SIXTH ANNUAL
OPERATION AND MONITORING REPORT
JUNE 2006 TO MAY 2007

GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Prepared by:
Conestoga-Rovers & Associates

651 Colby Drive
Waterloo, Ontario
Canada N2V 1C2

Office: (519) 884-0510
Fax: (519) 884-0525

web: http:\\www.CRAworld.com

OCTOBER 2007
REF. NO. 007987 (34)

TABLE OF CONTENTS

LIST OF FIGURES
(Following Text)

LIST OF TABLES
(Following Text)

LIST OF APPENDICES

1.0 INTRODUCTION

This report is the sixth annual Operation and Monitoring Report (O&M Report) for the remedial actions constructed at the Gratwick-Riverside Park Site (Site) located in North Tonawanda, New York. This report covers the period from June 2006 to May 2007 and was prepared pursuant to Section 7.0 of the report entitled "Operation and Maintenance Manual" (O&M Manual) dated March 2002 (revised January 2004). It is noted that New York State Department of Environmental Conservation (NYSDEC) approval for the O&M Manual was given on April 20, 2005. All O&M activities have been performed in accordance with the methods and frequencies specified in the O&M Manual except as modified in the previous annual report ("Fifth Annual Operation and Monitoring Report, May 2005 to May 2006"). It is noted that NYSDEC approval was received on October 17, 2005 to modify the groundwater discharge monitoring from monthly to semi-annually and for a reduced list of parameters as recommended in Section 4.2 of the Fifth Annual O&M Report. EPA review of this modification was performed and accepted in June 2006. This change was reflected in the new discharge permit dated January 31, 2007 (copy provided in Appendix D). In accordance with the approved monitoring changes, the first semi-annual discharge sample will be collected in September 2007.

2.0 GROUNDWATER WITHDRAWAL SYSTEM (GWS)

Full-time operation of the Groundwater Withdrawal System (GWS) at the Site started on May 4, 2001. The objectives of the GWS are to:

i) achieve and maintain an inward gradient from the Niagara River toward the GWS; and

ii) achieve and maintain an upward gradient from the fill alluvium layer beneath the GWS.

In order to determine whether the objectives are being met, hydraulic and chemical monitoring programs have been developed. These programs include: Site groundwater; GWS effluent; and River surface water. The wells, manholes, wet wells, and storm sewer outfalls that comprise the monitoring network are shown on Figure 2.1. The monitoring programs are described in the following subsections.

2.1 HYDRAULIC MONITORING

Hydraulic monitoring consists of the collection of water levels in monitoring wells and manholes, and River water levels at the storm sewer outfalls. These data are then used to determine the vertical and horizontal gradients for the groundwater.

The water levels in four GWS manholes and in the River were monitored to confirm that an inward gradient exists. The water levels in five GWS manholes and in four monitoring wells installed near the GWS alignment in the materials directly overlying the confining unit were monitored to confirm that an upward gradient exists. The specific manholes and monitoring wells used to determine the horizontal and vertical gradients are listed in Table 2.1.

Groundwater elevations are measured on a monthly basis. The measured water levels from the beginning of the O&M period are presented in Table 2.2. Summaries of the horizontal and vertical gradients are provided in Tables 2.3 and 2.4, respectively.

The results for the horizontal gradient evaluation show that:

i) inward horizontal gradients were achieved by May 11, 2001, within one week of the start of pumping the GWS;

ii) the inward gradients were maintained for the remainder of the first two years except for a few short intervals in isolated areas; and

iii) the inward gradients were maintained for the entire third to sixth years inclusive (May 2003 to May 2007), except for a short time period between June 26, 2006 and August 25, 2006 in the vicinity of MH-2 and between October 31, 2006 and December 29, 2006 in the vicinity of MH12.

The short periods of outward gradient did not adversely affect the effectiveness of the remedy because:

i) the gradients were outward for only short periods of time;

ii) the outward gradients occurred over only a portion of the barrier wall;

iii) the 36-inch barrier wall is six inches thicker than the design thickness thereby providing extra protection; and

iv) any outward migration of Site groundwater into the barrier wall during the short periods of outward gradient are more than offset by the inward migration of river water into the barrier wall during the long periods of inward gradient.

The results for the vertical gradient evaluation showed that the vertical gradients were continually upward for all four monitoring pairs for the time period of May 2005 to May 2007, except for the location of monitoring well pair MH3/MW-6 at which a small downward gradient was measured in July 2005 and July 2006 and in well pair MH14&15/MW-9 in August 2006. An upward gradient existed at these well pairs in all other monitoring events.

2.2 GROUNDWATER QUALITY MONITORING

Groundwater quality monitoring consists of the collection of water samples from on-Site overburden monitoring wells (OGC-1 through OGC-8 and MW-6 through MW-9) and the analysis of these samples to determine the concentrations of chemicals in the groundwater. The purpose of the groundwater quality monitoring program is to monitor the anticipated improvement in the quality of the overburden groundwater:

i) between the barrier wall and the River (OGC-1 through OGC-4); and

ii) in the fill/alluvium beneath the GWS (MW-6 through MW-9).

Groundwater quality monitoring locations are presented on Figure 2.1 and the analytical parameters and frequency are listed in Table 2.5.

The sampling frequency for the initial 2-year period after GWS startup was quarterly. Based on the 2-year results, the frequency for most wells was modified to semi-annual for the third year (May and November 2003). The exceptions to this were for SVOCs in OGC-4 and VOCs in OGC-6, which remained at quarterly for the third year. Sampling for years 4 through 7 (from May 2004 to April 2008) is on an annual basis.

2.2.1 SAMPLE RESULTS

A summary of compounds detected in the groundwater samples is presented in Table 2.6 and pH levels are presented in Table 2.7.

To evaluate the trends in the groundwater chemistry and evaluate the appropriate frequency of future sampling, the VOCs and SVOCs were summed and plotted on Figures 2.2 through 2.13 for each of the 12 monitoring wells included in the program. It is believed that the sum of the VOCs (i.e., TVOCs) and SVOCs (i.e., TSVOCs) best represent the trends in the groundwater chemistry.

Review of the TVOC and TSVOC concentrations with time show the following trends:

i) TVOCs:

- decreasing concentrations in 8 of the 12 wells (MW-6, MW-8 , MW-9, OGC-3, OGC-4, OGC-6, OGC-7, and OGC-8); and
- relatively constant concentrations with random fluctuations in 4 of the 12 wells (MW-7, OGC-1, OGC-2, and OGC-5); and

ii) TSVOCs:

- decreasing concentrations in 5 of 12 wells (MW-8, MW-9, OGC-3, OGC-4, and OGC-6); and
- relatively constant concentrations with random fluctuations in 7 of the 12 wells (MW-6, MW-7, OGC-1, OGC-2, OGC-5, OGC-7, and OGC-8).

Many of the wells with decreasing or constant but fluctuating concentrations currently have only low level concentrations (i.e., <40 µg/L for TVOCs and TSVOCs). These are MW-6, MW-7, MW-9, OGC-1, OGC-2, OGC-3, OGC-4, OGC-5, OGC-7, and OGC-8 for TVOCs and MW-6, MW-7, OGC-1, OGC-2, OGC-5, OGC-7, and OGC-8 for TSVOCs.

In summary, the number of wells with decreasing or constant but fluctuating concentrations at low level concentrations, shows that the groundwater is being remediated.

Additional description of the TVOC and TSVOC concentrations is provided in the following paragraphs. The MWs are located on the inside of the barrier wall and the OGC's are located between the barrier wall and the river.

The TVOC concentrations for MW-6 shown on Figure 2.2 fluctuated randomly between 2 and 9 µg/L from August 2001 to February 2003, increased to 64 µg/L in May 2003, and then decreased to a range of 16 to 32 µg/L for the time period from November 2003 to May 2006. For the May 2007 sample, the TVOC concentration was only 1.0 µg/L. The TSVOC concentrations, after the initial rapid decrease from 107 to 13 µg/L between May and November 2001, fluctuated randomly between non-detect (ND) and 25 µg/L until May 2003, then increased to 350 µg/L in November 2003 before decreasing to ND in May 2004. No reason for these large variations is apparent. The TSVOC concentration remained low level (i.e., between 3 and 5 µg/L) in the May 2005, May 2006, and May 2007 samples.

The TVOC and TSVOC concentrations for MW-7 on Figure 2.3 show that both TVOC and TSVOC peaked in May 2002 (18 and 41 µg/L, respectively) and then decreased to non-detect for both TVOC and TSVOC in May 2004. In the May 2006 and May 2007 samples, the TVOC and TSVOC concentrations remained low level at 3 to 4 µg/L (TVOCs) and non-detect to 0.3 µg/L (TSVOCs).

The TVOC concentrations for MW-8 on Figure 2.4 show that the trend in the TVOC concentrations is a continual increase with some fluctuations until November 2003 when the concentrations peaked at 1,000 µg/L. Thereafter, the concentrations continually decreased with a TVOC concentration of 90 µg/L in the May 2007 sample. The TSVOC concentrations after August 2001 ranged between 200 and 300 µg/L until November 2003 and since then have continually decreased with a TSVOC concentration of 31 µg/L in the May 2006 sample. The TSVOC concentration in the May 2007 sample increased slightly to 68 µg/L.

The TVOC concentrations for MW-9 on Figure 2.5 show that the TVOC concentrations ranged between 9 and 29 µg/L. The TSVOC concentrations, not considering the May 2002 non-detect results which appear to be anomalous, fluctuated randomly between 140 to 280 µg/L from May 2001 to May 2003, increased to 380 µg/L in November 2003, and then fluctuated between 270 and 350 µg/L in the May 2004 and

May 2005 samples, respectively. Since May 2005, the TSVOC concentrations have continually decreased to 240 µg/L in the May 2007 sample.

All MWs are located on the inside of the barrier wall and an inward gradient has always been maintained in the vicinity of theses wells. Thus, the TVOCs and TSVOCs are not migrating to the Niagara River.

The TVOC concentrations for OGC-1 on Figure 2.6 show that the concentrations since November 2003 ranged between 0.5 and 4 µg/L. The TSVOC concentrations after November 2001, have fluctuated between non-detect and 59 µg/L with non-detect to 3 µg/L concentrations for the last five sampling events (i.e., since November 2003).

The TVOC concentrations for OGC-2 on Figure 2.7 have fluctuated randomly between non-detect and 4.5 µg/L since February 2002. The TSVOC concentrations were all non-detect over this same time period.

The TVOC concentrations for OGC-3 shown on Figure 2.8 ranged from 21 to 57 µg/L with the peak in November 2001. The TVOC concentrations ranged between 17 and 27 µg/L in the May 2004 to May 2006 samples and decreased to 10 µg/L in the May 2007 sample. The TSVOC concentrations fluctuated randomly from 207 to 411 µg/L between November 2001 and November 2003. Since November 2003, the TSVOC concentration has continually decreased from 300 µg/L to 124 µg/L in May 2007.

The TVOC concentrations for OGC-4 shown on Figure 2.9 fluctuated randomly between non-detect and 6 µg/L for the time period from November 2002 to May 2007. The TSVOC concentrations showed a continual increase from 380 µg/L in May 2001 to 2430 µg/L in February 2003, decreased to 64 µg/L in March 2004, and then increased to 2400 µg/L in May 2004. Since then, the TSVOC concentrations have continually decreased, with a concentration of 87 µg/L in the May 2007 sample. The single compound responsible for the higher concentrations was phenol which increased from 310 µg/L in May 2001 to 2400 µg/L in May 2004 and then decreased to 84 µg/L in May 2007. Phenol was non-detect in the March 2004 sample.

The TVOC concentrations for OGC-5 shown on Figure 2.10, ranged from non-detect to 11 µg/L after February 2002, whereas the TSVOC concentrations ranged from non-detect to 11 µg/L with non-detect concentrations for TSVOC since February 2003.

The TVOC concentrations for OGC-6 shown on Figure 2.11 increased continually from 3 µg/L in May 2001 to 4,200 µg/L in May 2006 and then decreased to 2,670 µg/L in May 2007. The primary compounds detected are PCE and TCE. The TSVOC

concentrations increased continually from non-detect in May 2001 to 26 µg/L in May 2002 and then held relatively constant between 11 and 30 µg/L from May 2002 to November 2003. Thereafter, they continually increased to 210 µg/L in the May 2006 sample and then decreased to 88 µg/L in the May 2007 sample. OGC-6 is located a short distance upstream of the northerly river monitoring station and is between MH6 and MH8. Review of the water levels for MH6, OGC-6, MH8, and the middle river station show that the water levels in MH6 and MH8 are typically 8 and 4 feet lower, respectively, than the river north level, resulting in a strong inward gradient which has continually existed in this area since pumping began. Thus, there will be no migration of chemicals from the Site through the barrier wall to the Niagara River. The well inside the barrier wall closest to OGC-6 is MW-7. As described above, the analytical results for MW-7 show only low level TVOC concentrations. Furthermore, the current maximum TVOC concentration for the four wells inside the barrier wall was 90 µg/L in well MW-8 and in the groundwater discharge was 260 µg/L (see Section 2.3), both significantly less than the TVOC concentration of 2,670 µg/L detected in OGC-6. The MW and discharge groundwater results support that the PCE and TCE detected in OGC-6 are unlikely to be migrating from the Site. Thus, the source for these VOCs is uncertain but is expected to reside outside of the barrier wall and is being drawn back toward the Site.

The TVOC concentrations for OGC-7 shown on Figure 2.12, ranged between 59 and 156 µg/L since August 2001, with the peak concentration in November 2003. Since November 2003, the TVOC concentrations have continually decreased with a concentration of 39 µg/L in the May 2007 sample. The TSVOC concentrations ranged between non-detect and 2 µg/L with non-detect concentrations for TSVOC from August 2002 to May 2006.

The TVOC concentrations for OGC-8 shown on Figure 2.13 have decreased from 165 µg/L in August 2002 to 29 µg/L for both the May 2004 and May 2005 samples, 25 µg/L for the May 2006 sample, and 12 µg/L for the May 2007 sample. The TSVOC concentrations have decreased from 54 µg/L in August 2002 to 8 µg/L in the May 2007 sample.

The QA/QC review of the May 2007 groundwater results is included in Appendix B.

2.2.2 MONITORING FREQUENCY TO MAY 2008

The groundwater sampling frequency has been annual since May 2004 and will continue to be annual until May 2008. At that time, an evaluation will be made with regard to sampling frequency and analytical parameters for the next 5-year period.

2.3 EFFLUENT MONITORING PROGRAM

Groundwater from the GWS is discharged to the POTW without the need for pretreatment. The monitoring performed during the construction phase of the remedy clearly showed that the minimal chemical presence in the groundwater collected in the GWS is easily treated at the POTW and therefore no on-Site pretreatment is necessary. The effluent samples are collected at the monitoring station (meter building), which is located at the south end of the Site as shown on Figure 2.1. The analytical parameters for the time period from June 2001 to February 2007, inclusive, are listed in Table 2.8.

Based on the results available for the period ending May 2003, the Second Annual O&M Report recommended revising the monitoring frequency to semi-annual and reducing the analytical parameter list (see Table 2.9). These same recommendations were made in the Third to Fifth Annual O&M Reports based on the results available for the periods ending May 2004, May 2005, and May 2006. NYSDEC approval for this recommendation was received on October 17, 2005. EPA review of the modification was performed in June 2006. This change was reflected in the new permit dated January 31, 2007 which expires on February 1, 2010 (copy provided in Appendix D). The last monthly discharge sample was collected on February 9, 2007. The first semi-annual discharge sample will be collected in September 2007.

2.3.1 SAMPLE RESULTS

Effluent samples were collected monthly until February 2007 as specified in the previous City of North Tonawanda Industrial Wastewater Discharge Permit (see O&M Manual Appendix B - Wastewater Discharge Permit). Each month, a 24-hour composite sample was collected for SVOCs, metals, and wet chemistry parameters. Three grab samples were also collected for VOCs at 8-hour intervals and the measured concentrations were averaged to give a 24-hour concentration.

The monthly effluent sample results are presented in Table 2.10 and the TVOC and TSVOC results are plotted on Figure 2.14. As shown on Figure 2.14, the TVOCs generally peak in the spring and then decline reaching a trough in the fall. This pattern may be attributable to additional flushing during the spring snow melt. The mean TVOC concentrations decreased until June 2004 and thereafter appear to have held relatively uniform. The effluent TSVOC results on Figure 2.14 show no apparent

seasonal pattern but the mean TSVOC concentrations show the same pattern with time as the mean TVOC concentrations.

QA/QC reviews of the monthly discharge results to May 2006 have already been submitted to the NYSDEC. Thus, these reviews are not being resubmitted with this O&M Report. The QA/QC reviews of the monthly discharge results from June 2006 to February 2007, inclusive, are provided in Appendix B.

2.3.2 MONITORING PROGRAM TO FEBRUARY 2010

2.3.2.1 SAMPLING FREQUENCY

To assist in evaluating the sampling frequency for the effluent discharge from the GWS, the measured concentrations for the following parameters were plotted: TVOCs, TSVOCs, pH, total suspended solids (TSS), and biochemical oxygen demand (BOD) (see Figures 2.14 through 2.17). It is believed that these parameters are representative of the trends in the chemistry of the water discharged to the POTW and, as such, can be used to determine an appropriate monitoring frequency for the effluent.

The effluent TVOC concentrations versus time are presented on Figure 2.14. As shown on Figure 2.14, the TVOCs generally peak in the spring and then decline reaching a trough in the fall. Furthermore, the mean concentrations appear to be relatively uniform since June 2004.

The effluent TSVOC concentrations are also presented on Figure 2.14. There is no apparent seasonal pattern in the TSVOC concentrations. However, the mean TSVOC concentrations also appear to be relatively uniform since June 2004.

The pH levels are presented on Figure 2.15. As shown on Figure 2.15, the pH levels range between 8.4 and 11.5. An apparent trend in the pH levels is higher pH levels in the winter/spring and lower pH levels in the summer/fall.

The TSS concentrations presented on Figure 2.16 show higher concentrations occurring in the early spring and late summer/fall with elevated concentrations (maximum of 278 mg/L) in the spring of 2005. Because TSS may be related to the discharge flow rate, the monthly discharge volume (see Table 2.11) is plotted on Figure 2.18. Comparison of the results presented on these two figures shows an apparent correlation between higher flows and greater TSS concentrations except for the 2005 spring results.

The BOD concentrations are presented on Figure 2.17. As shown on Figure 2.17, BOD concentrations ranged from 20 to 29 mg/L until April 2002 then decreased to the range of 6 to 22 mg/L since May 2002. The BOD concentrations were compared with the discharge volume but showed no apparent correlation.

In summary, the trends described above support the semi-annual sampling frequency that the NYSDEC approved on October 17, 2005. This modification was implemented starting after February 2007 in accordance with the City of North Tonawanda Industrial Wastewater Discharge Permit (see Appendix D).

2.3.2.2 ANALYTICAL PARAMETERS

Review of the analytical results also shows that none of the detected metals exceeded the surface water standard/guidance values listed in Table 2.10. Thus, it was recommended in the Fifth Annual O&M report that metals be deleted from the effluent analytical parameter list.

Furthermore, operation of the POTW does not require monitoring of the general chemistry parameters. Thus, it was recommended that the general chemistry parameters be deleted from the effluent analytical parameter list, other than those parameters which have a surface water standard/guidance level. The parameters retained are: chloride, ammonia, nitrate, sulfate, sulfide, phosphorus, and cyanide. Of these effluent parameters, chloride, ammonia, sulfide, and phosphorus have consistently exceeded their respective surface water quality criteria whereas sulphate concentrations have been above criteria in three of the last 12 months (see Table 2.10). The parameters with standards/guidance levels will continue to be monitored to assist in the determination of when pumping to the POTW for treatment can be stopped and the groundwater thereafter can be allowed to discharge directly to the Niagara River. Phenol, even though it has a standard, was deleted from the general parameter list because it is already included under the SVOC parameter list.

These recommendations were incorporated into the discharge permit effective January 31, 2007.

A summary of the effluent monitoring program for the period from February 2007 to February 2010 is presented in Table 2.9. This modification was approved by the NYSDEC on October 17, 2005 and was implemented starting after February 2007.

2.4 SURFACE WATER MONITORING PROGRAM

To determine that the River sediment remediation and enhancement is working properly, surface water samples were collected upstream of, adjacent to, and at the downstream end of the Site at the locations shown on Figure 2.1. The analytical parameters are listed in Table 2.12. Surface water samples were collected and analyzed concurrent with the groundwater samples.

2.4.1 SAMPLE RESULTS

The river water analytical results are presented in Table 2.6. As shown in Table 2.6, almost all of the analytical results were non-detect. Only a few VOCs were infrequently detected at very low level concentrations and only 2 SVOCs were ever detected; once each at less than 1 µg/L. None of the detected compounds exceeded the Class A surface water criteria with the exception of samples collected in May 2002, November 2003, May 2004, and May 2006 at the North River location. The May 2002, May 2004, and May 2006 North River analytical results show detected concentrations of primarily ethylbenzene (20, 40, and 2.9 µg/L), toluene (63, 130, and 14 µg/L), and total xylenes (80, 210, and 23 µg/L). Benzene was detected at 2 µg/L, slightly above the Class A surface water criteria of 1 µg/L, in the North River location in the November 2003 sample. Given that:

i) the North River location is downstream of the on-site boat launch;

ii) boats and personnel watercraft were present in the area;

iii) the concentrations for these three compounds in the groundwater are generally much less than the May 2002, May 2004, and May 2006 river water concentrations; and

iv) the concentrations for these three compounds were non-detect in all other samples at this location, except for toluene (0.96J and 2.2 µg/L) and total xylene (0.96J and 3.7 µg/L) in the May 2003 and May 2005 samples, respectively, and PCE (1.3 µg/L) in the May 2007 sample,

the most likely explanation for these measured concentrations of BTEX compounds in the river water sample is a fuel leak or spillage from watercraft.

The QA/QC review of the May 2007 river water results is included in Appendix B.

2.4.2 MONITORING FREQUENCY TO APRIL 2008

Given the infrequent and low level concentrations of VOCs and SVOCs, the frequency for river water sampling and analyses is annual, the same as for the groundwater.

2.5 GWS OPERATIONS

The volume of water pumped on a monthly basis from the Site to the City POTW for treatment is presented in Table 2.11 and plotted on Figure 2.18. Due to an oversight, monthly flows were not measured for March to May 2007 although the total pumped in this period is known. Monthly flow monitoring was restarted on June 1, 2007. The monthly volumes show that during the time period of initial dewatering of the Site (i.e., May and June 2001) the monthly volumes ranged from 2,300,000 to 2,900,000 gallons. Thereafter, the monthly volumes ranged from 210,000 to 1,280,000 gallons, with the volumes ranging from 213,000 to 779,000 gallons for the time period from June 2006 to June 1, 2007. The lower monthly volumes typically occur during the drier summer/fall months.

The total volume of water discharged from the Site for the time period from May 2001 to June 1, 2007 was 43,517,800 gallons with 5,534,000 gallons pumped during the last 12 months.

Section 5.0 of the O&M Manual describes the procedures to be followed in case pumping of the GWS needs to be stopped to prevent the discharge of untreated water from the Site by the City POTW (i.e., wet weather shutdown). No wet weather shutdown occurred in the time period from June 2006 to May 2007. However, the system was shut down for a period of approximately 25 days due to a restriction to flow caused by a manhole flap gate malfunction as described in Section 2.6.

The treatment of the Site groundwater by the City POTW did not require any modifications to the standard operations of the City POTW and did not cause any operational upsets of the City POTW.

2.6 GWS MAINTENANCE

The following maintenance or service repairs that resulted in extended shut-down periods were performed on the GWS components during the June 2006 to May 2007 time period.

