0.0002		0.000012			0.00	0.27	0.000	0.000
Dibenzofuran		0.0072	0.0033		0.000198					0.000	0.000
Tetrachloroethylene		0.0072	0.0016		0.000096	0.05		0.05	0.44	0.050	0.050
Toluene /2 /4		0.0072	0.0270	0.60	0.001621	1.00	0.38	1.38	1.53	1.383	0.553
Trichloroethylene /2 /4		0.0072	0.0043	0.33	0.000258			0.00	2.99	0.000	0.000

**NYS New Discharge Form**  
for new or increased discharges  
Niagara County Landfill

4. Substance	NT	4. Flow	5. Prop.	6. Pres.	7. Prop.	8. Pres.	9. Non	10. Pres.	11. Allow.	12. Proj.	13. Proj.
Reg			Max. Dis.	POTW	Addit.	Perm.	Ind.	Hdwks.	Hdwks.	Hdwks.	Effluent
Limit			Conc.	Rem.	Loading	Loading	Loading	Loading	Loading	Loading	Loading
(PPM)	(MGD)	(PPM)	% **	Max lbs.	Tot. lbs.	lbs.	lbs.	lbs.	Max. lbs.	Max. lbs.	Max. lbs.
		@ 5gpm									
Aluminum	2.0	0.0072	21.0000		1.281008					1.261	1.261
Barium		0.0072	0.4100		0.024620					0.025	0.025
Arsenic /4	4.9	0.0072	0.0055	0.33	0.000330			0.00	0.32	0.000	0.000
Cadmium /4	0.3	0.0072	0.0011	0.26	0.000086	0.04		0.04	0.59	0.043	0.032
Cobalt		0.0072	0.0058		0.000348					0.000	0.000
Chromium /4	4.7	0.0072	0.0780	0.69	0.004684	4.31		4.31	2.45	4.319	1.338
Copper /4	3.9	0.0072	0.0600	0.79	0.003603	0.73	4.56	5.30	3.10	5.299	1.113
Cyanide /2 /4	5.0	0.0072	0.0190	0.47	0.001141	0.53		0.53	5.28	0.535	0.284
Lead /4	4.6	0.0072	0.0860	0.71	0.005164	0.13		0.13	15.70	0.134	0.039
Vanadium		0.0072	0.0400		0.002402					0.002	0.002
Mercury /3	0.0	0.0072	0.0007	0.79	0.000041	0.01		0.01	0.125	0.006	0.001
Nickel /2 /4	3.4	0.0072	0.1700	0.06	0.010208	0.47		0.47	3.51	0.482	0.453
Zinc /2 /4	14.0	0.0072	5.3000	0.52	0.318254	0.64	15.06	15.71	31.25	16.024	7.691
3&4-Methylphenol		0.0072	0.2600		0.015612					0.016	0.016
Phenols (4AAP) /2 /4	4.0	0.0072	16.0000	0.74	0.960768	4.90	2.75	7.65	28.85	6.611	2.238
2-Butanone		0.0072	0.1100		0.006605				2.17	0.007	0.007
Total Xylenes		0.0072	0.0200		0.001201				0.11	0.001	0.001
Calcium		0.0072	360.0000		21.617280				1.08	21.617	21.617
Iron	10.0	0.0072	120.0000		7.205760				0.11	7.206	7.206
Potassium		0.0072	170.0000		10.208160				1.08	10.208	10.208
Magnesium		0.0072	200.0000		12.009600				0.11	12.010	12.010
Manganese		0.0072	2.5000		0.150120				1.08	0.150	0.150
Sodium		0.0072	710.0000		42.634080				0.02	42.634	42.634
Calcium		0.0072	360.0000		21.617280					21.617	21.617
* If Substance not denoted by sub note /2, Allowable Mass is calculated using MDL in accordance with TOGs guidance @ 13 MGD.											
** Percent as decimal fraction.											
/1 Controlled by NYSDEC Bioaccumulative and Persistent Substances List.											
/2 Allowable Headworks Loading Mass taken from North Tonawanda Mass Allocation Manual.											
/3 Removal efficiency based on removals at the Niagara Falls WWTP											
/4 Removal efficiency based on removals at the North Tonawanda WWTP											

**APPENDIX B**

**CORRESPONDENCE**





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

NOV 21 2005

**BY FEDEX**

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

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

Dear Mr. Felter:

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

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

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

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael J. Negrelli", followed by a horizontal line.