A visit to the Site on July 7, 2006 by City of North Tonawanda personnel observed that a parking lot drain in the northerly lot of the Niagara River Yacht Club was overflowing. The pumps in the three pumping manholes (MH-3, MH-9, and MH-15) were taken out of service and secured by City personnel. Record searches and manually controlled pumping of the GWS identified a manhole located in River Road with a flap gate. Inspection of this manhole on July 31, 2006 identified that the wooden board holding the flap gate open had fallen. The board was replaced and the GWS was restarted on July 31, 2006. Additional details regarding this occurrence are provided in the City correspondence included in Appendix C.

During this downtime, the water levels in all the MHs were approximately 1 to 4 feet higher than previous levels. Even with the higher water levels, the groundwater gradient around the GWS remained inward (i.e., from the river through the barrier wall to the GWS) except for the section in the vicinity of MH-2. The effect of this outward gradient is described in Section 2.1. In summary, no groundwater migration from the interior of the Site to the river occurred.

On December 1, 2006, a lightning strike caused a power surge that resulted in the transformer on River Road servicing the Site to explode and fuses for the GSW controls to blow. Due to the blown fuses, automatic operation of the GWS was not possible until December 13, 2006 when the fuses were replaced. During this time period, the GWS was operated in manual mode and inward gradients were maintained.

3.0 SITE INSPECTIONS

Site inspections were performed on a monthly basis. Copies of the inspection logs for the time period to May 2006 were previously submitted and thus are not being resubmitted with this O&M Report. The monthly inspection logs for June 2006 to May 2007 are included in Appendix A. In summary, the June 2006 to May 2007 inspections identified some dead/dying vegetation of the Site cover during August 2006 and in May 2007 due to dry conditions. Recovery of the vegetation was observed during subsequent inspections.

4.0 CONCLUSIONS/RECOMMENDATIONS

4.1 OPERATION AND MAINTENANCE

The constructed remedy is achieving the remedial action objectives.

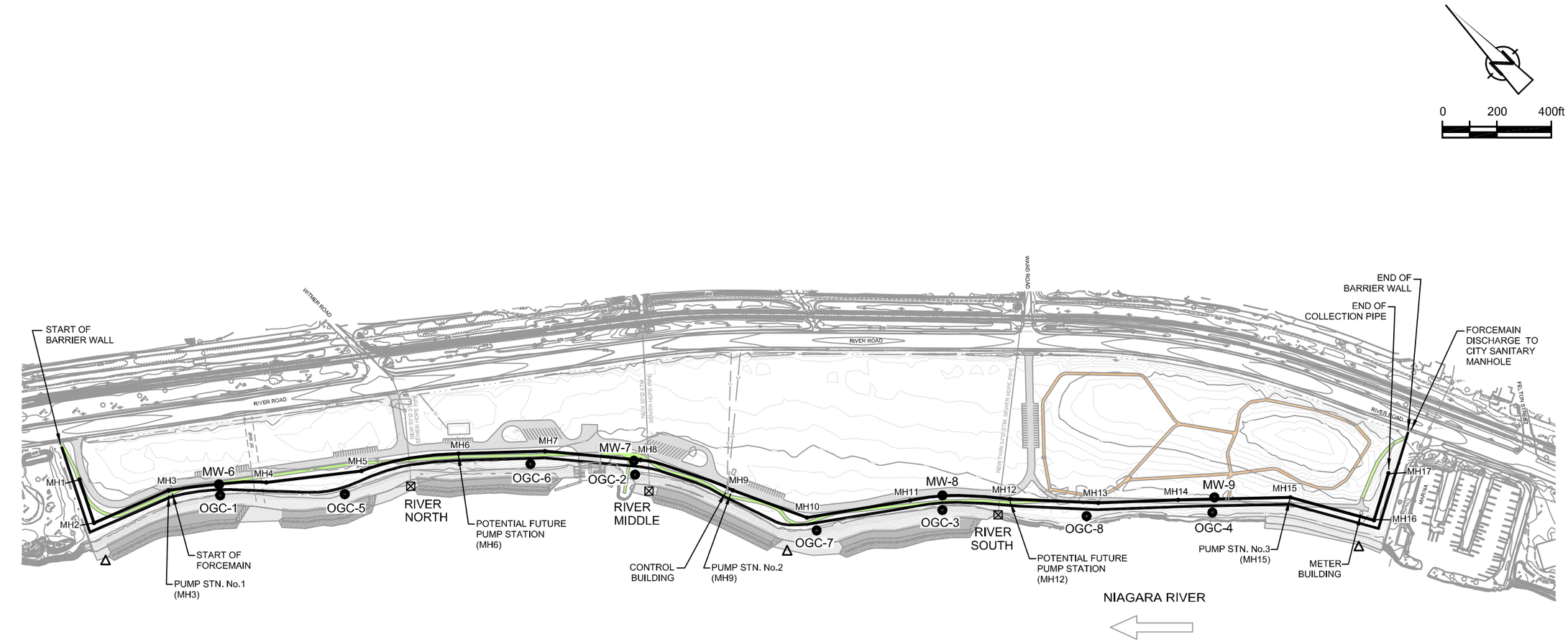
4.2 MONITORING

As described in Section 2.2, the trends in the groundwater analytical results are relatively consistent with time. Thus, the frequency for the groundwater monitoring is annual for the period from May 2004 to April 2008.

Only a few VOCs and SVOCs were infrequently detected at very low level concentrations in the river water samples. Thus, the frequency for the river water monitoring is annual for the same time period.

The trends in the effluent from the GWS to the POTW support the reduction in the sampling frequency from monthly to semi-annual. Flow monitoring will continue to be performed monthly as a check on the operation of the GWS.

It was previously recommended that metals be deleted from the effluent parameter list because none of the detected metals exceed their respective standard/guidance value. It was also recommended that all general chemistry parameters be deleted except those which have a surface water standard/guidance level. This was approved by the NYSDEC on October 17, 2005 and was reviewed and accepted by the USEPA in June 2006. Pursuant to the discharge permit effective January 31, 2007, semi-annual monitoring will commence in September 2007.



LEGEND

- BARRIER WALL
- MH11 — GROUNDWATER COLLECTION SYSTEM
- ● OGC-1 MW-1 — MONITORING WELL LOCATION
- ⊠ RIVER SOUTH — SURFACE WATER LEVEL MONITORING LOCATION
- △ — SURFACE WATER CHEMICAL MONITORING LOCATION

figure 2.1

MONITORING NETWORK
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA006 JUL 23/2007