Michael J. Negrelli  
Remedial Project Manager  
New York Remediation Branch

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

## **APPENDIX C**

### **WATER LEVEL RECORDS**

# WATER LEVEL RECORD

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE:

0	4	0	8	0	6
(MM		DD		YY)	

CREW MEMBERS: Richard C. Becken

Observation Well	Time of Measurement	Top of Casing Elevation	Depth to Water	Water Level Elevation
		A	B	A-B
		feet	feet	feet
East "A"		598.93	24.22	574.71
East "B"		596.23	19.86	576.37
East "C"		598.69	19.77	578.92
East "D"		593.20	14.46	578.74
NCR-3S		579.60	2.45	577.15
NCR-4S		591.88	2.72	589.16
NCR-5S		597.34	7.91	589.43
NCR-13S		593.13	5.84	587.29

## Wet Wells

depth of water

WWA	0800	$\sim 12^u$		
WWB		$\sim 13^u$		
WWC		$\sim 13^u$		
WWD		$\sim 11''$		

Total System

Time of

Flow

## Measurement

31253340	0800

**FORM 16**

## WATER LEVEL RECORD

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

DATE: 05/01/06  
(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"	1535	598.93	24.81	574.12
East "B"	1515	596.23	21.1	575.13
East "C"	1450	598.69	20.09	578.60
East "D"	1440	593.20	14.74	578.46
NCR-3S	1410	579.60	3.44	576.16
NCR-4S	1328	591.88	3.26	588.62
NCR-5S	1420	597.34	8.79	588.55
NCR-13S	1250	593.13	6.15	586.98

### Wet Wells

		depth of water		
WWA	12:45	~15"		
WWB	1320	~13"		
WWC	1350	~13"		
WWD	1300	~12"		

Total System Flow	Time of Measurement
31531100	1245

FORM 16

## WATER LEVEL RECORD

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

DATE: 06/07/06  
(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"	1350	598.93	23.53	575.40
East "B"	1500	596.23	19.80	576.43
East "C"	1425	598.69	19.69	579.00
East "D"	1420	593.20	14.87	578.33
NCR-3S	1045	579.60	dry	
NCR-4S	1130	591.88	4.31	587.57
NCR-5S	1815	597.34	8.97	588.37
NCR-13S	0945	593.13	7.33	585.80

### Wet Wells

Depth of Water

WWA	0930	~15"		
WWB	1140	~13"		
WWC	1100	~12"		
WWD	0955	~14"		

Total System Flow	Time of Measurement
31686910	0930

FORM 16

**APPENDIX D**

**MONTHLY INSPECTION LOGS**

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

INSPECTOR(S):

*RC Becker*

DATE:

*10/10/06*  
(MM DD YY)

Item	Inspect For	Action Required	Comments
<b>1. Perimeter Collection System/Off-Site Forcemain</b>			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Manholes	- cover on securely	<i>OK</i>
		- condition of cover	<i>OK</i>
		- condition of inside of manhole	<i>OK</i>
		- flow conditions	<i>minor flow</i>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Wet Wells	- cover on securely	<i>OK</i>
		- condition of cover	<i>OK</i>
		- condition of inside of wet well	<i>OK</i>
<b>2. Landfill Cap</b>			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Vegetated Soil Cover	- erosion	<i>none</i>
		- bare areas	<i>none</i>
		- washouts	<i>none</i>
		- leachate seeps	<i>none</i>
		- length of vegetation	<i>short</i>
		- dead/dying vegetation	<i>winter kill</i>

FORM 1



## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE:

10/4/08/06  
(MM DD YY)

INSPECTOR(S):