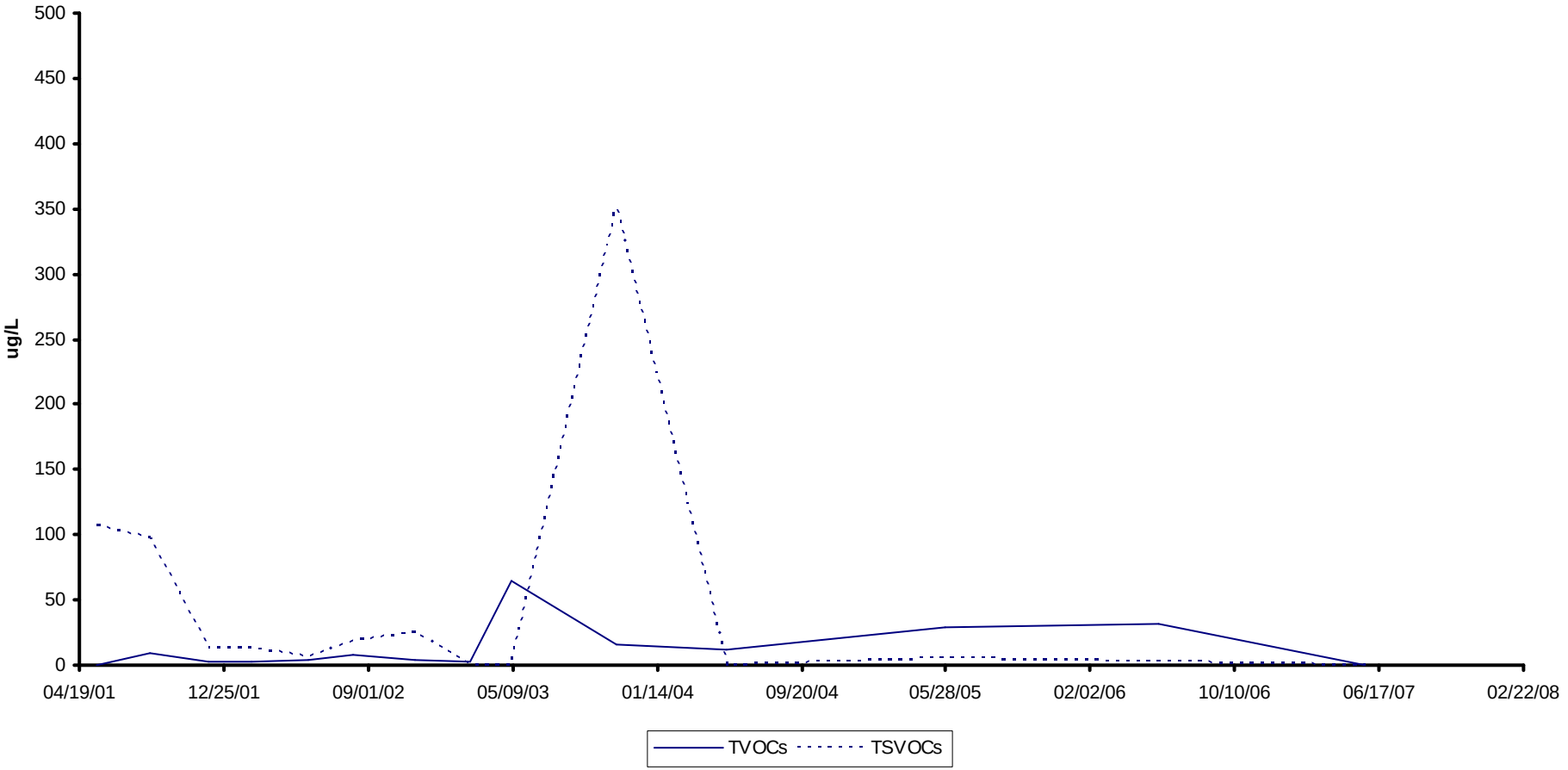


figure 2.2

MW-6 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA007 JUL 23/2007

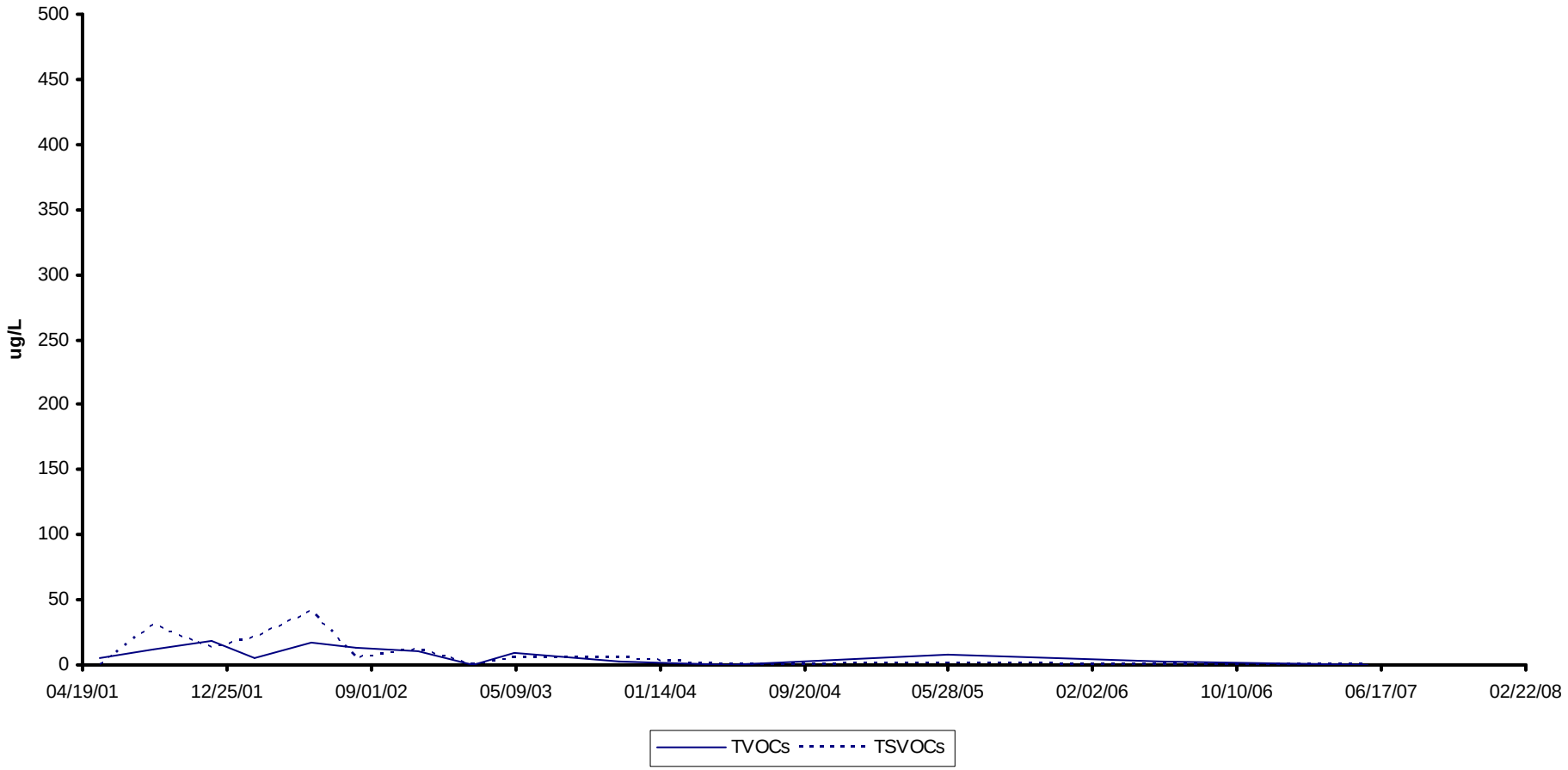


figure 2.3

MW-7 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA008 JUL 23/2007

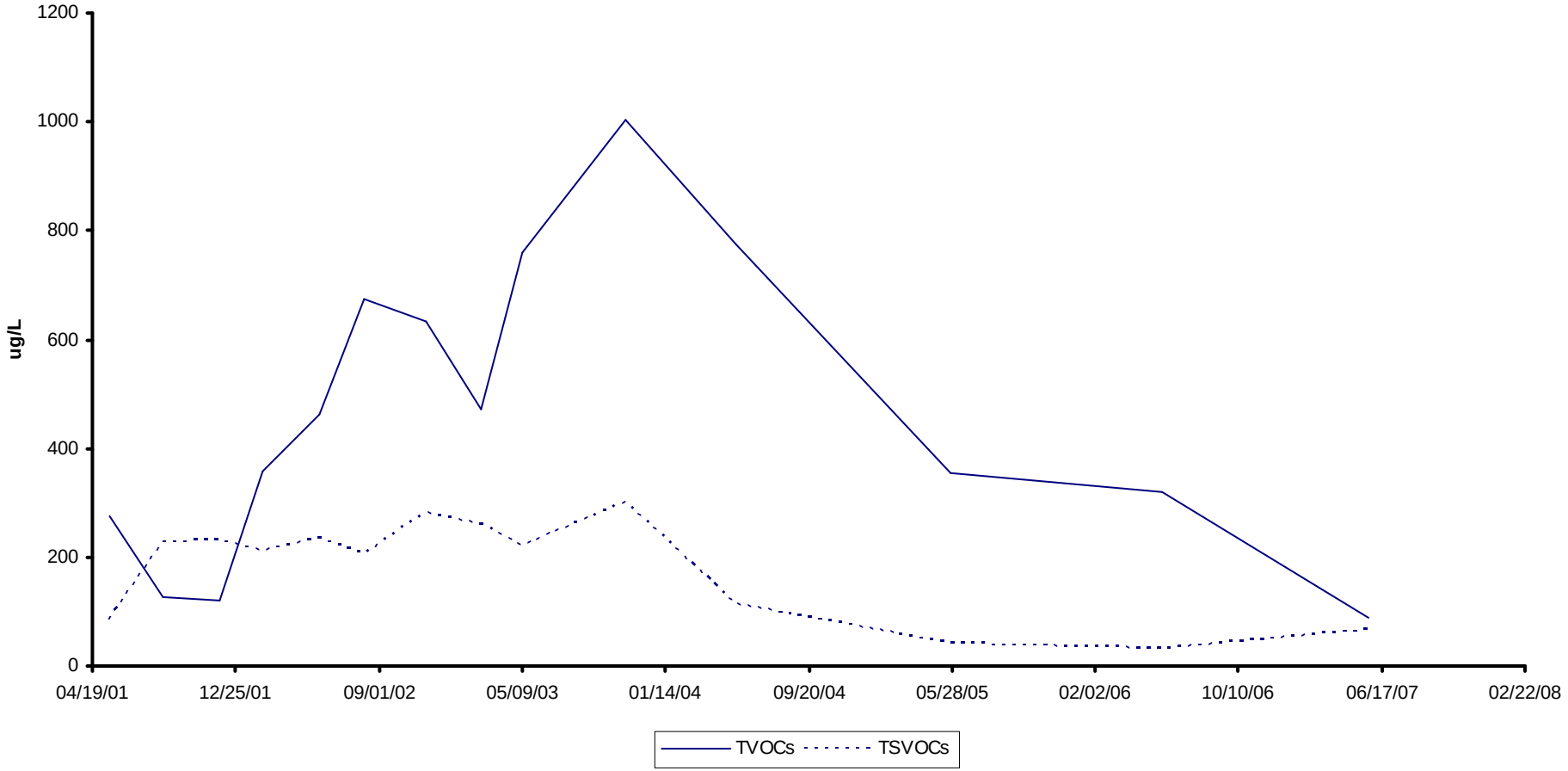


figure 2.4

MW-8 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA009 JUL 23/2007

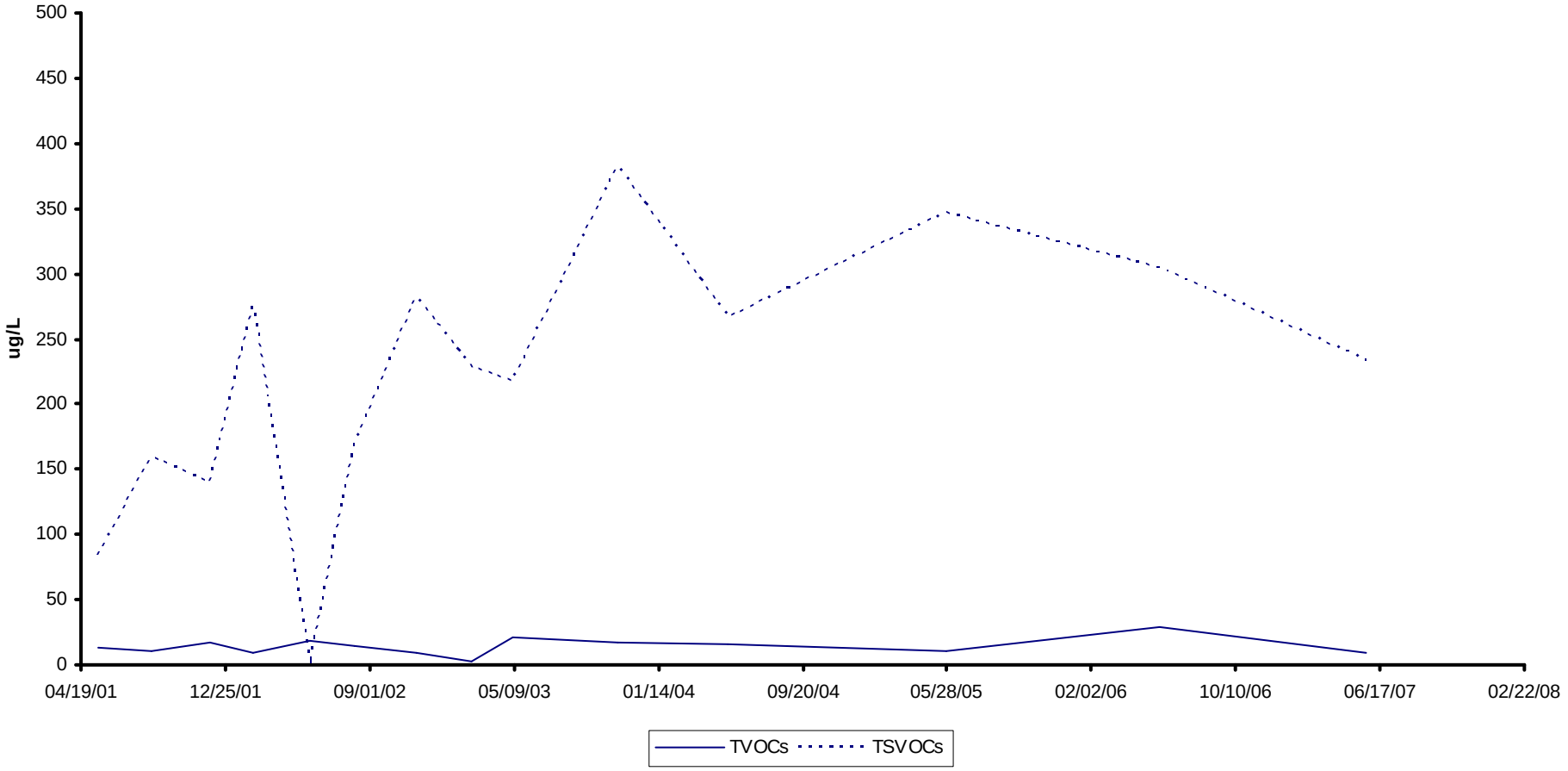


figure 2.5

MW-9 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA010 JUL 23/2007

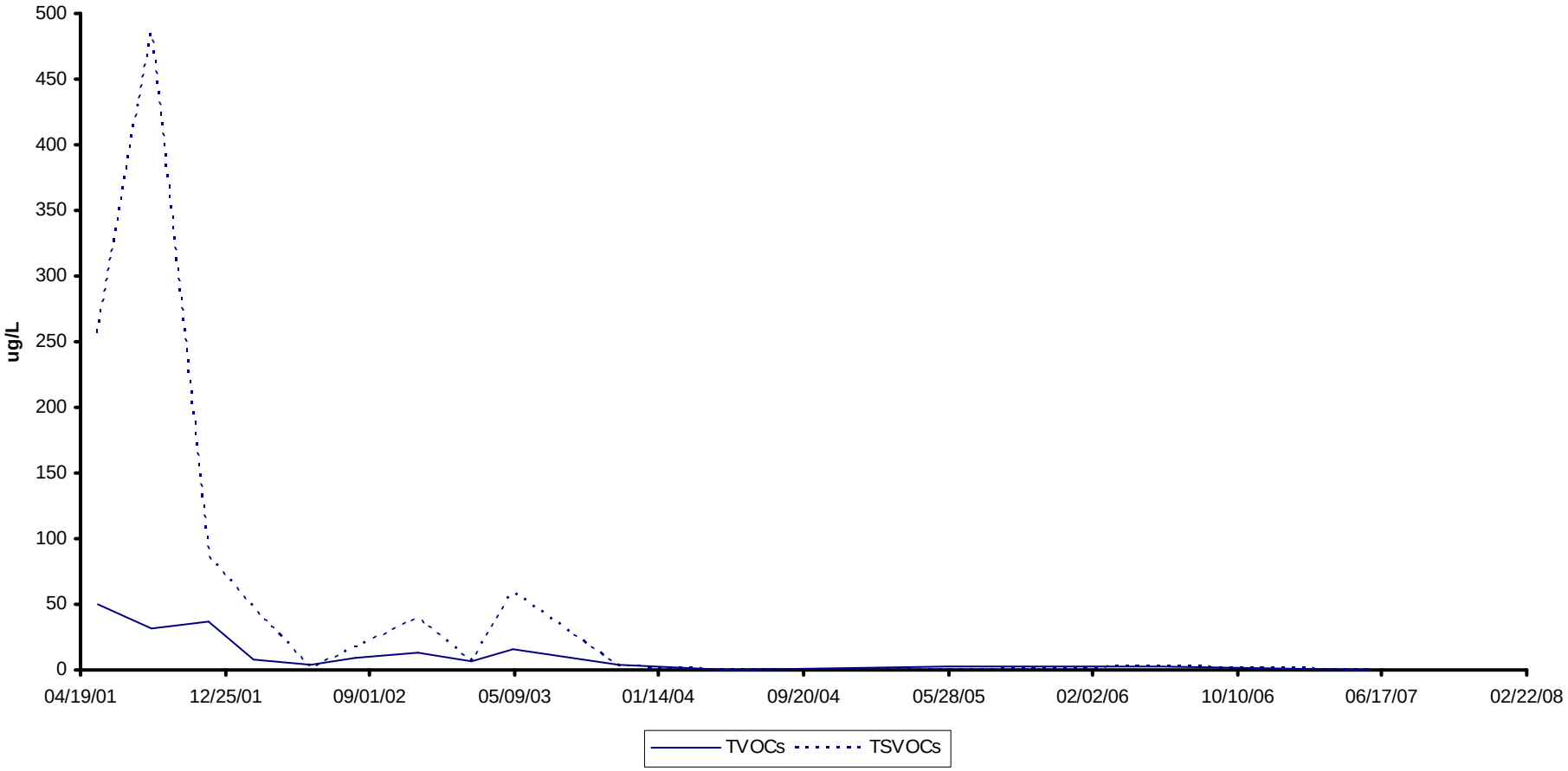


figure 2.6

OGC-1 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

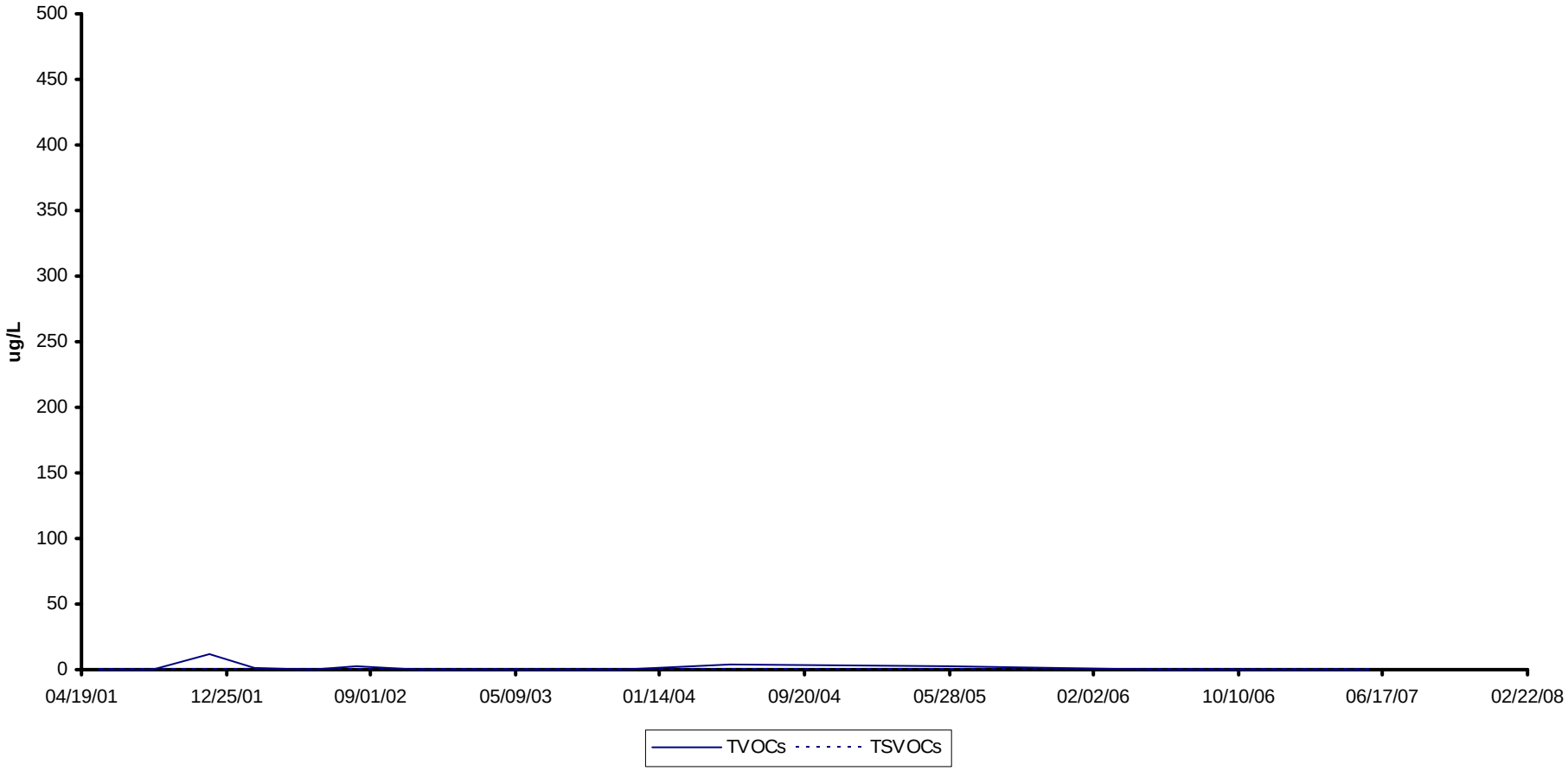


figure 2.7

OGC-2 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA012 JUL 23/2007

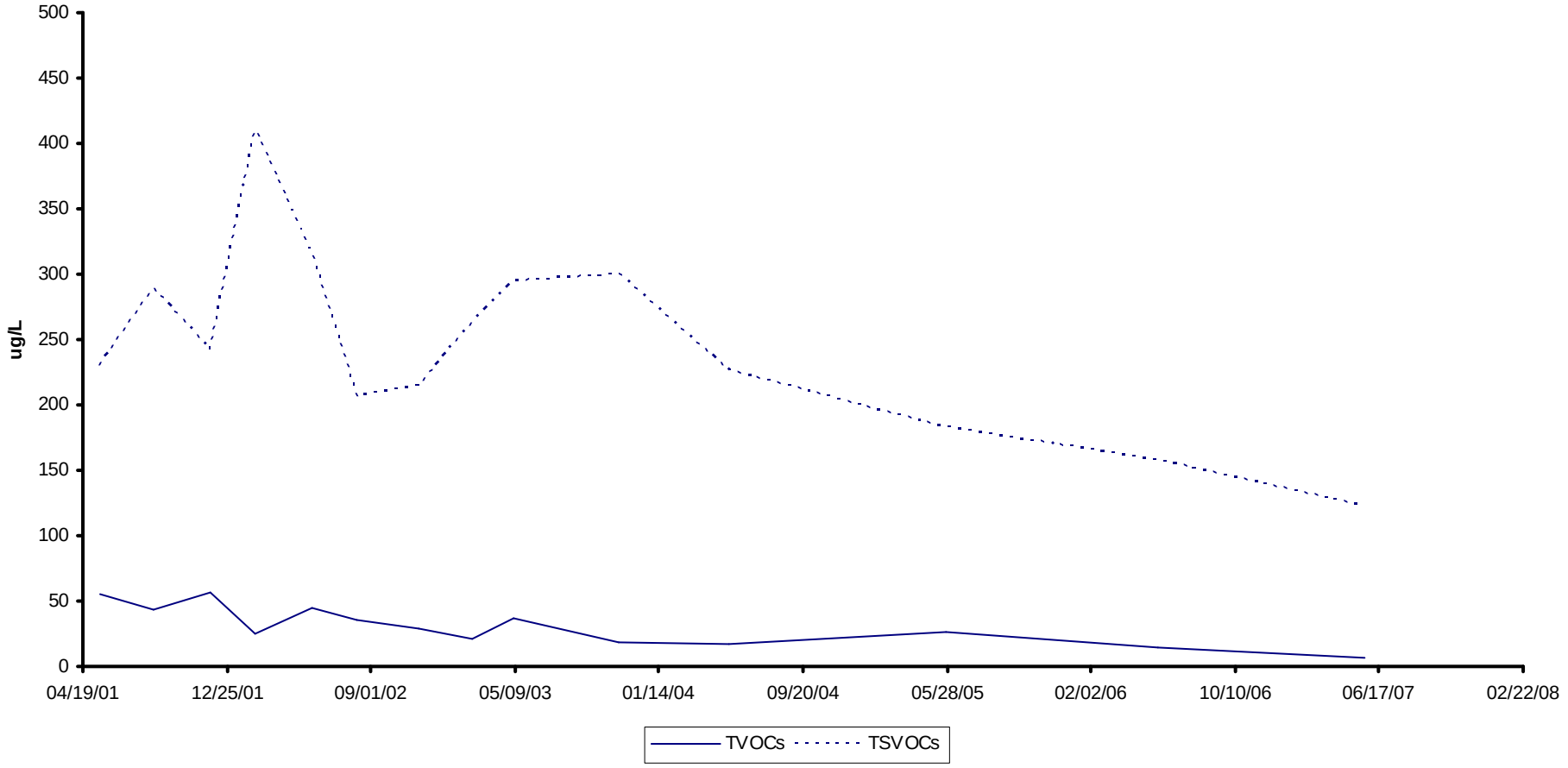


figure 2.8

OGC-3 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA013 JUL 23/2007

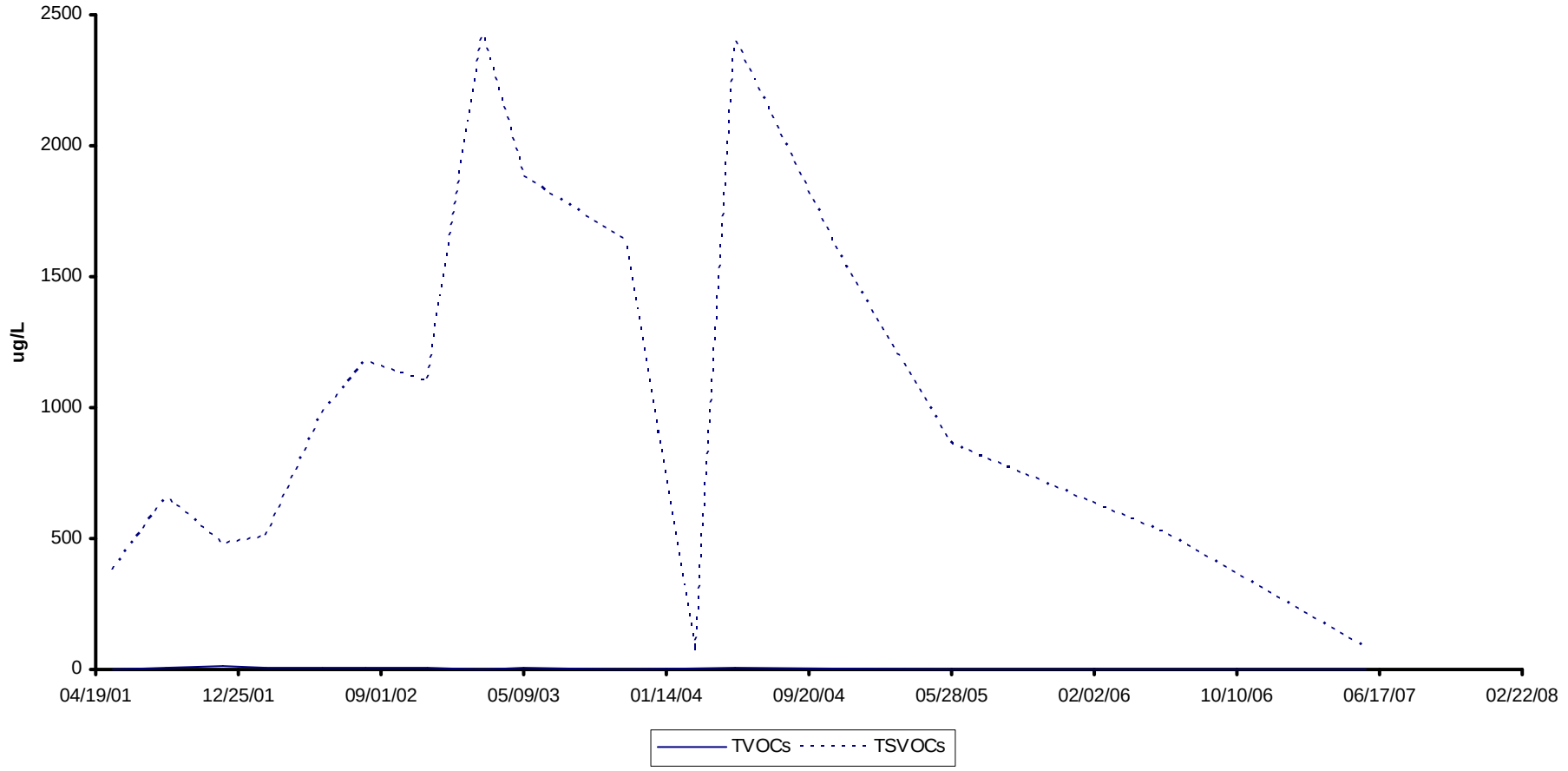


figure 2.9

OGC-4 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA014 JUL 23/2007

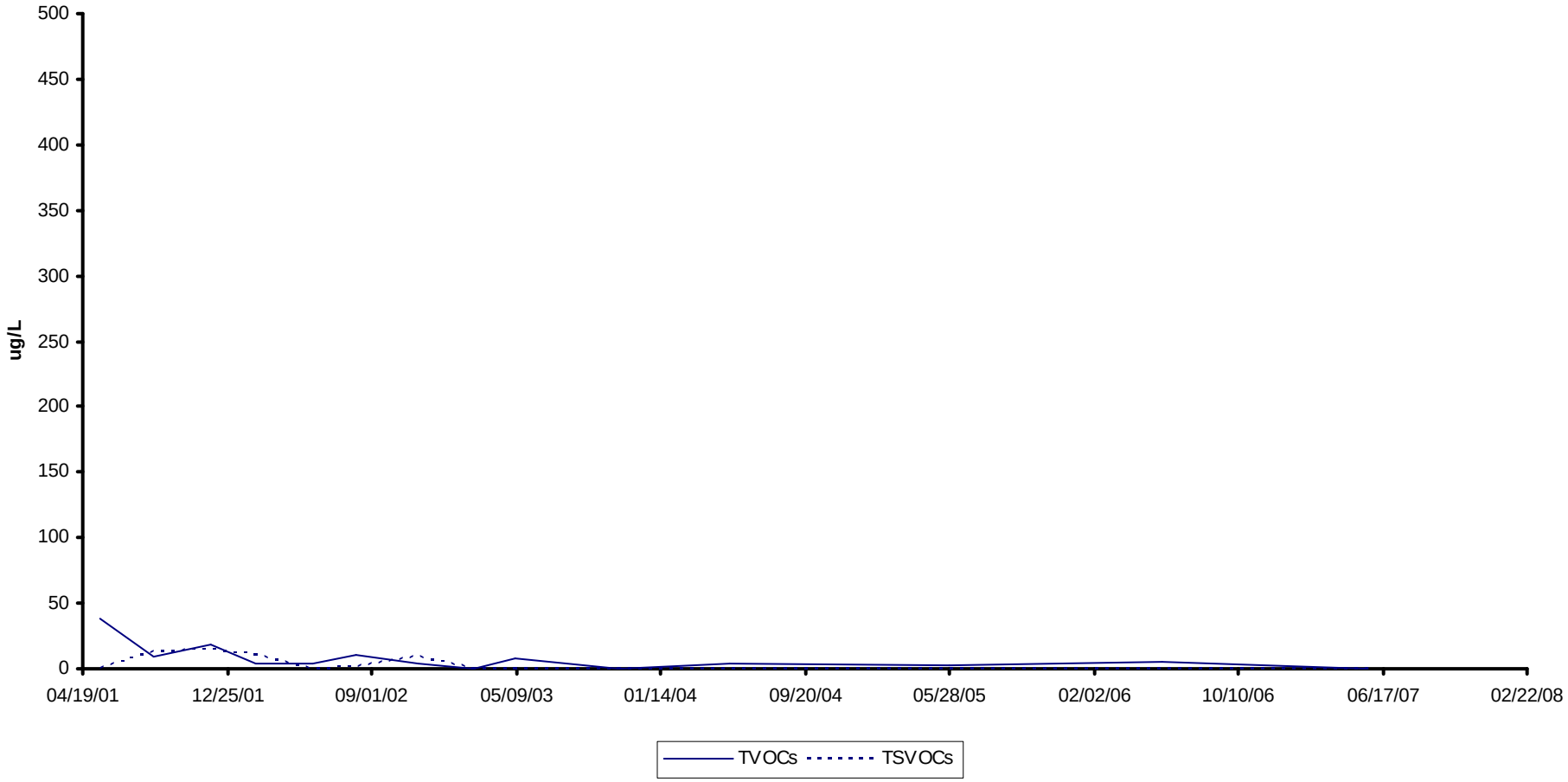


figure 2.10

OGC-5 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA015 JUL 23/2007

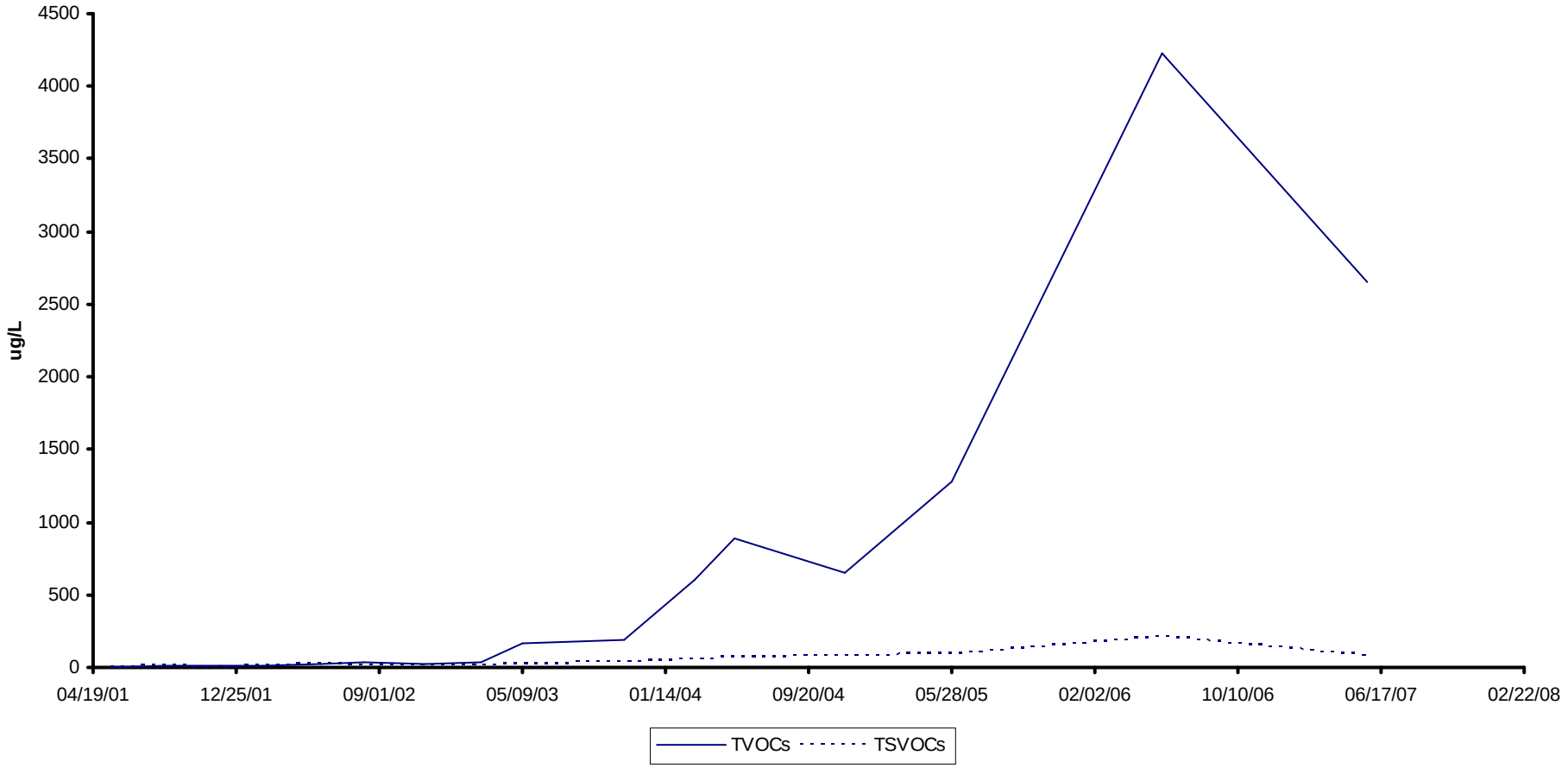


figure 2.11

OGC-6 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA016 JUL 23/2007

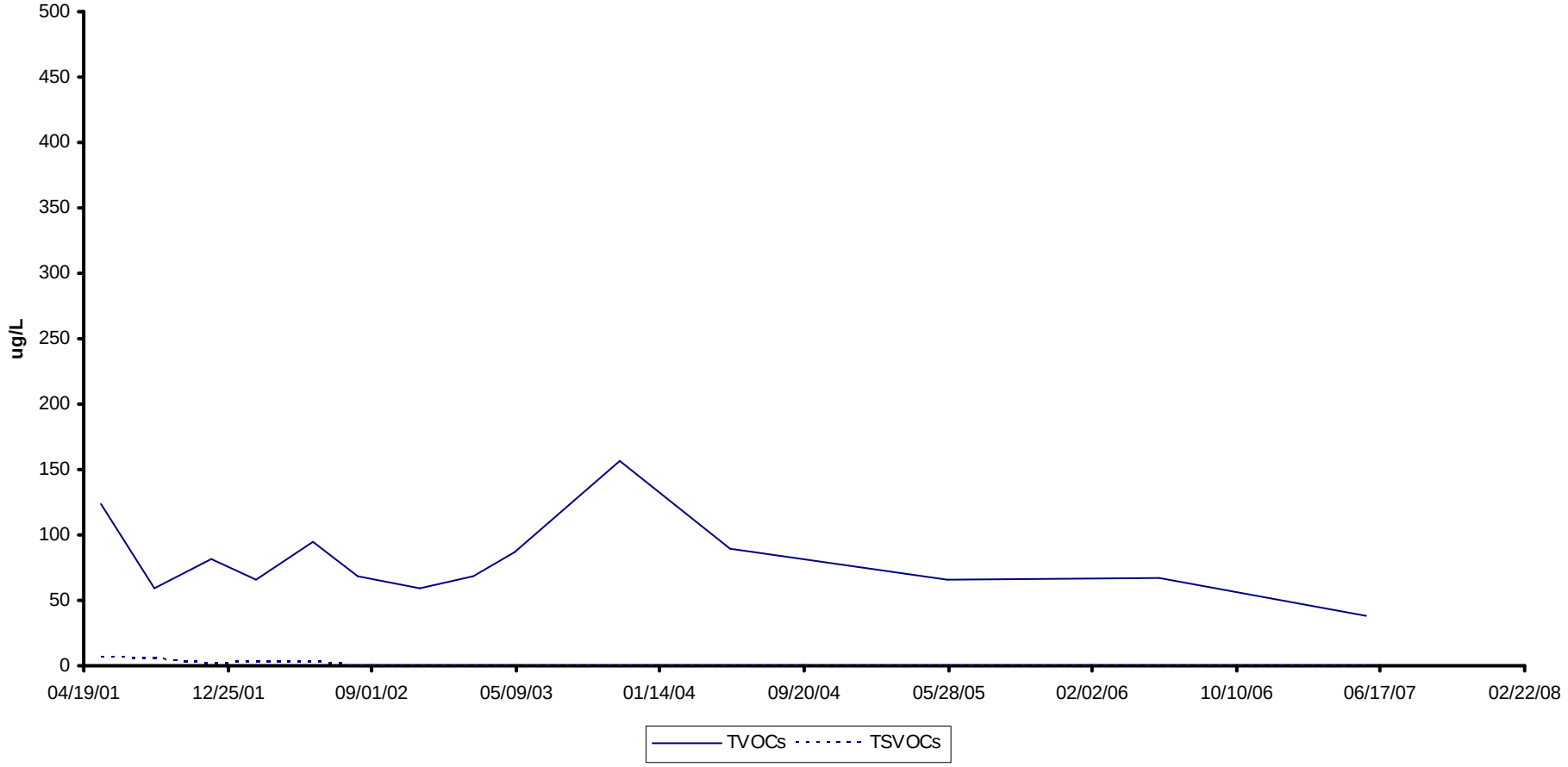


figure 2.12

OGC-7 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA017 JUL 23/2007

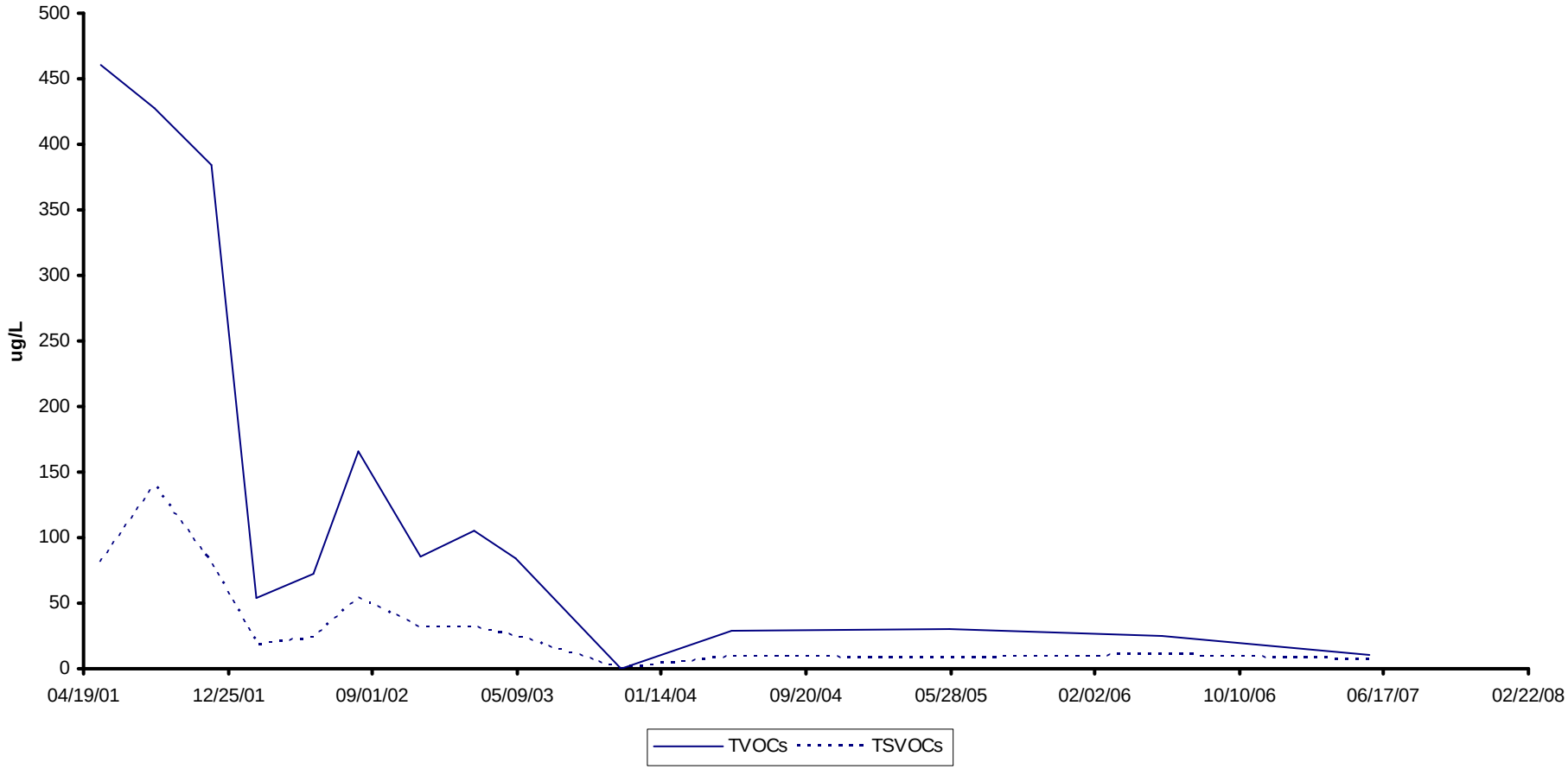


figure 2.13

OGC-8 TVOC AND TSVOC CONCENTRATIONS
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

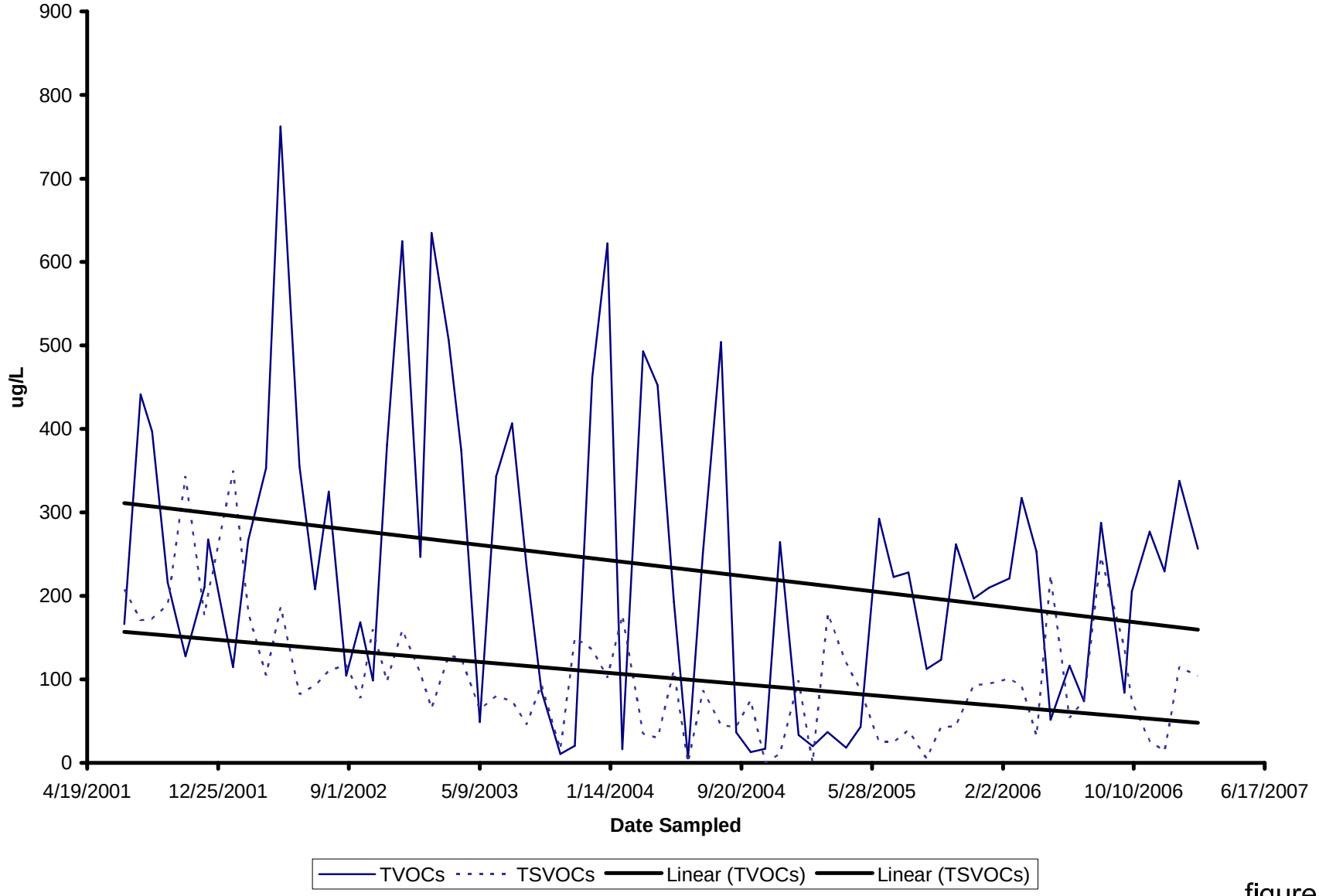


figure 2.14

EFFLUENT TVOCs AND TSVOCs vs. TIME
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

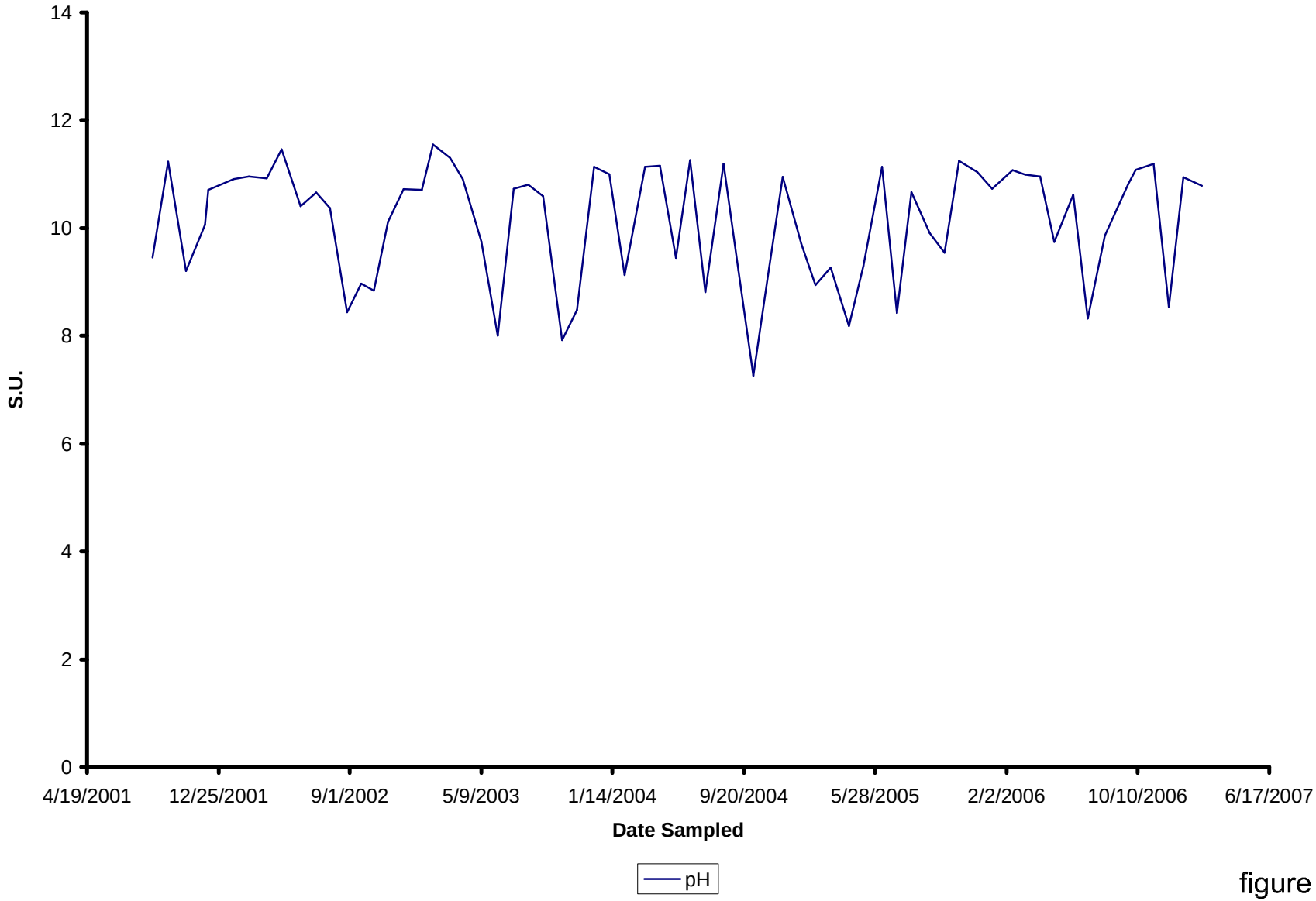


figure 2.15

EFFLUENT pH vs. TIME
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

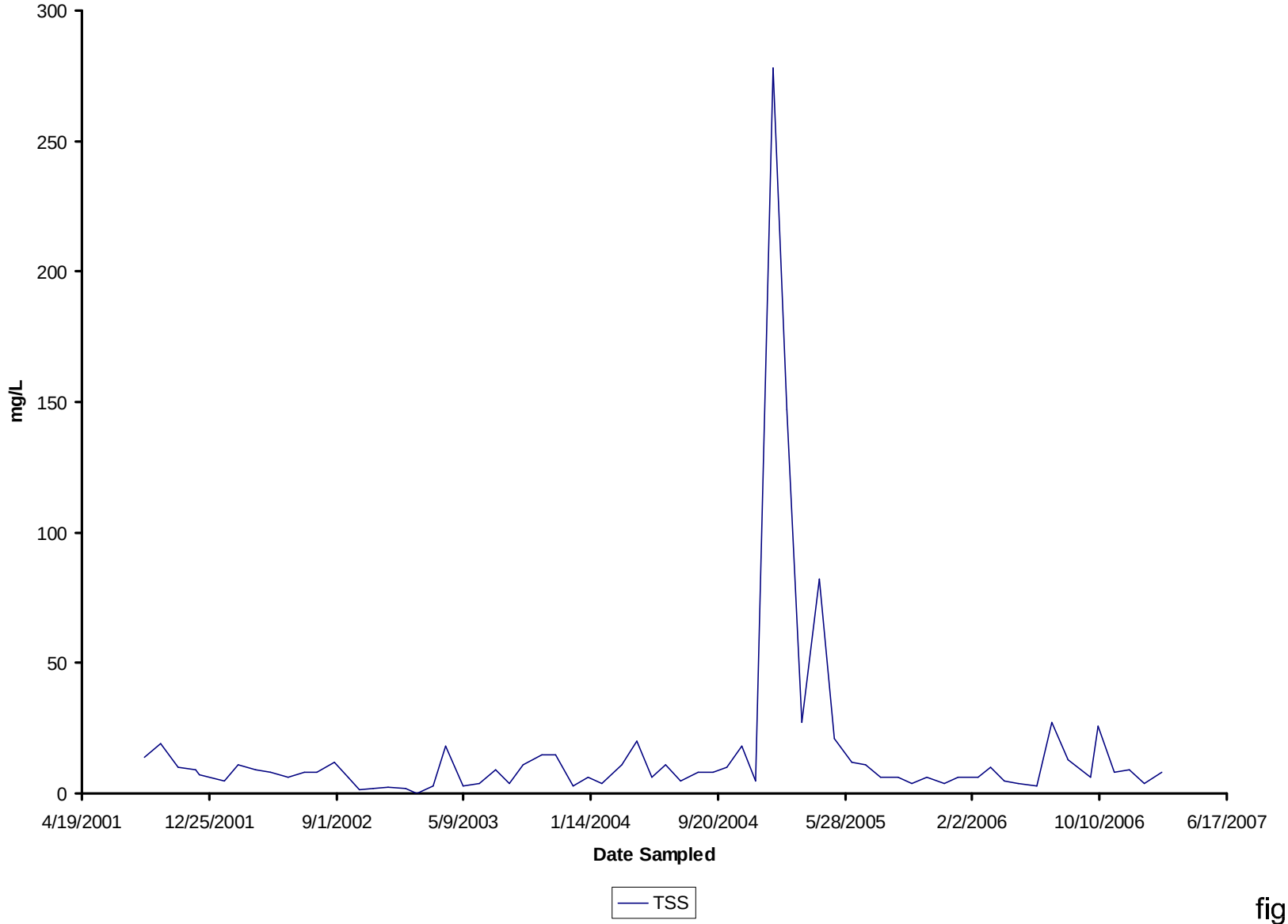


figure 2.16

EFFLUENT TOTAL SUSPENDED SOLIDS vs. TIME
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

07987-00(034)GN-WA003 JUL 23/2007

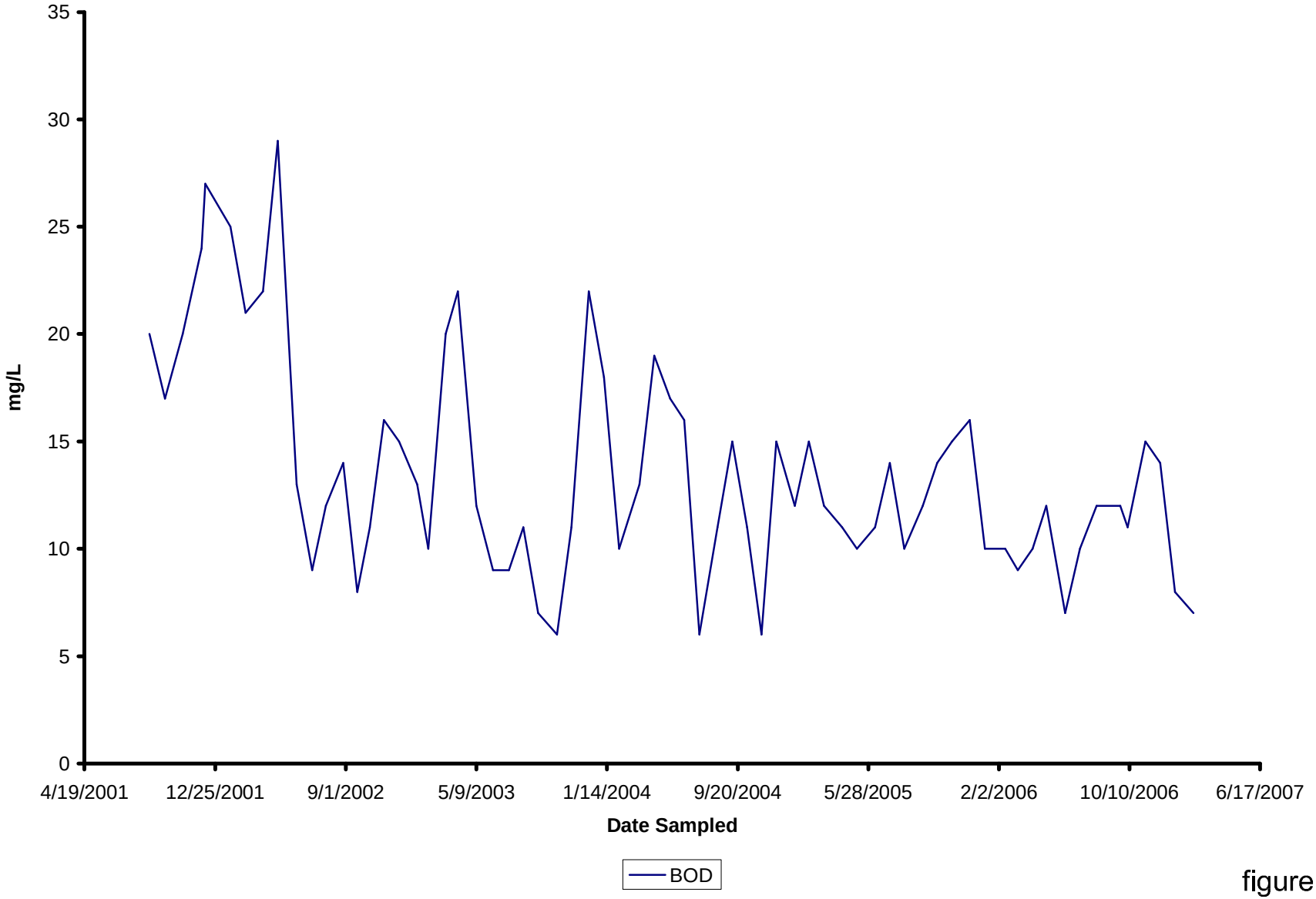


figure 2.17

EFFLUENT BOD vs. TIME
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

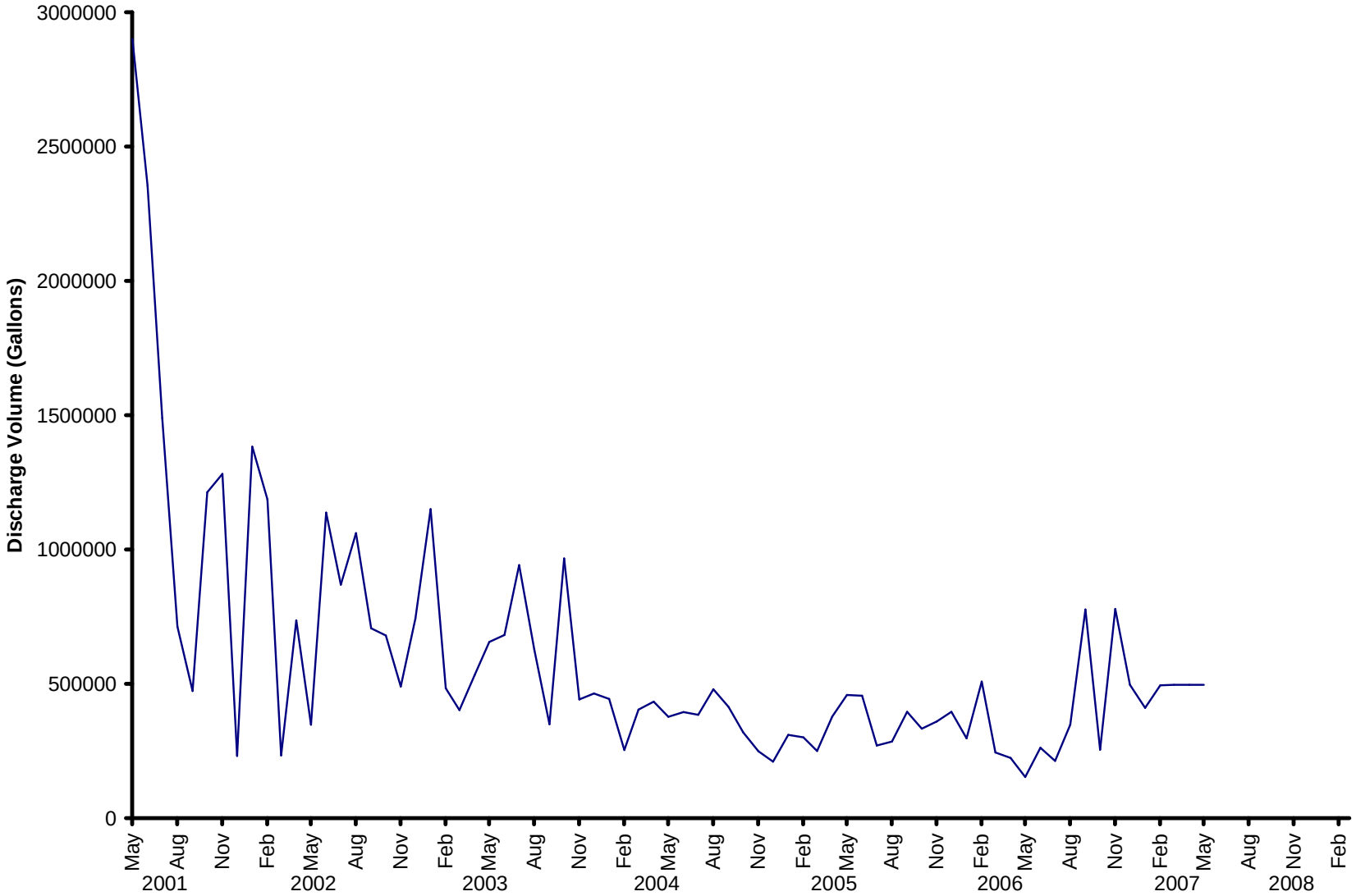


figure 2.18

EFFLUENT VOLUME vs. TIME
GRATWICK-RIVERSIDE PARK SITE
North Tonawanda, New York

TABLE 2.1

GROUNDWATER HYDRAULIC MONITORING LOCATIONS
OPERATION AND MAINTENANCE
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

INWARD HYDRAULIC GRADIENT MONITORING LOCATIONS

Inner [1]	Outer
MH2	Niagara River North (Downstream)
MH6	Niagara River North (Downstream)
MH8	Niagara River Middle
MH12	Niagara River South (Upstream)

UPWARD HYDRAULIC GRADIENT MONITORING LOCATIONS

Upper [1]	Lower
MH3	MW-6
MH8	MW-7
MH11	MW-8
MH14/MH15 [2]	MW-9

FREQUENCY

- Weekly following GWS startup until six consecutive inward gradients are achieved; and
- Monthly thereafter for the remainder of the initial 2-year period (review after 2 years).
- 2-Year review indicated that the monitoring frequency remain monthly.