RL Becker

Item	Inspect For	Action Required	Comments
2. Landfill Cap (continued)			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Access Roads	- bare areas, dead/dying veg.	no
		- erosion	none
		- potholes or puddles	minor
		- obstruction	none
3. Wetlands (Area "F")			
	- dead/dying vegetation	winter kill	
	- change in water budget	normal	
	- general condition of wetlands	good	
4. Other Site Systems			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Perimeter Fence	- integrity of fence	OK
		- integrity of gates	OK
		- integrity of locks	OK
		- placement and condition of signs	OK

FORM 1

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 04/10/16  
(MM DD YY)

INSPECTOR(S):

RC Becker

Item	Inspect For	Action Required	Comments
4. Other Site Systems (continued)			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Drainage Ditches/ Swale Outlets	- sediment build-up	<u>none</u>
		- erosion	<u>none</u>
		- condition of erosion protection	<u>OK</u>
		- flow obstructions	<u>none</u>
		- dead/dying vegetation	<u>winter kill</u>
		- cable concrete/gabion mats and riprap	<u>OK</u>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Culverts	- sediment build-up	<u>none</u>
		- erosion	<u>none</u>
		- condition of erosion protection	<u>OK</u>
		- flow obstructions	<u>none</u>
<input type="checkbox"/> <input type="checkbox"/>	Gas Vents	- intact / damage	<u>good condition</u>
<input type="checkbox"/>	Wells	- locks secure	<u>OK</u>

FORM 1

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 05/01/06  
(MM DD YY)

INSPECTOR(S):

RC Becker

Item	Inspect For	Action Required	Comments
1. Perimeter Collection System/Off-Site Forcemain			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Manholes	- cover on securely	OK
		- condition of cover	OK
		- condition of inside of manhole	OK
		- flow conditions	none
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Wet Wells	- cover on securely	OK
		- condition of cover	OK
		- condition of inside of wet well	OK
2. Landfill Cap			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Vegetated Soil Cover	- erosion	minor
		- bare areas	none
		- washouts	none
		- leachate seeps	none
		- length of vegetation	short
		- dead/dying vegetation	none

FORM 1

# MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 10/5/10  
(MM DD YY)

INSPECTOR(S):

RC Becker

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

FORM 1

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

INSPECTOR(S):

*R. Becker*

DATE:

*10/5/07/06*  
(MM DD YY)

Item	Inspect For	Action Required	Comments
4. Other Site Systems (continued)			
<input type="checkbox"/> Drainage Ditches/ Swale Outlets	- sediment build-up	<i>none</i>	
<input type="checkbox"/>	- erosion	<i>none</i>	
<input type="checkbox"/>	- condition of erosion protection	<i>good</i>	
<input type="checkbox"/>	- flow obstructions	<i>none</i>	
<input type="checkbox"/>	- dead/dying vegetation	<i>none</i>	
<input type="checkbox"/>	- cable concrete/gabion mats and riprap	<i>good</i>	
<input type="checkbox"/> Culverts	- sediment build-up	<i>none</i>	
<input type="checkbox"/>	- erosion	<i>none</i>	
<input type="checkbox"/>	- condition of erosion protection	<i>good</i>	
<input type="checkbox"/>	- flow obstructions	<i>none</i>	
<input type="checkbox"/> Gas Vents	- intact /damage	<i>good condition</i>	
<input type="checkbox"/> Wells	- locks secure	<i>good</i>	

FORM 1

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

INSPECTOR(S):

RC Becken

DATE:

01/6/07  
(MM DD YY)

Item	Inspect For	Action Required	Comments
<b>1. Perimeter Collection System/Off-Site Forcemain</b>			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Manholes	- cover on securely	<u>OK</u>
		- condition of cover	<u>OK</u>
		- condition of inside of manhole	<u>OK</u>
		- flow conditions	<u>no flow</u>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Wet Wells	- cover on securely	<u>OK</u>
		- condition of cover	<u>OK</u>
		- condition of inside of wet well	<u>OK</u>
<b>2. Landfill Cap</b>			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Vegetated Soil Cover	- erosion	<u>none</u>
		- bare areas	<u>none</u>
		- washouts	<u>none</u>
		- leachate seeps	<u>none</u>
		- length of vegetation	<u>tall</u>
		- dead/dying vegetation	<u>none</u>