Notes:

(1) These manholes will be monitored twice daily by POTW staff during a wet weather bypass event pursuant to Section 5.0 of the O&M Manual.

(2) Distance weighted averages of water levels used (MH14 - two thirds and MH15 - one third).

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*MH2*	*MH3*	*MH6*		*OGC-1*	*MW-6*	*OGC-5*	*River North*	*OGC-6*	*MH8*	*MW-7*	*OGC-2*	*River Middle*	*OGC-7*
RIM Elevation	573.28	573.81	572.03							572.37				
TOC Elevation (ft amsl)					575.01	575.40	573.82	566.80	576.65		575.57	574.08	566.48	572.49
December 12, 2000	NM				564.26	567.05	563.84	NM	564.24		567.20	564.58	NM	565.24
January 8, 2001	NM		NM		563.94	567.21	563.82	NM	563.84		567.30	564.01	NM	563.90
March 29, 2001	NM		NM		564.19	567.80	563.82	NM	564.10		566.89	564.28	NM	564.12
May 11, 2001	559.31		561.98		564.39	563.53	564.54	564.54	564.25		561.60	564.53	564.38	564.50
May 18, 2001	NM		562.03		564.21	563.08	564.54	564.49	564.25		561.97	564.53	564.33	564.55
May 25, 2001	NM		NM		564.46	562.80	564.52	563.80	564.22		561.71	564.28	563.63	564.50
June 1, 2001	559.34		561.97		564.51	562.74	564.52	563.52	564.20		561.77	564.18	563.47	564.49
June 8, 2001	NM		562.49		564.63	562.65	564.82	564.75	564.36		561.59	564.60	564.68	564.78
June 15, 2001	560.79	560.59	562.60		564.67	562.54	564.76	564.71	564.53	560.53	561.48	564.77	564.71	564.79
June 22, 2001	560.77	560.55	562.53		564.65	562.50	564.72	564.90	564.43	560.44	561.41	564.66	564.86	564.72
June 29, 2001	560.62	560.40	562.42		564.51	562.42	564.66	564.52	564.35	560.38	561.39	564.57	564.48	564.59
July 31, 2001	559.87	559.21	562.90		564.49	562.19	564.71	564.66	564.35	560.25	561.30	564.60	564.68	565.70
August 20, 2001	561.49	561.07	565.23	(1)	564.60	562.09	563.82	564.69	564.46	560.25	561.29	564.77	564.64	564.81
September 28, 2001	561.03	560.56	563.03		564.61	562.13	564.25	564.68	564.48	560.27	561.32	564.79	564.68	564.99
October 22, 2001	561.38	562.36	567.06	(3)	564.61	562.08	564.41	(2)	564.33	560.43	561.37	564.58	564.26	564.33
November 27, 2001	561.45	560.94	564.53		563.95	561.88	563.65	(2)	563.83	560.45	561.36	564.04	563.54	563.87
December 20, 2001	560.96	560.50	564.39		564.47	561.83	564.78	564.69	564.27	559.75	561.25	564.72	564.45	564.86
January 29, 2002	560.74	560.15	563.75		564.09	561.83	563.87	563.89	563.99	560.98	561.89	564.12	563.74	564.01
February 11, 2002	560.80	560.28	564.19		564.22	561.73	563.84	564.03	564.07	561.06	561.50	564.18	563.97	564.19
March 25, 2002	560.55	560.10	563.25		564.10	561.72	563.51	(2)	564.03	560.65	561.60	564.02	563.59	563.83
April 24, 2002	562.54	562.05	564.12		564.60	561.88	564.70	564.61	564.49	561.13	561.95	564.67	564.19	564.72
May 21, 2002	561.74	561.28	564.10		564.79	561.97	564.84	564.76	564.68	560.05	561.38	564.85	564.66	564.84
June 20, 2002	561.67	561.24	565.58		564.74	561.92	564.56	564.58	564.62	560.68	561.54	564.85	564.68	564.80
July 18, 2002	561.46	560.99	564.99		564.78	561.89	565.00	564.89	564.66	560.79	561.65	564.90	564.90	564.93
August 6, 2002	561.26	560.79	565.89		564.86	561.92	564.70	564.65	564.71	561.05	561.93	564.90	564.59	564.85
September 12, 2002	561.60	561.14	565.60		564.80	561.82	565.05	565.04	564.67	561.10	561.99	564.87	564.95	564.97
October 30, 2002	561.63	561.21	566.24		564.18	561.97	563.95	(2)	564.07	561.07	561.95	564.10	563.75	564.00
November 21, 2002	561.12	560.67	554.47	(4)	564.05	562.05	563.94	(2)	563.98	558.03	561.41	564.20	563.71	564.06
December 11, 2002	561.55	561.08	555.09		563.99	562.04	563.85	(2)	563.84	559.95	561.25	563.94	563.72	563.87

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.

(2) River level too low to obtain a measurement at the measuring location.

(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.

(4) Inspection of the groundwater collection pipe valves in MH6 on November 18, 2002 identified that they were closed. The valves were opened on November 18, 2002 and the water level dropped approximately 6 feet in 10 minutes.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*OGC-3*	*MH11*	*MW-8*	*River South*	*MH12*	*OGC-8*	*OGC-4*	*MW-9*	*MH14*	*MH15*	*MH16*
RIM Elevation		572.11			572.37				574.30	575.84	574.82
TOC Elevation (ft amsl)	573.35		574.37	568.46		574.01	574.66	576.23			
December 12, 2000	565.07		567.08	NM		564.45	564.85	567.15			
January 8, 2001	563.95		567.29	NM	NM	564.01	564.00	567.35			567.29
March 29, 2001	564.21		567.96	NM	NM	564.24	564.25	568.06			NM
May 11, 2001	564.58		561.95	564.70	564.15	564.63	564.59	562.53			562.45
May 18, 2001	564.59		562.49	564.65	564.12	564.66	564.66	563.05			562.55
May 25, 2001	564.57		561.99	564.80	564.17	564.63	564.60	562.54			562.48
June 1, 2001	564.59		562.06	565.00	564.19	564.66	564.60	562.57			562.51
June 8, 2001	564.87		561.89	565.05	562.45	564.96	564.89	562.47			562.42
June 15, 2001	564.91	561.12	561.69	565.05	562.34	564.93	564.88	562.45	562.32		562.29
June 22, 2001	564.87	561.05	561.54	565.18	562.29	565.00	564.80	562.19	562.32		562.14
June 29, 2001	564.68	560.97	561.46	564.83	561.80	564.75	564.68	562.11	562.45		562.06
July 31, 2001	564.78	560.73	561.19	564.96	560.77	564.85	564.76	562.45	562.45		561.69
August 20, 2001	564.83	560.50	561.05	564.99	560.42	564.88	564.85	561.55	561.72		561.54
September 28, 2001	564.85	560.61	561.07	564.95	560.36	564.87	564.84	561.58	561.70		561.52
October 22, 2001	564.58	560.51	561.27	564.61	560.42	564.61	564.62	561.75	562.10		561.72
November 27, 2001	563.89	559.51	561.30	564.05	560.06	563.89	563.94	561.71	561.87		563.82
December 20, 2001	564.96	561.31	560.73	564.96	560.23	564.99	565.05	561.77	561.89		561.71
January 29, 2002	564.06	Blocked	561.91	563.92	560.29	564.03	564.08	562.31	562.53		562.31
February 11, 2002	564.28	561.23	561.93	564.53	560.24	564.35	564.35	562.52	562.18		562.54
March 25, 2002	563.87	560.97	561.60	564.15	560.34	563.85	563.95	562.45	562.77		562.61
April 24, 2002	564.79	561.41	561.95	564.86	560.63	564.86	564.84	562.96	563.09		562.95
May 21, 2002	564.95	560.35	560.89	565.07	560.89	565.03	564.98	563.11	563.25	562.17	563.10
June 20, 2002	564.85	560.98	561.50	564.88	561.04	564.90	564.94	562.91	562.98	562.00	562.90
July 18, 2002	565.09	561.07	561.80	565.22	560.95	565.17	565.08	562.84	561.83	561.93	562.83
August 6, 2002	564.88	561.33	561.88	564.90	561.07	564.95	564.91	562.75	562.08	561.86	562.75
September 12, 2002	565.09	561.34	561.91	565.25	561.09	565.20	565.05	562.66	562.11	561.75	562.63
October 30, 2002	564.03	561.36	561.95	564.16	561.31	564.14	564.00	562.57	562.68	561.62	562.56
November 21, 2002	564.04	561.49	560.99	564.15	561.44	564.19	564.18	562.74	562.88	561.82	562.73
December 11, 2002	564.01	561.51	560.73	564.14	561.45	564.09	564.02	562.91	563.07	562.01	562.94

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.

(2) River level too low to obtain a measurement at the measuring location.

(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*MH2*	*MH3*	*MH6*	*OGC-1*	*MW-6*	*OGC-5*	*River North*	*OGC-6*	*MH8*	*MW-7*	*OGC-2*	*River Middle*	*OGC-7*
RIM Elevation	573.28	573.81	572.03						572.37				
TOC Elevation (ft amsl)				575.01	575.40	573.82	566.80	576.65		575.57	574.08	566.48	572.49
January 16, 2003	561.65	561.20	556.15	564.03	562.27	563.88	(2)	564.12	561.04	561.95	564.27	563.52	564.10
February 25, 2003	561.58	561.10	555.74	563.80	561.85	563.71	(2)	563.67	560.60	561.49	563.81	563.34	563.81
March 14, 2003	561.65	561.17	555.75	563.75	561.69	563.74	(2)	563.61	560.61	561.49	563.77	563.24	563.77
April 14, 2003	561.68	561.22	554.54	564.32	562.42	564.34	564.30	564.17	558.65	561.42	564.39	564.24	564.40
May 8, 2003	561.52	561.03	555.93	564.37	562.38	564.41	564.29	564.21	560.76	561.59	564.36	564.27	564.37
June 19, 2003	562.26	561.83	556.02	564.73	562.43	564.83	564.78	564.59	560.85	561.60	564.77	564.66	564.81
July 21, 2003	561.21	560.46	556.06	564.68	562.31	564.64	564.49	564.58	560.89	561.74	564.81	564.44	564.75
August 28, 2003	561.65	561.20	554.61	564.65	562.21	564.76	564.64	564.51	558.52	561.29	564.67	564.60	564.75
September 30, 2003	561.57	561.10	555.08	564.64	562.53	564.89	(2)	564.49	559.88	561.35	564.76	564.67	564.91
October 20, 2003	561.48	561.07	554.98	564.61	562.52	564.93	(2)	564.45	559.77	561.17	564.68	564.63	564.86
November 3, 2003	561.53	561.08	555.94	564.29	562.33	563.89	(2)	564.11	560.76	561.12	563.56	564.36	564.15
December 23, 2003	561.08	559.49	555.62	564.29	562.30	564.04	(2)	564.17	560.67	561.48	564.33	(2)	564.18
January 21, 2004	(5)	560.33	555.84	565.24	562.32	564.19	(2)	564.12	560.70	561.55	564.30	(2)	564.26
February 12, 2004	(5)	561.08	556.12	563.99	562.16	563.76	(2)	563.87	560.95	561.81	564.00	(2)	563.88
March 4, 2004	561.33	561.13	555.90	564.17	562.21	557.07 (6)	(2)	564.00	560.75	561.61	564.31	(2)	564.19
April 16, 2004	560.05	558.78	554.91	564.59	562.48	564.49	(2)	564.36	559.59	561.71	564.56	564.43	564.56
May 14, 2004	560.17	559.71	554.56	564.49	562.39	564.57	564.55	564.34	559.45	561.70	564.51	564.48	564.54
June 25, 2004	561.64	561.21	555.74	564.76	562.27	564.71	564.68	564.62	560.50	561.42	564.82	564.56	564.78
July 30, 2004	561.79	561.25	555.24	565.01	562.29	565.20	565.20	564.84	560.04	561.31	565.02	565.16	565.14
August 31, 2004	561.37	560.59	555.83	565.06	562.23	565.05	564.98	564.92	560.67	561.56	565.14	564.93	565.17
September 30, 2004	561.48	560.81	555.60	565.11	562.28	565.22	565.00	564.95	560.71	561.49	565.20	565.05	565.20
October 20, 2004	561.65	561.19	555.96	564.65	562.10	564.57	564.45	564.44	560.82	561.69	564.57	564.41	564.57
November 23, 2004	561.50	561.05	554.95	564.17	561.99	564.20	(2)	564.02	559.77	561.21	564.31	(2)	564.28
December 31, 2004	561.60	560.74	556.19	564.58	562.16	564.50	564.68	564.25	561.02	561.80	564.37	564.56	564.40

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the measuring location.
(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.
(4) Inspection of the groundwater collection pipe valves in MH6 on November 18, 2002 identified that they were closed. The valves were opened on November 18, 2002 and the water level dropped approximately 6 feet in 10 minutes.
(5) Buried with snow.
(6) Believed to be erroneous reading.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*OGC-3*	*MH11*	*MW-8*	*River South*	*MH12*	*OGC-8*	*OGC-4*	*MW-9*	*MH14*	*MH15*	*MH16*
RIM Elevation		572.11			572.37				574.30	575.84	574.82
TOC Elevation (ft amsl)	573.35		574.37	568.46		574.01	574.66	576.23			
January 16, 2003	564.13	561.68	562.00	564.11	561.83	564.14	564.20	563.17	563.37	562.28	563.20
February 25, 2003	563.87	561.60	561.48	564.21	561.56	563.90	563.94	562.89	563.07	562.01	562.91
March 14, 2003	563.79	561.57	561.46	564.11	561.54	563.92	563.91	562.90	563.09	562.05	562.93
April 14, 2003	564.48	558.53	560.98	564.45	561.56	564.54	564.52	563.36	563.54	562.49	563.40
May 8, 2003	564.48	561.03	561.56	564.61	561.61	564.59	564.44	563.07	563.26	562.01	563.11
June 19, 2003	564.92	561.12	561.56	564.96	561.94	564.99	564.95	563.10	563.41	562.25	563.15
July 21, 2003	564.81	561.10	561.69	564.78	562.03	564.84	564.88	562.89	563.03	561.98	562.89
August 28, 2003	564.86	564.37	562.35	564.91	562.19	564.94	564.85	566.17	566.48	566.36	566.59
September 30, 2003	565.02	558.68	560.17	565.08	562.26	565.08	565.02	562.77	562.89	562.02	562.78
October 20, 2003	564.94	558.66	560.02	565.03	562.25	565.05	564.96	562.75	562.88	562.01	562.76
November 3, 2003	564.26	561.01	561.57	564.28	562.52	564.27	564.31	562.85	563.00	561.91	562.83
December 23, 2003	564.24	560.94	561.34	564.36	562.75	564.08	564.28	563.20	563.31	562.28	563.20
January 21, 2004	564.33	(4)	561.47	564.36	562.49	564.41	564.35	562.72	(4)	561.74	562.68
February 12, 2004	563.93	561.23	561.75	564.16	562.30	563.96	563.98	562.88	(4)	561.73	562.66
March 4, 2004	564.25	561.04	561.56	564.26	562.07	564.34	564.35	562.70	562.75	561.75	562.66
April 16, 2004	564.64	559.85	561.38	564.69	561.00	564.74	564.66	562.64	562.79	561.72	562.63
May 14, 2004	564.63	559.87	561.39	564.71	560.80	564.68	564.55	562.71	562.74	561.74	562.67
June 25, 2004	564.85	560.79	561.19	564.91	560.95	564.89	564.89	562.70	562.74	561.76	562.68
July 30, 2004	565.28	560.26	560.71	565.46	561.15	565.33	565.21	562.70	561.13	561.74	562.67
August 31, 2004	565.26	560.94	561.39	565.25	561.35	565.31	565.27	562.95	563.08	562.02	562.93
September 30, 2004	565.29	561.00	561.43	565.30	561.25	565.40	565.26	562.98	562.90	562.20	562.98
October 20, 2004	564.67	561.09	561.56	564.49	561.50	564.76	564.68	562.64	562.82	561.73	562.88
November 23, 2004	564.34	560.05	560.56	564.30	561.57	564.38	564.40	562.71	561.04	561.62	562.69
December 31, 2004	564.69	561.23	561.75	564.81	561.81	564.78	564.55	562.71	562.05	561.77	562.69

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.

(2) River level too low to obtain a measurement at the measuring location.

(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.

(4) Buried with snow.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*MH2*	*MH3*	*MH6*	*OGC-1*	*MW-6*	*OGC-5*	*River North*	*OGC-6*	*MH8*	*MW-7*	*OGC-2*	*River Middle*	*OGC-7*
RIM Elevation	573.28	573.81	572.03						572.37				
TOC Elevation (ft amsl)				575.01	575.40	573.82	566.80	576.65		575.57	574.08	566.48	572.49
January 28, 2005	562.60	562.15	556.22	564.68	562.27	564.62	(2)	564.53	561.06	561.85	564.67	564.32	564.71
February 28, 2005	561.05	559.96	555.58	564.58	562.14	564.68	(7)	564.48	560.47	561.46	564.21	564.46	564.76
March 31, 2005	561.25	559.94	555.93	564.55	562.04	564.40	(2)	564.38	560.78	561.66	564.63	564.08	564.49
April 20, 2005	560.20	559.54	556.01	565.01	562.26	564.94	564.83	564.84	560.89	561.76	565.01	564.71	565.05
May 27, 2005	560.23	558.92	555.82	564.71	562.24	564.79	564.78	564.63	560.65	561.55	564.78	564.74	564.91
June 24, 2005	561.50	561.09	555.16	564.71	562.22	564.85	564.73	564.61	559.92	561.47	564.78	564.70	564.85
July 29, 2005	562.70	562.26	556.56	564.79	562.11	564.95	564.82	564.65	561.39	562.27	564.87	564.85	564.98
August 31, 2005	561.62	560.64	556.24	564.68	562.09	564.71	(2)	564.59	561.07	561.94	564.79	564.54	564.82
October 3, 2005	561.52	560.54	555.41	564.75	562.24	564.85	564.80	564.62	560.20	561.40	564.78	564.75	564.88
October 31, 2005	561.68	560.73	555.60	564.59	562.34	564.69	564.80	564.44	560.46	561.52	564.64	564.55	564.70
November 22, 2005	561.62	561.20	555.20	564.40	561.67	564.64	(2)	564.28	560.04	561.49	564.44	(2)	564.21
December 23, 2005	562.55	562.09	556.20	564.28	562.45	564.11	(2)	564.22	561.05	561.85	564.42	(2)	564.32
January 27, 2006	562.95	562.53	556.21	564.50	562.97	564.16	(2)	564.32	561.02	561.79	564.41	(2)	564.06
February 28, 2006	563.17	562.26	554.70	564.27	562.90	564.13	(2)	564.31	558.44	561.68	564.37	(2)	564.26
March 24, 2006	562.68	561.77	555.64	564.46	562.86	564.25	(2)	564.32	560.43	561.57	564.46	(2)	564.36
April 21, 2006	562.31	561.84	555.61	564.42	562.76	564.41	(2)	564.32	560.40	561.48	564.49	564.26	564.46
May 30, 2006	562.73	562.30	555.84	564.91	562.50	565.00	564.87	564.80	560.44	561.75	564.95	564.86	565.07
June 26, 2006	561.57	560.63	556.19	563.04	562.37	564.97	564.81	564.92	561.02	561.92	565.15	564.78	565.06
July 31, 2006 (8)	565.18	564.78	558.88	565.14	564.39	565.24	565.09	565.01	563.66	564.54	565.19	565.07	565.28
August 25, 2006	561.64	561.21	556.06	564.72	562.99	564.81	(2)	564.59	560.89	561.82	564.80	564.68	564.87
September 22, 2006	561.46	561.01 (6)	555.95	564.88	562.76	564.73	564.70	564.72	560.51	561.99	564.94	564.67	564.88
October 31, 2006	559.98	555.62	556.01	565.03	562.58	564.96	564.82	564.87	559.95	562.09	565.06	564.66	565.03
November 29, 2006	561.35	560.85	555.93	564.30	562.48	564.25	(2)	564.18	560.73	562.01	564.40	(2)	564.35
December 29, 2006	561.52	560.42	555.93	564.46	562.98	564.36	564.82	564.31	560.80	561.89	564.53	(2)	564.49

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.

(2) River level too low to obtain a measurement at the measuring location.

(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.

(4) Inspection of the groundwater collection pipe valves in MH6 on November 18, 2002 identified that they were closed. The valves were opened on November 18, 2002 and the water level dropped approximately 6 feet in 10 minutes.

(5) Buried with snow.

(6) Believed to be erroneous reading.

(7) Ice on pipe.

(8) GWS down from July 7 to 31, 2006 because of closed flapper gate in upstream City manhole.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*MH2*	*MH3*	*MH6*	*OGC-1*	*MW-6*	*OGC-5*	*River North*	*OGC-6*	*MH8*	*MW-7*	*OGC-2*	*River Middle*	*OGC-7*
RIM Elevation	573.28	573.81	572.03						572.37				
TOC Elevation (ft amsl)				575.01	575.40	573.82	566.80	576.65		575.57	574.08	566.48	572.49
January 26, 2007	561.39	560.92	556.04	564.62	562.78	564.75	(2)	563.79	560.89	562.06	564.67	564.46	564.77
February 27, 2007	561.53	560.57	556.23	564.32	562.49	564.25	(2)	564.15	561.07	561.96	564.35	(7)	564.33
March 30, 2007	560.25	559.45	556.24	564.49	562.30	564.40	(2)	564.27	561.09	562.05	564.46	564.28	564.48
April 30, 2007	560.99	559.39	556.31	564.97	562.62	564.97	564.82	564.78	561.14	562.20	564.96	564.78	565.07
May 25, 2007	560.85	559.85	556.12	564.67	562.48	565.73	(2)	564.54	561.02	562.05	564.75	564.67	564.75

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the measuring location.
(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.
(4) Inspection of the groundwater collection pipe valves in MH6 on November 18, 2002 identified that they were closed. The valves were opened on November 18, 2002 and the water level dropped approximately 6 feet in 10 minutes.
(5) Buried with snow.
(6) Believed to be erroneous reading.
(7) Ice on pipe.
(8) GWS down from July 7 to 31, 2006 because of closed flapper gate in downstream City manhole.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*OGC-3*	*MH11*	*MW-8*	*River South*	*MH12*	*OGC-8*	*OGC-4*	*MW-9*	*MH14*	*MH15*	*MH16*
RIM Elevation		572.11			572.37				574.30	575.84	574.82
TOC Elevation (ft amsl)	573.35		574.37	568.46		574.01	574.66	576.23			
January 28, 2005	564.77	561.33	561.82	564.69	561.92	564.79	564.90	562.75	(4)	561.01	562.71
February 28, 2005	564.84	560.74	561.25	564.79	562.05	564.88	564.94	562.78	(4)	561.55	562.77
March 31, 2005	564.54	561.06	561.60	564.56	562.11	564.59	564.65	563.12	563.26	562.21	563.11
April 20, 2005	565.13	561.15	561.65	565.15	562.26	565.19	565.21	563.21	562.72	562.28	563.20
May 27, 2005	564.99	561.13	561.42	565.02	562.29	565.08	565.08	563.12	563.25	562.19	563.11
June 24, 2005	564.98	560.18	560.76	564.92	562.40	565.06	565.00	562.85	562.93	561.91	562.82
July 29, 2005	565.09	561.17	562.15	565.15	562.51	565.14	561.33	562.88	563.03	561.98	562.87
August 31, 2005	564.88	561.31	561.85	564.88	562.75	564.90	564.96	562.91	563.01	561.98	562.86
October 3, 2005	564.99	560.43	560.95	565.11	562.90	565.07	564.97	563.20	563.26	562.24	563.13
October 31, 2005	564.83	560.71	561.25	565.00	563.15	564.96	564.82	563.39	563.50	562.43	563.35
November 22, 2005	564.26	560.31	561.00	564.18	563.29	564.26	564.35	563.53	563.69	562.25	563.53
December 23, 2005	564.35	561.30	561.84	564.26	563.46	564.32	564.48	563.50	563.67	562.60	563.52
January 27, 2006	564.34	561.26	561.76	564.36	563.61	564.42	564.42	563.90	564.08	563.02	563.92
February 28, 2006	564.32	558.38	561.23	564.29	563.73	564.34	564.38	563.94	564.09	563.02	563.96
March 24, 2006	564.39	560.60	561.16	564.44	563.47	564.45	564.50	563.83	564.02	562.96	563.88
April 21, 2006	564.54	560.63	561.15	564.64	563.49	564.60	564.55	563.65	563.77	562.68	563.61
May 30, 2006	565.18	560.28	561.03	565.24	563.61	565.26	565.25	563.48	563.54	562.53	563.44
June 26, 2006	565.12	561.26	561.75	565.13	563.70	565.15	565.19	563.41	563.52	562.43	563.37
July 31, 2006 (5)	565.44	564.03	564.30	565.45	563.92	565.49	565.45	564.08	564.20	563.15	564.07
August 25, 2006	564.98	561.10	561.57	565.10	563.98	565.26	561.81	563.38	564.62	562.43	563.42
September 22, 2006	564.94	559.81	561.20	565.04	564.29	565.01	564.95	562.73	562.83	561.67	562.54
October 31, 2006	565.11	558.19	561.78	565.07	564.77	565.14	565.16	564.40	564.51	563.36	564.36
November 29, 2006	564.42	560.54	561.69	564.41	564.87	566.44	564.50	562.10	561.27	559.66	561.85
December 29, 2006	564.55	560.96	561.46	564.54	561.89	564.64	564.64	561.90	561.95	560.86	561.71

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.

(2) River level too low to obtain a measurement at the measuring location.

(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.

(4) Buried with snow.

(5) Buried with snow.

TABLE 2.2

WATER LEVELS (ft amsl)
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date	*OGC-3*	*MH11*	*MW-8*	*River South*	*MH12*	*OGC-8*	*OGC-4*	*MW-9*	*MH14*	*MH15*	*MH16*
RIM Elevation		572.11			572.37				574.30	575.84	574.82
TOC Elevation (ft amsl)	573.35		574.37	568.46		574.01	574.66	576.23			
January 26, 2007	564.89	561.09	561.73	564.96	560.86	564.99	565.49	563.41	563.52	562.36	563.39
February 27, 2007	564.43	561.16	561.86	564.46	559.97	564.47	564.47	562.64	562.77	561.73	562.62
March 30, 2007	564.58	561.36	561.85	564.65	560.20	564.67	564.64	562.66	561.87	558.93	561.72
April 30, 2007	565.20	561.29	561.77	565.26	559.05	565.26	565.22	562.13	562.22	561.13	562.05
May 25, 2007	564.89	561.12	561.61	564.98	560.04	565.00	564.94	562.10	562.20	561.14	563.09

Notes:

(1) Water level monitored on 09/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the measuring location.
(3) Water level monitored on 10/27/01 was 563.56 ft. which provided an inward gradient.
(4) Buried with snow.
(5) Buried with snow.

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*5/11/2001*		*5/18/2001*		*5/25/2001*		*6/1/2001*		*6/8/2001*		*6/15/2001*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.54	Inward	564.49	NA	563.80	NA	563.52	Inward	564.75	NA	564.71	Inward
Inner	MH2	559.31		NM		NM		559.34		NM		560.79	
Outer	River North	564.54	Inward	564.49	Inward	563.80	NA	563.52	Inward	564.75	Inward	564.71	Inward
Inner	MH6	561.98		562.03		NM		561.97		562.49		562.60	
Outer	River Middle	564.38	NA	564.33	NA	563.63	NA	563.47	NA	564.68	NA	564.71	Inward
Inner	MH8	NM		NM		NM		NM		NM		560.53	
Outer	River South	564.70	Inward	564.65	Inward	564.80	Inward	565.00	Inward	565.05	Inward	565.05	Inward
Inner	MH12	564.15		561.12		564.17		564.19		562.45		562.34	

Date Monitored		*6/22/2001*		*6/29/2001*		*7/31/2001*		*8/20/2001*		*9/28/2001*		*10/22/2001*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.90	Inward	564.52	Inward	564.66	Inward	564.69	Inward	564.68	Inward	564.36 (2)	Inward
Inner	MH2	560.77		560.62		559.87		561.49		561.03		561.38	
Outer	River North	564.90	Inward	564.52	Inward	564.66	Inward	564.69	(1) Outward	564.68	Inward	564.36 (2)	Outward
Inner	MH6	562.53		562.42		562.90		565.23		563.03		567.06	
Outer	River Middle	564.86	Inward	564.48	Inward	564.68	Inward	564.64	Inward	564.68	Inward	564.26	Inward
Inner	MH8	560.44		560.38		560.25		560.25		560.27		560.43	
Outer	River South	565.18	Inward	564.83	Inward	564.96	Inward	564.99	Inward	564.95	Inward	564.61	Inward
Inner	MH12	562.29		561.80		560.77		560.42		560.36		560.42	

Notes:

(1) Water level monitored on 9/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.
(3) Valves in MH6 were opened on November 18, 2002.
(4) Snow covered well, could not locate.
NM - Not Measured
NA - Not Applicable

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*11/27/2001*		*12/20/2001*		*1/29/2002*		*2/11/2002*		*3/25/2002*		*4/24/2002*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	563.80 (2)	Inward	564.69	Inward	563.89	Inward	564.03	Inward	563.90 (2)	Inward	564.61	Inward
Inner	MH2	561.45		560.96		560.74		560.80		560.55		562.54	
Outer	River North	563.80 (2)	Outward	564.69	Inward	563.89	Inward	564.03	Outward	563.90 (2)	Inward	564.61	Inward
Inner	MH6	564.53		564.39		563.75		564.19		563.25		564.12	
Outer	River Middle	563.54	Inward	564.45	Inward	563.74	Inward	563.97	Inward	563.59	Inward	564.19	Inward
Inner	MH8	560.45		559.75		560.98		561.06		560.65		561.13	
Outer	River South	564.05	Inward	564.96	Inward	563.92	Inward	564.53	Inward	564.15	Inward	564.86	Inward
Inner	MH12	560.06		560.23		560.29		560.28		560.34		560.63	

Date Monitored		*5/21/2002*		*6/20/2002*		*7/18/2002*		*8/6/2002*		*9/12/2002*		*10/30/2002*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.76	Inward	564.58	Inward	564.89	Inward	564.65	Inward	565.04	Inward	563.91 (2)	Inward
Inner	MH2	561.74		561.67		561.46		561.26		561.60		561.63	
Outer	River North	564.76	Inward	564.58	Outward	564.89	Outward	564.65	Outward	565.04	Outward	563.91 (2)	Outward
Inner	MH6	564.10		565.58		564.99		565.89		565.60		566.24	
Outer	River Middle	564.66	Inward	564.68	Inward	564.90	Inward	564.59	Inward	564.95	Inward	563.75	Inward
Inner	MH8	560.05		560.68		560.79		561.05		561.10		561.07	
Outer	River South	565.07	Inward	564.88	Inward	565.22	Inward	564.90	Inward	565.25	Inward	564.16	Inward
Inner	MH12	560.84		561.04		560.95		561.07		561.09		561.31	

Notes:

(1) Water level monitored on 9/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.
(3) Valves in MH6 were opened on November 18, 2002.
(4) Snow covered well, could not locate.
NM - Not Measured
NA - Not Applicable

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*11/21/2002*		*12/11/2002*		*1/16/2003*		*2/25/2003*		*3/14/2003*		*4/14/2003*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	563.90 (2)	Inward	563.89 (2)	Inward	563.86 (2)	Inward	563.96 (2)	Inward	563.86 (2)	Inward	564.30	Inward
Inner	MH2	561.12		561.55		561.65		561.58		561.65		561.68	
Outer	River North	563.90 (2)	Inward	563.89 (2)	Inward	563.86 (2)	Inward	563.96 (2)	Inward	563.86 (2)	Inward	564.30	Inward
Inner	MH6	554.47 (3)		555.09		556.15		555.74		555.75		554.54	
Outer	River Middle	563.71	Inward	563.72	Inward	563.52	Inward	563.34	Inward	563.24	Inward	564.24	Inward
Inner	MH8	558.03		559.95		561.04		560.60		560.61		558.65	
Outer	River South	564.15	Inward	564.14	Inward	564.11	Inward	564.21	Inward	564.11	Inward	564.45	Inward
Inner	MH12	561.44		561.45		561.83		561.26		561.54		561.56	

Date Monitored		*5/8/2003*		*6/19/2003*		*7/21/2003*		*8/28/2003*		*9/30/2003*		*10/30/2003*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.61	Inward	564.78	Inward	564.49	Inward	564.64	Inward	564.83 (2)	Inward	564.78 (2)	Inward
Inner	MH2	561.52		562.26		561.21		561.65		561.65		561.48	
Outer	River North	564.61	Inward	564.78	Inward	564.49	Inward	564.64	Inward	564.83 (2)	Inward	564.78 (2)	Inward
Inner	MH6	555.93		556.02		556.06		554.61		554.61		554.98	
Outer	River Middle	564.27	Inward	564.66	Inward	564.44	Inward	564.6	Inward	564.6	Inward	564.63	Inward
Inner	MH8	560.76		560.85		560.89		558.52		558.52		559.77	
Outer	River South	564.61	Inward	564.96	Inward	564.78	Inward	564.91	Inward	565.08	Inward	565.03	Inward
Inner	MH12	561.61		561.94		562.03		562.19		562.26		562.25	

Notes:

(1) Water level monitored on 9/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.
(3) Valves in MH6 were opened on November 18, 2002.
(4) Snow covered well, could not locate.
NM - Not Measured
NA - Not Applicable

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*11/21/2003*		*12/11/2003*		*1/16/2004*		*2/25/2004*		*3/14/2004*		*4/14/2004*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.03 (2)	Inward	564.11 (2)	Inward	564.11 (2)		563.91 (2)		564.01 (2)	Inward	564.44 (2)	Inward
Inner	MH2	561.53		561.08		(4)		(4)		561.33		560.05	
Outer	River North	564.03 (2)	Inward	564.11 (2)	Inward	564.11 (2)	Inward	563.91 (2)	Inward	564.01 (2)	Inward	564.44 (2)	Inward
Inner	MH6	555.94		555.82		555.84		556.12		555.9		554.91	
Outer	River Middle	564.36	Inward	564.11 (2)	Inward	564.11 (2)	Inward	563.91 (2)	Inward	564.01 (2)	Inward	564.43	Inward
Inner	MH8	560.76		560.67		560.7		560.95		560.75		559.59	
Outer	River South	564.28	Inward	564.36	Inward	564.36	Inward	564.16	Inward	564.26	Inward	564.69	Inward
Inner	MH12	562.52		562.75		562.49		562.3		562.07		561	

Date Monitored		*5/14/2004*		*6/25/2004*		*7/30/2004*		*8/31/2004*		*9/30/2004*		*10/20/2004*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.55	Inward	564.68	Inward	565.20	Inward	564.98	Inward	565.00	Inward	564.45	Inward
Inner	MH2	560.17		561.64		561.79		561.37		561.48		561.65	
Outer	River North	564.55	Inward	564.68	Inward	565.20	Inward	564.98	Inward	565.00	Inward	564.45	Inward
Inner	MH6	554.56		555.74		555.24		555.83		555.60		555.96	
Outer	River Middle	564.48	Inward	564.56	Inward	565.16	Inward	564.93	Inward	565.05	Inward	564.41	Inward
Inner	MH8	559.45		560.50		560.04		560.67		560.71		560.82	
Outer	River South	564.71	Inward	564.91	Inward	565.46	Inward	565.25	Inward	565.30	Inward	564.49	Inward
Inner	MH12	560.80		560.95		561.15		561.35		561.25		561.50	

Notes:

(1) Water level monitored on 9/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.
(3) Valves in MH6 were opened on November 18, 2002.
(4) Snow covered well, could not locate.
NM - Not Measured
NA - Not Applicable

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*11/23/2004*		*12/31/2004*		*1/28/2005*		*2/28/2005*		*3/31/2005*		*4/29/2005*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.05 (2)	Inward	564.68	Inward	564.44 (2)	Inward	(6)	NA	564.31 (2)	Inward	564.83	Inward
Inner	MH2	561.50		561.60		562.60		561.05		561.25		560.20	
Outer	River North	564.05 (2)	Inward	564.68	Inward	564.44 (2)	Inward	(6)	NA	564.31 (2)	Inward	564.83	Inward
Inner	MH6	554.95		556.19		556.22		555.58		555.93		556.01	
Outer	River Middle	564.18 (5)	Inward	564.56	Inward	564.32	Inward	564.46	Inward	564.08	Inward	564.71	Inward
Inner	MH8	559.77		561.02		561.06		560.47		560.78		560.89	
Outer	River South	564.30	Inward	564.81	Inward	564.69	Inward	564.79	Inward	564.56	Inward	565.15	Inward
Inner	MH12	561.57		561.81		561.92		562.05		562.11		562.26	

Date Monitored		*5/27/2005*		*6/24/2005*		*7/29/2005*		*8/31/2005*		*10/3/2005*		*10/31/2005*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.78	Inward	564.73	Inward	564.82	Inward	564.63(2)	Inward	564.80	Inward	564.80	Inward
Inner	MH2	560.23		561.50		562.70		561.62		561.52		561.68	
Outer	River North	564.78	Inward	564.73	Inward	564.82	Inward	564.63(2)	Inward	564.80	Inward	564.80	Inward
Inner	MH6	555.82		555.16		556.56		556.24		555.41		555.60	
Outer	River Middle	564.74	Inward	564.70	Inward	564.85	Inward	564.54	Inward	564.75	Inward	564.55	Inward
Inner	MH8	560.65		559.92		561.39		561.07		560.20		560.46	
Outer	River South	565.02	Inward	564.92	Inward	565.15	Inward	564.88	Inward	565.11	Inward	565.00	Inward
Inner	MH12	562.29		562.40		562.51		562.75		562.90		563.15	

Notes:

(1) Water level monitored on 9/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.
(3) Valves in MH6 were opened on November 18, 2002.
(4) Snow covered well, could not locate.
NM - Not Measured
NA - Not Applicable

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*11/22/2005*		*12/23/2005*		*01/27/2006*		*02/28/2006*		*03/24/2006*		*04/21/2006*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	563.93 (2)	Inward	564.01 (2)	Inward	564.11 (2)	Inward	564.04 (2)	Inward	564.19 (2)	Inward	564.39 (2)	Inward
Inner	MH2	561.62		562.55		562.95		563.17		562.68		562.31	
Outer	River North	563.93 (2)	Inward	564.01 (2)	Inward	564.11 (2)	Inward	564.04 (2)	Inward	564.19 (2)	Inward	564.39 (2)	Inward
Inner	MH6	555.20		556.20		556.21		554.70		555.64		555.61	
Outer	River Middle	564.05 (5)	Inward	564.13 (5)	Inward	564.23 (5)	Inward	564.16 (5)	Inward	564.31 (5)	Inward	564.26	Inward
Inner	MH8	560.64		561.05		561.02		558.44		560.43		560.40	
Outer	River South	564.18	Inward	564.26	Inward	564.36	Inward	564.29	Inward	564.44	Inward	564.64	Inward
Inner	MH12	563.29		563.46		563.61		563.73		563.47		563.49	

		05/30/2006		*06/26/2006*		*07/31/2006*		*08/25/2006*		*09/22/2006*		*10/31/2006*	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.87	Inward	564.81	Inward	565.09	Outward	564.85 (2)	Inward	564.70	Inward	564.82	Inward
Inner	MH2	562.73		561.57		565.18		561.64		561.46		559.98	
Outer	River North	564.87	Inward	564.81	Inward	565.09	Inward	564.85 (2)	Inward	564.70	Inward	564.82	Inward
Inner	MH6	555.84		556.19		556.19		556.06		555.95		555.62	
Outer	River Middle	564.86	Inward	564.78	Inward	565.07	Inward	564.68	Inward	564.67	Inward	564.66	Inward
Inner	MH8	560.44		561.02		563.66		561.02		561.02		559.95	
Outer	River South	565.24	Inward	565.13	Inward	565.45	Inward	565.10	Inward	565.04	Inward	565.07	Inward
Inner	MH12	563.61		563.70		563.92		563.98		564.29		564.77	

Notes:

(1) Water level monitored on 9/14/01 was 563.87 ft amsl which provided an inward gradient.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.
(3) Valves in MH6 were opened on November 18, 2002.
(4) Snow covered well, could not locate.
(5) River level too low to obtain a measurement. Water level shown is River South water level minus 0.13 feet.
NM - Not Measured
NA - Not Applicable

TABLE 2.3

SUMMARY OF HORIZONTAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

		11/29/2006		12/29/2006		01/26/2007		02/27/2007		03/30/2007		4/30/2007	
		Water Level (ft amsl)	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Monitoring Location													
Outer	River North	564.16	Inward	564.82	Inward	564.71 (2)	Inward	564.21 (2)	Inward	564.40 (2)	Inward	564.82	Inward
Inner	MH2	561.35		561.52		561.39		561.53		560.25		560.99	
Outer	River North	564.16	Inward	564.82	Inward	564.71 (2)	Inward	564.21 (2)	Inward	564.40 (2)	Inward	564.82	Inward
Inner	MH6	555.93		555.93		556.04		556.23		556.24		556.31	
Outer	River Middle	564.28	Inward	564.41 (1)	Inward	564.46	Inward	564.33 (1)	Inward	564.28	Inward	564.78	Inward
Inner	MH8	560.73		560.80		560.89		561.07		561.09		561.14	
Outer	River South	564.41	Outward	564.54	Inward	564.96	Inward	564.46	Inward	564.65	Inward	565.26	Inward
Inner	MH12	564.87		561.89		560.86		559.97		560.20		559.85	

		5/25/2007	
		Water Level (ft amsl)	*Gradient Direction*
Monitoring Location			
Outer	River North	564.73 (2)	Inward
Inner	MH2	560.85	
Outer	River North	564.73 (2)	Inward
Inner	MH6	556.12	
Outer	River Middle	564.67	Inward
Inner	MH8	561.02	
Outer	River South	564.98	Inward
Inner	MH12	560.04	

Notes:

(1) River level too low to obtain a measurement. Water level shown is River South water level minus 0.13 feet.
(2) River level too low to obtain a measurement at the monitoring location. Water level shown is River South Water level minus 0.25 feet.