FORM 1

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE:

01/07/06  
(MM DD YY)

INSPECTOR(S):

RC Baker

Item	Inspect For	Action Required	Comments
2. Landfill Cap (continued)			
<input type="checkbox"/>	Access Roads	- bare areas, dead/dying veg.	none
		- erosion	none
		- potholes or puddles	none
		- obstruction	none
3. Wetlands (Area "F")			
	- dead/dying vegetation	none	
	- change in water budget	water level down from last month	
	- general condition of wetlands	good	
4. Other Site Systems			
<input type="checkbox"/>	Perimeter Fence	- integrity of fence	OK
		- integrity of gates	OK
		- integrity of locks	OK
		- placement and condition of signs	OK

FORM 1

## MONTHLY INSPECTION LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

DATE: 01/4/97  
(MM DD YY)

INSPECTOR(S): PC Becker

Item	Inspect For	Action Required	Comments
4. Other Site Systems (continued)			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Drainage Ditches/ Swale Outlets	- sediment build-up	none
		- erosion	none
		- condition of erosion protection	OK
		- flow obstructions	none
		- dead/dying vegetation	none
		- cable concrete/gabion mats and riprap	OK
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Culverts	- sediment build-up	none
		- erosion	none
		- condition of erosion protection	OK
		- flow obstructions	none
<input type="checkbox"/> <input type="checkbox"/>	Gas Vents	- intact / damage	all OK
	Wells	- locks secure	OK

FORM 1



**APPENDIX E**

**MAINTENANCE RECORD LOGS**

## MAINTENANCE RECORD LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

CREW MEMBERS: RC Becker

1. Date: 04/28/06 (MM DD YY)

Time: 1133 (HH mm)

Scheduled/Unscheduled: unscheduled

Type of Maintenance Performed: painted monitoring wells

2. Company Performing Maintenance

Name: O & M Enterprises Inc.

Address: 7134 Manigault St.  
North Tonawanda, NY

Contact Name: Rick Becker

3. Methods Used:

painted each monitoring well NCR 35 NCR 45 NCR 55  
NCR 135 East A, East B, East C + East D

Description of Material Removed:

none

Problems/Comments:

none

4/28/06

DATE

RC Becker

INSPECTOR

Rick Becker

INSPECTOR'S SIGNATURE

FORM 2

## MAINTENANCE RECORD LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

CREW MEMBERS: RC Becker

1. Date: 042806 (MM DD YY)

Time: 0900 (HH mm)

Scheduled/Unscheduled: scheduled

Type of Maintenance Performed: clean & check pumping wells

2. Company Performing Maintenance

Name: Osm Enterprises Inc.

Address: 7134 Marigold Dr.

North Tonawanda, NY

Contact Name: Rick Becker

3. Methods Used:

Using truck lift I pulled each pump, pressure washed,  
the reinstall pump into well. Upon start up I checked  
amperage of each pump.

Description of Material Removed:

none

Problems/Comments:

none

4/28/06

DATE

RC Becker

INSPECTOR

Rick Becker

INSPECTOR'S SIGNATURE

FORM 2

## MAINTENANCE RECORD LOG

PROJECT NAME: Niagara County Refuse Site

LOCATION: Wheatfield, New York

CREW MEMBERS: RC Becker

1. Date: 050106 (MM DD YY)

Time: 11545 (HH mm)

Scheduled/Unscheduled: unscheduled

Type of Maintenance Performed: installed more perimeter signs.

2. Company Performing Maintenance

Name: Qm Enterprises Inc.

Address: 7134 Manigold Dr.

North Tonawanda, NY

Contact Name: Rick Becker

3. Methods Used:

added three more perimeter signs to the north fence line.

Description of Material Removed:

none

Problems/Comments:

none

5/1/06  
DATE

RC Becker  
INSPECTOR

Rick C Becker  
INSPECTOR'S SIGNATURE

FORM 2

**APPENDIX F**

**COMPACT DISC CONTAINING REPORT**