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		6/15/2001		6/22/2001		6/29/2001		7/31/2001		8/20/2001		9/28/2001		10/22/2001	
Monitoring Location		Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction
Upper	MH3	560.59	Upward	560.55	Upward	560.40	Upward	559.21	Upward	561.07	Upward	560.56	Upward	562.36	Downward
Lower	MW-6	562.54		562.50		562.42		562.90		562.09		562.13		562.08	
Upper	MH8	560.53	Upward	560.44	Upward	560.38	Upward	560.25	Upward	560.25	Upward	560.27	Upward	560.43	Upward
Lower	MW-7	561.48		561.41		561.39		561.30		561.29		561.32		561.31	
Upper	MH11	561.12	Upward	561.05	Upward	560.97	Upward	560.73	Upward	560.50	Upward	560.61	Upward	560.51	Upward
Lower	MW-8	561.69		561.54		561.46		561.19		561.05		561.07		561.27	
Upper	MH14	562.32	Upward	562.32	Downward	562.45	Downward	562.45	Neutral	561.72	Downward	561.70	Downward	562.10	Downward
Lower	MW-9	562.45		562.19		562.11		562.45		561.55		561.58		561.77	
Upper	MH15	NM		NM		NM		NM		NM		NM		NM	

Date Monitored		11/27/2001		12/20/2001		1/29/2002		2/11/2002		3/25/2002		4/24/2002		5/21/2002	
Monitoring Location		Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction
Upper	MH3	560.94	Upward	560.50	Upward	560.15	Upward	560.28	Upward	560.10	Upward	562.05	Downward	561.28	Upward
Lower	MW-6	561.88		561.83		561.83		561.73		561.72		561.88		561.97	
Upper	MH8	560.45	Upward	559.75	Upward	560.98	Upward	561.06	Upward	560.65	Upward	561.13	Upward	560.05	Upward
Lower	MW-7	561.36		561.25		561.89		561.50		561.60		561.95		561.38	
Upper	MH11	559.51	Upward	561.31	Downward	NM	--	561.23	Upward	560.97	Upward	561.41	Upward	560.35	Upward
Lower	MW-8	561.30		560.73		561.91		561.93		561.60		561.95		560.91	
Upper	MH14	561.87	Downward	561.89	Downward	562.53	Downward	562.18	Upward	562.77	Downward	563.09	Downward	563.25	Downward
Lower	MW-9	561.71		561.77		562.31		562.52		562.64		562.96		563.11	
Upper	MH15	NM		NM		NM		NM		NM		NM		562.17	Upward
Average [1]														562.89	Upward

Notes:

NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*6/20/2002*		*7/18/2002*		*8/6/2002*		*9/12/02*		*10/30/02*		*11/21/02*		*12/11/02*	
Monitoring Location		*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Upper	MH3	561.24	Upward	560.99	Upward	560.79	Upward	561.14	Upward	561.21	Upward	560.67	Upward	561.08	Upward
Lower	MW-6	561.92		561.89		561.92		561.82		561.97		562.05		562.04	
Upper	MH8	560.68	Upward	560.79	Upward	561.05	Upward	561.10	Upward	561.07	Upward	558.03	Upward	559.95	Upward
Lower	MW-7	561.54		561.65		561.93		561.99		561.95		561.41		561.25	
Upper	MH11	560.98	Upward	561.07	Upward	561.33	Upward	561.34	Upward	561.36	Upward	561.49	Downward	561.51	Downward
Lower	MW-8	561.50		561.60		561.88		561.91		561.95		560.99		560.73	
Upper	MH14	562.98	Downward	561.83	Upward	562.08	Upward	562.11	Upward	562.68	Downward	562.88	Downward	563.07	Downward
Lower	MW-9	562.91		562.84		562.75		562.66		562.57		562.74		562.91	
Upper	MH15	562.00	Upward	561.93	Upward	561.86	Upward	561.75	Upward	561.62	Upward	561.82	Upward	562.01	Upward
Average [(1)]		562.65	Upward	561.86	Upward	562.01	Upward	561.99	Upward	562.33	Upward	562.53	Upward	562.72	Upward

Notes:

NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		*1/16/2003*		*2/25/2003*		*3/14/03*		*4/14/03*		*5/8/03*		*6/19/03*	
Monitoring Location		*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Upper	MH3	561.20	Upward	561.10	Upward	561.17	Upward	561.22	Upward	561.03	Upward	561.83	Upward
Lower	MW-6	562.27		561.85		561.69		562.42		562.38		562.43	
Upper	MH8	561.04	Upward	560.60	Upward	560.61	Upward	558.65	Upward	560.76	Upward	560.85	Upward
Lower	MW-7	561.95		561.49		561.49		561.42		561.59		561.60	
Upper	MH11	561.68	Upward	561.60	Downward	561.57	Downward	558.53	Upward	561.03	Upward	561.12	Upward
Lower	MW-8	562.00		561.48		561.46		560.98		561.56		561.56	
Upper	MH14	563.37	Downward	563.07	Downward	563.09	Downward	563.54	Downward	563.26	Downward	563.41	Downward
Lower	MW-9	563.17		562.89		562.90		563.36		563.07		563.10	
Upper	MH15	562.28	Upward	562.01	Upward	562.05	Upward	562.49	Upward	561.02	Upward	562.25	Upward
Average [1]		563.01	Upward	562.72	Upward	562.74	Upward	563.19	Upward	562.84	Upward	563.02	Upward

Date Monitored		*7/21/03*		*8/28/03*		*9/30/03*		*10/20/03*		*11/03/03*		*12/23/03*	
Monitoring Location		*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	*Gradient Direction*
Upper	MH3	560.46	Upward	561.20	Upward	561.10	Upward	561.07	Upward	561.08	Upward	559.49	Upward
Lower	MW-6	562.31		562.21		562.53		562.52		562.33		562.30	
Upper	MH8	560.89	Upward	558.52	Upward	559.88	Upward	559.77	Upward	560.76	Upward	560.67	Upward
Lower	MW-7	561.74		561.29		561.35		561.17		561.12		561.48	
Upper	MH11	561.10	Upward	564.37	Downward	558.68	Upward	558.66	Upward	561.01	Upward	560.94	Upward
Lower	MW-8	561.69		562.35		561.17		560.02		561.57		561.34	
Upper	MH14	563.03	Downward	566.48	Downward	562.89	Downward	562.88	Downward	563.00	Downward	563.31	Downward
Lower	MW-9	562.89		566.17		562.77		562.75		562.85		563.20	
Upper	MH15	561.98	Upward	566.36	Downward	562.02	Upward	562.01	Upward	561.91	Upward	562.28	Upward
Average [1]		562.68	Upward	566.44	Downward	562.60	Upward	562.59	Upward	562.64	Upward	562.97	Upward

Notes:

NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		01/21/04		02/12/04		03/04/04		04/16/04		05/14/04		06/25/04	
Monitoring Location		Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction
Upper	MH3	560.33	Upward	561.08	Upward	561.13	Upward	558.78	Upward	559.71	Upward	561.21	Upward
Lower	MW-6	562.32		562.16		562.21		562.48		562.39		562.27	
Upper	MH8	560.70	Upward	560.95	Upward	560.75	Upward	559.59	Upward	559.45	Upward	560.50	Upward
Lower	MW-7	561.55		561.81		561.61		561.71		561.70		561.42	
Upper	MH11	(2)	NA	561.23	Upward	561.04	Upward	559.85	Upward	559.87	Upward	560.79	Upward
Lower	MW-8	561.47		561.75		561.56		561.38		561.39		561.19	
Average [1]		(2)	NA	(2)	NA	562.08	Upward	562.43	Upward	562.41	Upward	562.41	Upward
Lower	MW-9	562.72		562.68		562.70		562.64		562.71		562.70	

Date Monitored		07/30/04		08/31/04		09/30/04		10/20/04		11/23/04		12/31/04	
Monitoring Location		Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction	Water Level (ft amsl)	Gradient Direction
Upper	MH3	561.25	Upward	560.59	Upward	560.81	Upward	561.19	Upward	561.05	Upward	560.74	Upward
Lower	MW-6	562.29		562.23		562.28		562.10		561.99		562.16	
Upper	MH8	560.04	Upward	560.67	Upward	560.71	Upward	560.82	Upward	559.77	Upward	561.02	Upward
Lower	MW-7	561.31		561.56		561.49		561.19		561.21		561.80	
Upper	MH11	560.26	Upward	560.94	Upward	561.00	Upward	561.09	Upward	560.05	Upward	561.23	Upward
Lower	MW-8	560.71		561.39		561.43		561.56		560.56		561.75	
Average [1]		561.33	Upward	562.73	Upward	562.67	Upward	562.46	Upward	561.23	Upward	561.96	Upward
Lower	MW-9	562.70		562.95		562.98		562.64		562.71		562.71	

Notes:

NA - Not Applicable.
NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).
(2) - Buried with snow.

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		1/28/2005		2/28/2005		3/31/2005		4/29/2005		5/27/2005		6/24/2005	
Monitoring Location		***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	*Water Level (ft amsl)*	*Gradient Direction*	*Water Level (ft amsl)*	***Gradient Direction***
Upper	MH3	562.15	Upward	559.96	Upward	559.94	Upward	559.54	Upward	558.92	Upward	561.09	Upward
Lower	MW-6	562.27		562.14		562.04		562.26		562.24		562.22	
Upper	MH8	561.06	Upward	560.47	Upward	560.78	Upward	560.89	Upward	560.65	Upward	559.92	Upward
Lower	MW-7	561.85		561.46		561.66		561.76		561.55		561.47	
Upper	MH11	561.33	Upward	560.74	Upward	561.06	Upward	561.15	Upward	561.13	Upward	560.18	Upward
Lower	MW-8	561.82		561.25		561.60		561.65		561.42		560.76	
Average [1]		(3)	NA	(3)	NA	562.91	Upward	562.57	Upward	562.90	Upward	562.59	Upward
Lower	MW-9	562.75		562.78		563.12		563.21		563.12		562.85	

Date Monitored		7/29/2005		8/31/2005		10/3/2005		10/31/2005		11/22/2005		12/23/2005	
Monitoring Location		***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***	***Water Level (ft amsl)***	***Gradient Direction***
Upper	MH3	562.26	Downward	560.64	Upward	560.54	Upward	560.73	Upward	561.20	Upward	562.09	Upward
Lower	MW-6	562.11		562.09		562.24		562.34		561.67		562.45	
Upper	MH8	561.39	Upward	561.07	Upward	560.20	Upward	560.46	Upward	560.04	Upward	561.05	Upward
Lower	MW-7	562.27		561.94		561.40		561.52		561.49		561.85	
Upper	MH11	561.17	Upward	561.31	Upward	560.43	Upward	560.71	Upward	560.31	Upward	561.30	Upward
Lower	MW-8	562.15		561.85		560.95		561.25		561.00		561.84	
Average [1]		562.68	Upward	562.67	Upward	562.92	Upward	563.14	Upward	563.33	Upward	563.31	Upward
Lower	MW-9	562.88		562.91		563.20		563.39		563.53		563.50	

Notes:

NA - Not Applicable.
NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).
(2) - Buried with snow.
(3) - Not Monitored - MH14 was buried with snow and could not be accessed.

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		01/27/2006		02/28/2006		03/24/2006		04/21/2006		05/30/2006		06/26/2006	
		Water Level	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*
Monitoring Location		***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***
Upper	MH3	562.53	Upward	562.26	Upward	561.77	Upward	561.84	Upward	562.30	Upward	560.63	Upward
Lower	MW-6	562.97		562.90		562.86		562.76		562.50		562.37	
Upper	MH8	561.02	Upward	558.44	Upward	560.43	Upward	560.40	Upward	560.44	Upward	561.02	Upward
Lower	MW-7	561.79		561.68		561.57		561.48		561.75		561.97	
Upper	MH11	561.26	Upward	558.38	Upward	560.60	Upward	560.63	Upward	560.28	Upward	561.26	Upward
Lower	MW-8	561.76		561.23		561.16		561.15		561.03		561.75	
Average [1]		563.73	Upward	563.73	Upward	563.67	Upward	563.41	Upward	563.20	Upward	563.16	Upward
Lower	MW-9	563.90		563.94		563.83		563.65		563.48		563.41	

Date Monitored		07/31/2006		08/25/2006		09/22/2006		10/31/2006		11/29/2006		12/29/2006	
		Water Level	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*
Monitoring Location		***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***
Upper	MH3	564.78	Downward	561.21	Upward	561.01	Upward	555.62	Upward	560.85	Upward	560.42	Upward
Lower	MW-6	564.39		564.72		562.76		562.58		562.48		562.98	
Upper	MH8	563.66	Upward	560.89	Upward	560.51	Upward	559.95	Upward	560.73	Upward	560.80	Upward
Lower	MW-7	564.54		561.82		561.99		562.09		562.01		561.89	
Upper	MH11	564.03	Upward	561.10	Upward	559.81	Upward	558.19	Upward	560.54	Upward	560.96	Upward
Lower	MW-8	564.30		561.57		561.20		561.78		561.69		561.46	
Average [1]		563.85	Upward	563.89	Downward	562.44	Upward	564.13	Upward	560.73	Upward	561.59	Upward
Lower	MW-9	564.08		563.38		562.73		564.40		562.10		561.90	

Notes:

NA - Not Applicable.
NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).
(2) - Buried with snow.
(3) - Not Monitored - MH14 was buried with snow and could not be accessed.

TABLE 2.4

SUMMARY OF VERTICAL GRADIENTS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Date Monitored		01/26/2007		02/27/2007		03/30/2007		4/30/2007		5/25/2007	
		Water Level	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*	*Water Level*	*Gradient*
Monitoring Location		***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***	***(ft amsl)***	***Direction***
Upper	MH3	560.92	Upward	560.57	Upward	559.45	Upward	559.39	Upward	559.85	Upward
Lower	MW-6	562.78		562.49		562.30		562.62		562.48	
Upper	MH8	560.89	Upward	560.89	Upward	561.09	Upward	561.14	Upward	561.02	Upward
Lower	MW-7	562.06		561.96		562.05		562.20		562.05	
Upper	MH11	561.09	Upward	561.16	Upward	561.36	Upward	561.29	Upward	561.12	Upward
Lower	MW-8	561.73		561.86		561.85		561.77		561.61	
Average [(1)]		563.13	Upward	562.42	Upward	560.89	Upward	561.86	Upward	561.85	Upward
Lower	MW-9	563.41		562.64		562.66		562.13		562.10	

Notes:

NA - Not Applicable.
NM - Not monitored. MH11 was blocked and could not be accessed.
(1) - Distance weighted for MH14 (two thirds) and MH15 (one third).
(2) - Buried with snow.
(3) - Not Monitored - MH14 was buried with snow and could not be accessed.

TABLE 2.5

GROUNDWATER SAMPLING SUMMARY
OPERATION AND MAINTENANCE MANUAL
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

LOCATIONS

OGC1	MW-6
OGC2	MW-7
OGC3	MW-8
OGC4	MW-9
OGC5	OGC6
OGC7	OGC8

FREQUENCY

- quarterly for 2 years following GWS startup.
- semi-annually for Year 3 except for OGC-4 (quarterly for SVOCs) and OGC-6 (quarterly for VOCs).
- annually for Years 4 through 7 (until May 2008).

PARAMETERS

Volatiles

Acetone
Benzene
2-Butanone
Chlorobenzene
1,1-Dichloroethane
trans-1,2-Dichloroethene
Ethylbenzene
Methylene Chloride
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
Xylenes (Total)

Semi-Volatiles

1,2-Dichlorobenzene
1,4-Dichlorobenzene
2,4-Dimethylphenol
2-Methylphenol
4-Methylphenol
Naphthalene
Di-n-octylphthalate
Phenol

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*MW-9*													
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/25/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50	9.4J	4.3J	7.3J/6.7J		4.2J	7.0/7.2			13/12			17	17	
Benzene	1		0.24J	0.39J/0.35J		0.44J	0.29J/0.30J	0.29J/0.29J		0.40J/ND0.70				0.54J	
2-Butanone	50													2.6J	
Chlorobenzene	5		0.50J	0.86J/0.85J		1.3		1.0/1.1		0.91J/0.87J		1.1	1.7	1.5	2.8
trans-1,2-Trichloroethene	5			0.22J/ND		0.31J	0.24J/0.24J	0.22J/0.20J						0.42J	
Ethylbenzene	5		0.30J	0.46J/0.42J		0.73J	0.44J/0.42J	0.46J/0.46J		0.40J/0.38J				0.83J	
Methylene Chloride	5		0.34J	0.33J/ND	4.0J	0.53J						7.2	1.6		
Tetrachloroethene	5	1.6J	1.1J	1.0J/0.92J		1.6	0.92J/0.80J	0.77J/0.74J		0.67J/0.71J				0.57J	
Toluene	5		1.6J	3.0J/2.5J	2.8J	2.7	2.1/2.0	2.7/2.7	2.0	2.0/1.9	4.6	3.2	2.6		3.1
Trichloroethene	5	2.2J	1.8J	2.4J/2.2J	3.0J	4.4	2.0/2.0	2.2/2.3		1.8/1.8	9.5	4.9	3.0	1.8	2.9
Vinyl Chloride	2									1.7/1.7			3.6	4.0	
Total Xylenes	5		1.0J	1.5J/1.5J		2.5J	1.3J/1.3J	1.4J/1.4J		0.98J/1.0J	3.0			2.0J	
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*				0.6J										0.9J
1,4-Dichlorobenzene	3*												2J		3J
2,4-Dimethylphenol	50	12	12	18/17	38		20/22	30/34	30	35/36	36	42	50	58	46
2-Methylphenol	NL	1J	3J	3J/3J	7J		4J/4J	6J/6J	6J	6J/6J	6J	5J	8J	8J	6
4-Methylphenol	NL	69	110	97/92	230		100/110	190/230	150	130/130	160	190	260	190	170
Naphthalene	10														0.2J
Di-n-octyl phthalate	50														
Phenol	1	3J	34	28/22	24		38/41	34/35	42	46/46	180	30	27	49	11

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-4*															
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*3/04/04*	*05/14/04*	*11/23/04*	*05/27/05*	*05/30/06*	*05/25/07*
Volatiles (µg/L)	*Class GA Level*											NA		NA			
Acetone	50			7.9J			4.0J										
Benzene	1		0.21J	0.2J													
2-Butanone	50																
Chlorobenzene	5		0.49J	0.66J		0.83J/0.79J		0.46J		0.83J							
trans-1,2-Trichloroethene	5			0.22J													
Ethylbenzene	5		0.41J	0.39J		0.54J/0.53J	0.48J	0.39J		0.77J						0.44J	
Methylene Chloride	5				5.1J/4.9J								4.6		2.0		
Tetrachloroethene	5	1.0J	1.2J	0.87J		0.86J/0.84J	1.1	0.78J		0.77J							
Toluene	5			1.0J		1.0/0.98J	1.4	0.72J		1.2							
Trichloroethene	5	1.6J	1.4J	1.5J		1.5/1.4	1.7	0.96J		1.5						0.53J	
Vinyl Chloride	2																
Total Xylenes	5		1.0J	0.94J		0.84J/0.82J	1.1J			0.95J							
Semi-Volatiles (µg/L)																	
1,2-Dichlorobenzene	3*																
1,4-Dichlorobenzene	3*																
2,4-Dimethylphenol	50	8J	12	6J	8J/6J	7J/7J	8J		7J/7J	8J	4J	6J		4J			
2-Methylphenol	NL	0.9J	2J	35	2J/ND	1J/2J	2J			3J		3J		2J			
4-Methylphenol	NL	64	86	40	58/55	61/67	68		69/68	73	32	55		31	14	15	3J
Naphthalene	10																
Di-n-octyl phthalate	50																
Phenol	1	310	560	400	420/460	710/1100	1100	1100	2400/2300	1800	1600		2400	1500	850	510	84

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-8*													
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*05/08/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50	78	31/29	19J		4.7J	3.6J				6.2	5.8	4.7J		
Benzene	1	11	14/14	14		2.6	5.3	3.3	3.6	3.1	1.8	1.2	1.1	0.92	0.54J
2-Butanone	50	4.0J													
Chlorobenzene	5	3.7J	4.1J/4.1J	4.0J		0.87J	1.7	1.1		1.1	0.65J	0.48J	0.43J	0.44J	
trans-1,2-Trichloroethene	5	4.3J	3.2J/3.1J	4.0J		0.76J	1.5	0.88J		1.0	0.50J	0.41J	1.0		
Ethylbenzene	5	13	16/16	15	1.6J	2.8	5.8	3.1	3.9	3.1	1.8	1.2		0.99J	0.53J
Methylene Chloride	5		0.52J/0.48J	0.62J	1.8J										
Tetrachloroethene	5	40	51/52	59	7.7J	9.9	22	12	14	11	7.0	5.0	3.8	4.0	2.0
Toluene	5	140	140/140	110	17J	21	53	28	38	27	16	11	8.1	8.3	4.0
Trichloroethene	5	120	110/110	110	20J	22	53	27	35	27	17		7.7	7.6	4.0
Vinyl Chloride	2	3.7J	3.4/3.6	3.1	1.1J		1.4	0.70J		0.78J					
Total Xylenes	5	43	55/54	46	4.8J	8.3	18	9.5	11	9.9	5.4	3.7	3.0	3.2	1.1J
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50	2J	4J/2J	4J	0.8J	0.8J	3J	1J							
2-Methylphenol	NL	18	30/25	16	4J	5J	13	7J	11	7J	4J	2J	2J	3J	2J
4-Methylphenol	NL	30	51/45	28	8J	10	26	14	20	14J	9	5J	6J	8J	6
Naphthalene	10	1J	3J/25	1J			0.9J								
Di-n-octyl phthalate	50		0.1J/ND												
Phenol	1	30	49/44	31	5J	8J	11	10		4J	6J	2J			

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*River South*													
Date		*05/18/01*	*09/17/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50						3.0J						3.2J		
Benzene	1										0.42J				
2-Butanone	50												3.9J		
Chlorobenzene	5														
trans-1,2-Trichloroethene	5														
Ethylbenzene	5														
Methylene Chloride	5														
Tetrachloroethene	5						0.30J								
Toluene	5			0.29J			0.72J	0.35J			1.8				
Trichloroethene	5						0.44J								
Vinyl Chloride	2						0.27J								
Total Xylenes	5										1.8J				
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50														
2-Methylphenol	NL														
4-Methylphenol	NL														
Naphthalene	10														
Di-n-octyl phthalate	50														
Phenol	1														

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*MW-8*													
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50	52	12J	11J	75J	67	20			73		28/33	26	16	6.6/7.5
Benzene	1	6.5	4.3	4.1		8.6	12	12	8.1	12	23/24	10/12	4.2	4.4	1.6/1.5
2-Butanone	50														
Chlorobenzene	5	1.8J	1.0J	1.0J		3.2	4.9	4.4	3.6	6.2	6.0/6.4	2.7/3.3	2.4	2.4	0.84J/0.82J
trans-1,2-Trichloroethene	5	2.2J	1.8J	2.9J	4.8J	7.3	11	16	12	13	10/12	7.3/9.4	7.4	5.3	4.4/3.9
Ethylbenzene	5	5.7	3.7J	4.4J	8.2J	12	18	18	15	23	30/32	20/24	4.6	5.8	2.5/2.2
Methylene Chloride	5	1.1J	0.58J	0.66J	4.4J	1.2	1.4	1.6		1.3	2.2/2.2	7.3/9.2	1.7	0.64J	
Tetrachloroethene	5	21	12	9.8	23J	32	61	58	54	80	91/100	120/130	62	71	16/14
Toluene	5	75	36	31	80	100	140	160	100	120	240/240	97/120	30	33	12/11
Trichloroethene	5	82	40	35	110	180	320	280	210	320	460/460	380/390	180	150	40/36
Vinyl Chloride	2	5.2	1.6J	3.3	23	12	18	14	12	18	21/21	13/16	5.8	5.1	
Total Xylenes	5	22	13	16	30J	40	68	69	58	93	120/120	92/110	32	25	9.8/9.1
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*				2J	2J		2J		4J	3J/3J				
1,4-Dichlorobenzene	3*			0.6J	2J	1J	1J	2J		4J	3J/3J	19U/2J	4J	5J	0.5J/0.4J
2,4-Dimethylphenol	50	1J	11	16	19	18	15	27	20	27	37/38	15J/14	7J	6J	0.8J/0.6J
2-Methylphenol	NL	33	55	41	48	44	38	56	37	35	45/46	18J/18	18J	16	7/7
4-Methylphenol	NL	10	32	34	55	60	59	83	64	75	130/130	34/31			18/16
Naphthalene	10				0.7J	0.8J	0.8J	1J			2J/2J				22/22
Di-n-octyl phthalate	50														
Phenol	1	43	130	140	85	110	91	110	140	78	80/80	28/28	11J	4J	20/21

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-3*													
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50	13J /19J	3.8J	15J		7.1	6.7			5.6			10/8.4	2.8J	0.76
Benzene	1	1.6J /1.6J	1.6	1.8		1.8	1.2	1.5		1.6	1.4		1.2/1.1	0.93J	
2-Butanone	50														
Chlorobenzene	5		0.24J	0.28J		0.28J		0.22J							
trans-1,2-Trichloroethene	5	1.6J /1.6J	1.0J	1.4J	1.1J	1.1	0.98J	0.44J		1.0					
Ethylbenzene	5	1.6J /1.5J	2.0J	2.3J	1.5J	2.4	1.7	1.8		2.0			1.4/1.3	1.1	0.85J
Methylene Chloride	5				1.9J							6.3	1.2/1.0		
Tetrachloroethene	5	2.4J /2.2J	3.0J	2.2J	1.7J	2.2	1.8	1.8		1.5			0.71J/0.63J	0.61J	0.56J
Toluene	5	5.7 /5.1	5.9	5.3		5.1	3.7	4.6	4.0	4.3	3.6	2.6	2.6/2.4		1.7
Trichloroethene	5	20 /20	18	19	14J	17	14	13	12	14	9.8	7.7	6.4/6.1	5.6	4.3
Vinyl Chloride	2	ND /1.0J	0.4	0.72						0.62J					
Total Xylenes	5	5.6J /5.4J	7.5	8.7	4.8J	7.8	5.8	5.8	5.0	6.6	3.9		3.3/3.0	2.9J	2.1J
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*				1J										0.6J
1,4-Dichlorobenzene	3*				0.7J		0.5J								
2,4-Dimethylphenol	50	5J /5J	9	8J	11	11	7J	8J	11	12	10	9J	8J/4J	6J	6
2-Methylphenol	NL	98 /96	120	87	160	140	100	100	120	140	150	110	83/73	64	47
4-Methylphenol	NL	13 /13	21	17	28	23	14	15	22	23	20	17	14/12	13	10
Naphthalene	10														
Di-n-octyl phthalate	50														
Phenol	1	120 /110	140	130J	210	140	85	92	110	120	120	90	78/74	75	60

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*GW-5S*		*OGC-7*													
Date		*12/17/87*	*08/12/88*	*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*																
Acetone	50	293		21J	0.25J	8.2J			3.6J								
Benzene	1	2				0.30J		0.28J	0.20J	0.26J				0.34J	0.34J		
2-Butanone	50	27															
Chlorobenzene	5																
trans-1,2-Trichloroethene	5	180	89	6.3	3.1J	5.4	4.9J	4.8J	4.2	4.7	4.0	5.4	5.0	5.9	4.9	5.8	3.8
Ethylbenzene	5	9	7J	1.1J	0.80J	1.0J		1.3	0.84J	0.91J		1.4	0.93J	1.5	1.4	1.3	0.87J
Methylene Chloride	5	1															
Tetrachloroethene	5	11	7J	4.3J	3.6J	3.4J	2.9J	4.0	3.4	2.7	2.8	4.1	2.2	4.1	2.9	2.8	1.7
Toluene	5	75	49	12	5.8	6.7	5.7J	6.9	5.2	6.0	6.7	8.6	5.8	9.3	8.3	8.6	5.0
Trichloroethene	5	287	220	70	40	48	45	68	44	38	50	56	38	56	37J	37	22
Vinyl Chloride	2	7	4J	2.6J	0.84	1.7J	3.5J	2.2	1.8	1.8		2.3	2	2.9	3.0	2.9	
Total Xylenes	5	54	37	6.0J	4.8J	6.5	3.9J	7.6	5.3	5.3	5.5	8.7	5.4	10	8.6	8.2	5.3
Semi-Volatiles (µg/L)																	
1,2-Dichlorobenzene	3*		2J														
1,4-Dichlorobenzene	3*																
2,4-Dimethylphenol	50	10	11		2J												
2-Methylphenol	NL	24	24	3J	2J	1.0J	0.8J	1J									0.6J
4-Methylphenol	NL	38				0.9J	0.7J	1J									0.6J
Naphthalene	10																
Di-n-octyl phthalate	50						0.6J										
Phenol	1	61	92	4J	0.7J												

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*River Middle*												
Date		*05/18/01*	*09/17/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/31/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50						3.1J								
Benzene	1														
2-Butanone	50														
Chlorobenzene	5														
trans-1,2-Trichloroethene	5														
Ethylbenzene	5														
Methylene Chloride	5														
Tetrachloroethene	5														1.3
Toluene	5														
Trichloroethene	5							0.21J							
Vinyl Chloride	2														
Total Xylenes	5														
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50														
2-Methylphenol	NL														
4-Methylphenol	NL														
Naphthalene	10														
Di-n-octyl phthalate	50				0.7J										
Phenol	1														

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*MW-7*													
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/31/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50	5.7J		6.5J		4.3J	5.4			4.8			4.3J	3.0J	3.9J
Benzene	1		1.9	2.0		2.0	1.3	1.8		0.90			0.58J		
2-Butanone	50														
Chlorobenzene	5														
trans-1,2-Trichloroethene	5		0.82J	1.1J		0.98J	0.89J	1					0.36J		
Ethylbenzene	5		0.85J	0.81J		1.0	0.61J	0.75J					0.32J		
Methylene Chloride	5				1.6J										
Tetrachloroethene	5			0.27J											
Toluene	5		3.5J	3.6J		3.3	1.9	3		1.1	2.8		0.93J		
Trichloroethene	5		0.55J	0.63J		0.43J	0.45J	0.36J							
Vinyl Chloride	2		1.6J	2.0	3.8J	2.9	1.7	2.2		1.3			0.80J		
Total Xylenes	5		2.1J	2.1J		2.7J	1.5J	1.9J		0.76J					
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50			2J	2J	3J	0.7J	2J							
2-Methylphenol	NL		3J	2J	4J	6J	1J	2J			2J				
4-Methylphenol	NL		3J	2J	4J	6J	1J	2J			1J				0.3J
Naphthalene	10														
Di-n-octyl phthalate	50				0.6J										
Phenol	1		24	7J	10	26	2J	6J		5J	2J		1J		

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-2*												
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/25/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50			11J			3.0J					4.5J	3.1		
Benzene	1														
2-Butanone	50														
Chlorobenzene	5														
trans-1,2-Trichloroethene	5														
Ethylbenzene	5														
Methylene Chloride	5				1.7J										
Tetrachloroethene	5														
Toluene	5										0.37J				
Trichloroethene	5		0.39J												
Vinyl Chloride	2			0.26J		0.25J	0.26J								
Total Xylenes	5														
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50														
2-Methylphenol	NL														
4-Methylphenol	NL														
Naphthalene	10														
Di-n-octyl phthalate	50														
Phenol	1														

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-6*															
Date		*05/18/01*	*08/20/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*03/04/04*	*05/14/04*	*11/23/04*	*05/27/05*	*05/31/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*																
Acetone	50			6.6J			5.0			3.7J						8.6/8.7	
Benzene	1									0.71	0.87	1.4		2.5	5.2	12/12	7.2
2-Butanone	50																
Chlorobenzene	5																
trans-1,2-Trichloroethene	5			0.23J	0.23J	0.37J	0.45J	0.55J		1.4	2.0	2.1		3.6	5.3	11/12	7.1
Ethylbenzene	5					0.31J				0.85J	1.1	2.0	3.3	3.1	7.4	20/20	12
Methylene Chloride	5				2.1J								4.4	2.5	2.2		
Tetrachloroethene	5		1.4J	0.73J		6.6	7.4	5	12	49	51	230	300	260	550	2000/2100	1400
Toluene	5			0.55J		2.0	1.6	1.5	2.4	9.3	12	27	40	35	72	240/260	97
Trichloroethene	5	3.0J	4.7J	3.1J	5.9	16	19	13	26	95	120	330	530	330	610	1800/1800	1100
Vinyl Chloride	2					0.22J	0.25J			0.45J						2.9/2.8	1.5
Total Xylenes	5		0.22J	0.53J	0.26J	1.7J	1.2J	1.0J		4.1	4.7	8.6	13	12	28	79/76	46
Semi-Volatiles (µg/L)												NA		NA			
1,2-Dichlorobenzene	3*																
1,4-Dichlorobenzene	3*																
2,4-Dimethylphenol	50							1J									
2-Methylphenol	NL		2J	2J	5J	11	8J	9J	13	22	27		63		85	89/110	76
4-Methylphenol	NL			1J	0.02J	10							1J		2J	84/100	2J
Naphthalene	10															1J/2J	2J
Di-n-octyl phthalate	50																
Phenol	1		7J	2J	4J	5J	3J	2J		5J	3J		9J		8J	13/16	8

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*River North*												
Date		*05/18/01*	*09/17/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/31/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50						2.4J		NS			3.6J	3.6J		
Benzene	1					0.21J					2.0	0.39J			
2-Butanone	50														
Chlorobenzene	5					1.3						3.2			
trans-1,2-Trichloroethene	5					0.25J						1.0			
Ethylbenzene	5					20						40		2.9	
Methylene Chloride	5				1.6J										
Tetrachloroethene	5					3.8						7.7		1.3	
Toluene	5			0.39J		63				0.96J		130	2.2	14	
Trichloroethene	5			0.35J		4.5						6.4		0.59J	
Vinyl Chloride	2					3.7						9.3			
Total Xylenes	5					80				0.96J		210	3.7	23	
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50							1J							
2-Methylphenol	NL														
4-Methylphenol	NL														
Naphthalene	10														
Di-n-octyl phthalate	50														
Phenol	1														

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-5*												
Date		*05/20/01*	*08/21/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*														
Acetone	50	38J		11J			6.4			4.9J		0.61J		3.0J	
Benzene	1		1.5	1.4		0.87	0.92	0.87		0.77				0.67J	0.54J
2-Butanone	50														
Chlorobenzene	5														
trans-1,2-Trichloroethene	5		0.65J	0.76J		0.42J	0.57J	0.52J				0.34J			
Ethylbenzene	5		0.21J	0.23J											
Methylene Chloride	5				3.4J								2.4		
Tetrachloroethene	5		0.38J	0.27J											
Toluene	5		2.5J	2.2J		0.99J	0.87J	1.2		0.80J		0.80J			
Trichloroethene	5		0.87J	0.66J		0.36J	0.41J	0.40J				0.28J			
Vinyl Chloride	2		1.6J	1.2J		1.1	1.5	1.2		1.1		1.4		1.2	0.95J
Total Xylenes	5		1.0J	1.0J		0.67J	0.37J	0.40J				1.0J			
Semi-Volatiles (µg/L)															
1,2-Dichlorobenzene	3*														
1,4-Dichlorobenzene	3*														
2,4-Dimethylphenol	50		8J	6J	5J		1J	6J							
2-Methylphenol	NL		1J	1J	1J										0.5J
4-Methylphenol	NL		2J	5J	4J			2J							0.9J
Naphthalene	10		1J	1J			0.5J	1J							2J
Di-n-octyl phthalate	50			1J	0.8J										
Phenol	1		0.9J												

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*GW-6S*		*MW-6*													
Date		*12/15/1987*	*08/10/88*	*05/18/01*	*08/21/01*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/30/06*	*05/24/07*
Volatiles (µg/L)	*Class GA Level*																
Acetone	50	684	4.9J						4.4J			44		6.7	13	31	
Benzene	1	3			0.64J			0.65J	0.59J	0.56J		0.57J					
2-Butanone	50																
Chlorobenzene	5		3.3J		1.5J	1.3J		0.65J		0.54J		0.81J		0.37J			
trans-1,2-Trichloroethene	5	58	4.4J		1.1J			0.37J	0.32J	0.34J		1.4		0.52J			
Ethylbenzene	5	2			0.21J												
Methylene Chloride	5						1.8J								2.1		
Tetrachloroethene	5	43			0.44J							0.67J		0.25J			
Toluene	5	16	3.0J		2.2J	0.29J		1.3	0.91J	1.1		2.1	3.6	0.92J			
Trichloroethene	5	62	5.1J		2.0J		1.2J		1.1	1.5	3.2	14	12	3.7	1.5	1.2	0.97J
Vinyl Chloride	2	11	1.7J					0.29J	0.24J	0.22J		0.52J					
Total Xylenes	5	7			0.90J	0.44J		0.36J	0.27J								
Semi-Volatiles (µg/L)																	
1,2-Dichlorobenzene	3*																
1,4-Dichlorobenzene	3*			1J		0.7J	2J						2J				0.8J
2,4-Dimethylphenol	50	5		5J	5J	3J	2J	1J	0.9J	9J			6J				
2-Methylphenol	NL	3		5J	6J	2J	2J	2J	1J	0.9J			5J				0.5J
4-Methylphenol	NL	4		15	13	5J	4J	3J	2J	2J			12			1J	1J
Naphthalene	10			67	69		1J		14	13			76		5J		2J
Di-n-octyl phthalate	50						2J										
Phenol	1	3		14	4J	2J	0.8J						250			2J	0.6J

Notes:

* Applies to sum of compounds
NL - Not listed
Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.6

SUMMARY OF DETECTED COMPOUNDS
SITE GROUNDWATER AND RIVER WATER
GRATWICK-RIVERSIDE PARK
NORTH TONAWANDA, NEW YORK

Location		*OGC-1*														
Date		*05/18/01*	*05/25/07*	*8/21/2001*	*11/27/01*	*02/11/02*	*05/21/02*	*08/06/02*	*11/22/02*	*02/25/03*	*05/08/03*	*11/04/03*	*05/14/04*	*05/27/05*	*05/31/06*	*5/24/2007*
Volatiles (µg/L)	*Class GA Level*															
Acetone	50	20J			11J			4.8J								
Benzene	1			0.64J	0.55J				0.26J							
2-Butanone	50	1.1J														
Chlorobenzene	5	2.2J	2.8	2.0J	1.7J		0.24J		0.78J		0.91J					
trans-1,2-Trichloroethene	5	5.6		3.7J	4.6J	1.8J	0.48J	0.58J	2.7		2.8	0.85J			0.55J	
Ethylbenzene	5			0.52J	0.43J				0.21J							
Methylene Chloride	5					1.6J								1.8		
Tetrachloroethene	5			0.78J	0.54J		0.42J	0.53J	0.30J			0.29J				
Toluene	5	5.2	3.1	5.4	4.2J		0.48J	0.43J	1.9	1.7	2.6	0.59J				
Trichloroethene	5	15	2.9	16	11	4.5J	2.2	2.7	6.1	5.1	8.4	2.2	0.47J	1.2	1.9	0.53J
Vinyl Chloride	2	1.3J		0.51J	0.72J				0.42J		0.64J					
Total Xylenes	5			2.1J	1.6J				0.49J		0.86J					
Semi-Volatiles (µg/L)																
1,2-Dichlorobenzene	3*		0.9J													
1,4-Dichlorobenzene	3*	1J	3J	3J	2J	1J			1J							
2,4-Dimethylphenol	50	9J	46	16	8J	3J		0.6J	9J		4J					
2-Methylphenol	NL	6J	6	12	5J	2J			2J		3J					
4-Methylphenol	NL	20	170	35	15J	5J		1J	5J	6J	8J				2J	
Naphthalene	10	71	0.2J	130		21		7J	18		25	3J				
Di-n-octyl phthalate	50															
Phenol	1	150	11	290	57	15	1J	8J	4J		19					

Notes:

* Applies to sum of compounds
NL - Not listed
[ ] Exceeds Class GA Level
NS - Not Sampled
J - Estimated

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*MH1*	*MH2*	*MH3*	*MW-6*	*OGC-1*	*MH4*	*OGC-5*	*MH5*	*MH6*	*OGC-6*	*MH7*	*MW-7*	*MH8*	*OGC-2*	*MH9*
Date															
07/24/00						7.8					10.3				
10/24/00						7.7					10.5				
03/29/01				7.60	10.82		NM			12.55		8.68		9.80	
05/11/01	*	*	*	*	*	*	*	8.30	8.17	8.50	10.16	8.90	11.22	9.22	11.26
05/18/01				11.05	11.14		10.42		10.00	10.50		8.19		8.70	
06/08/01	9.25						9.35		6.90	8.24		7.33		8.40	
06/15/01		10.1	10.38	9.6	9.6		9.4		6.91	8.22		7.43	10.65	8.46	
06/22/01		*	*	*	*										
06/29/01		10.9	10.8	11	10.9		10.56		7	8.97		9.27	11.33	8.63	
07/31/01		10.82	10.81	10.97	11.25		10.54		7.92	8.55		9.2	11.28	9.35	
08/20/01		11	11	9.86	10.95		10.44		7.9	8.31		7.71	11.45	8.49	
09/28/01		10.75	10.97	9.89	11.01		10.6		7.93	8.3		9.0	11.15	8.75	
10/22/01		10.7	10.45	10.5	11		7.86		6.1	9.32		8.97	8.49	8.87	
11/27/01		10.61	10.46	10.12	11.65		10.3			10.54		10.01	8.61	8.63	
12/20/01		10.17	10.11	9.97	11.22		10.19		9.98	10.37		9.68	8.42	8.51	
01/29/02		11.8	11.62	11.15	11.82		10.48		9.91	10.86		10.56	11.91	10.23	
02/11/02		10.26	10.16	10.5	10.4				7.79	11.44		10.04	11.74	8.33	
03/25/02		10.62	10.45	11.22	10.69		10.36		9.94	11.4		10.03	12.21	9.65	
04/24/02		10.37	10.22	10.68	11.36		9.97		9.46	11.15		9.73	11.3	9.52	
05/21/02		9.96	9.81	10.76	10.42		9.85		9.25	11.91		9.38	9.69	9.2	
06/20/02		10.64	9.4	10.91	11.19		9.77		9.46	11.4		10.59	11.76	9.46	
07/18/02		10.89	10.69	10.87	11.75		9.63		9.32	11.24		10.24	11.76	9.51	
08/06/02		10.62	10.47	8.21	5.67		7.25		8.79	8.78		7.46	11.24	7.83	
09/12/02		10.92	11.23	11.17	11.85		9.61		9.27	11.29		10.26	11.9	9.51	
10/30/02		10.1	11.22	10.74	10.89		9.68		9.82	10.63		9.95	11.97	9.64	
11/21/02		9.06	9.3	10.09	11.89		10.72		9.17	12.42		9.76	9.31	9.6	
12/11/02		8.92	9.17	10.16	11.03		9.87		9.02	10.39		10.19	9.5	9.18	
01/16/03		10.9	11.76	11.02	11.59		10.31		10.01	11.52		11.01	12.37	9.83	
02/25/03		10.72	11.12	10.51	11.81		10.22		9.87	12.31		9.42	9.32	8.92	
03/14/03		11.77	11.92	10.07	11.93		10.09		9.71	11.92		10.19	9.28	9.44	
04/14/03		9.78	9.71	9.67	10.82		9.74		9.21	10.45		9.74	10.48	9.01	
05/08/03		10.32	10.48	10.43	12.35		10.13		9.72	12.41		10.88	10.61	9.00	
06/19/03		10.21	10.39	10.36	12.31		10.05		9.68	12.29		10.75	10.51	8.99	
07/21/03		10.06	10.21	10.25	12.17		9.87		9.57	11.99		10.64	10.49	8.84	
08/28/03		10.22	10.91	10.32	11.16		9.8		10.17	10.96		11.04	10.38	9.89	
09/30/03		9.32	9.4	9.95	10.91		8.95		NM	10.22		9.35	9.42	9.58	
10/20/03		9.22	9.3	9	10		8.1		10.2	10.25		9.8	10	9.2	
11/03/03		9.15	9.14	8.86	9.49		7.8		10.51	10.54		10.41	10.28	9.03	
12/23/03		10.03	9.03	9.7	10.3		8.69		10.07	10.49		10.38	10.63	8.62	

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*MH1*	*MH2*	*MH3*	*MW-6*	*OGC-1*	*MH4*	*OGC-5*	*MH5*	*MH6*	*OGC-6*	*MH7*	*MW-7*	*MH8*	*OGC-2*	*MH9*
Date															
01/21/04		(1)	9.06	9.01	9.56		8.0		10.31	9.84		9.69	10.6	8.8	
02/12/04	8.45	(1)	9.72	13.24	11.02	7.77	8.75		7.65	10.8		10.32	11.23	9.2	
03/04/04	8.21	10.05	8.93	10.28	10.69		8.82		9.43	10.52		10.28	10.87	9.24	
04/16/04		9.52	8.77	10.16	9.28		8.61		9.2	10.96		10.41	11.18	9.12	
05/14/04		10.5	8.08	10.16	9.47		8.74		7.19	11.69	9.49	9.36	11.00	9.09	
06/25/04		10.22	8.66	10.07	9.98		8.46		8.41	10.89		9.82	10.65	9.1	
07/30/04		10.03	9.00	9.91	10.45		8.41		8.42	10.67		9.31	10.51	8.94	
08/31/04		9.89	8.7	9.69	10.0		8.17		7.58	10.36		8.97	10.65	8.85	
09/30/04		10.01	8.77	9.9	9.8		8.4		8.11	10.13		9.2	10.47	8.6	
10/20/04		9.91	7.95	9.8	9.28		8.18		8.46			9.89	9.95	8.84	
11/23/04		9.26	8.47	9.87	9.83		8.32		8.92	10.89		9.8	10.84	8.96	
12/31/04		10.13	8.82	9.42	9.26		8.44		10.31	10.04		9.79	9.57	8.73	
01/28/05		10.21	10.75	9.25	8.91		8.39		8.86	10.6		9.66	9.05	9.1	
02/28/05		10.66	9.5	9.09	9.17		8.54		10.89	10.61		9.11	10.8	6.8	
03/31/05		10.91	8.96	9.78	8.95		8.51		9.06	10.99		9.58	11.06	9.18	
04/29/05		10.74	8.92	9.90	9.59		8.74		8.72	11.26		9.62	10.29	9.56	
05/27/05		11.29	9.88	7.85	10.26		9.18		8.12	11.3		9.62	11.16	9.78	
06/24/05		10.72	10.51	10.22	10.2		8.69		8.01	11.48		9.38	11.34	9.31	
07/29/05		7.3	6.20	8.96	9.23		7.83		8.29	9.9		8.91	10.32	8.55	
08/31/05		9.76	7.64	9.35	9.47		8.23		8.5	10.4		8.67	10.68	9.24	
10/03/05		9.1	8.45	9.52	9.14		8.12		7.26	10.43		7.89	9.23	8.9	
10/31/05		10.01	8.59	9.37	8.89		8.47		9.24	10.14		8.63	11.13	9.06	
11/22/05		10.29	8.15	9.13	8.68		8.05		8.25	10.18		8.79	10.70	8.71	
12/23/05		9.24	11.09	10.15	10.11		10.84		9.37	10.84		10.43	9.46	9.23	
01/27/06		9.38	10.69	10.75	9.27		8.63		8.29	11.10		10.05	8.62	9.46	
02/28/06		9.94	11.28	10.49	9.63		8.9		9.56	10.96		9.96	9.56	9.85	
03/24/06		9.57	8.84	10.64	9.43		8.70		9.43	11.14		9.70	9.28	9.40	
04/21/06		11.13	11.03	10.65	9.6		8.91		10.67	11.03		9.44	10.44	9.33	
05/30/06		9.78	10.44	7.50	10.62		8.02		7.10	10.85		9.46	8.98	8.45	
06/26/06		11.24	8.67	10.6	10.83		8.52		8.06	11.24		9.79	10.69	9.24	
07/31/06		7.8	7.85	10.27	10.05		8.12		7.95	10.34		9.93	7.88	8.59	
08/25/06		11.17	8.74	11.07	10.45		8.6		7.7	11.01		8.49	11.4	9.25	
09/22/06		8.33	8.34	10.97	9.73		8.71		8.84	10.85		9.46	11.63	9.23	
10/31/06		10.82	8.26	10.36	9.49		8.62		9.03	10.64		9.86	11.23	9.22	
11/29/06		11.13	9.09	10.45	9.46		8.97		10.90	10.80		9.49	11.13	9.62	
12/29/06		11.15	8.94	10.88	9.36		8.90		11.27	10.56		10.02	11.33	9.05	

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*MH1*	*MH2*	*MH3*	*MW-6*	*OGC-1*	*MH4*	*OGC-5*	*MH5*	*MH6*	*OGC-6*	*MH7*	*MW-7*	*MH8*	*OGC-2*	*MH9*
Date															
01/26/07		11.51	9.21	11.05	9.26		8.80		11.45	11.23		9.76	11.67	9.48	
02/27/07		11.55	10.3	10.93	9.64		8.95		11.08	11.20		9.33	11.45	10.16	
03/30/07		11.37	8.89	10.68	8.83		8.78		11.18	11.13		9.35	11.28	9.21	
04/30/07		11.19	8.27	10.42	9.02		8.47		8.23	10.99		9.59	11.14	9.04	
05/25/07		11.3	8.47	10.32	8.83		8.09		7.74	10.93		9.32	11.18	9.00	

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*MH10*	*OGC-7*	*MH11*	*MW-8*	*OGC-3*	*MH12*	*MH13*	*OGC-8*	*MH14*	*MW-9*	*OGC-4*	*MH15*	*MH16*	*MH17*
Date														
07/24/00	9.2						10.6		9.5				7.4	
10/24/00			8.38						7.76				8.15	
03/29/01		8.37		6.41	9.41			9.77		8.17	10.41			
05/11/01	10.9	11.51		11.55	11.59	8.25	7.5	11.58		7.37	11.16	11.21	8.83	9.27
05/18/01		10.93		11.2	11.21	8.25		11.4		10.60	11.32		12.27	
06/08/01		9.68		10.1	10.34	6.99		10.32		10.03	10.44		7.25	
06/15/01		10.0	10.3	10.7	10.8	7.03		10.54	8.75	10.34	10.55		7.27	8.88
06/22/01	*	*	*	*	10.92	7.3		11	8.98	10.47	11.1		7.57	
06/29/01		11.13	10.9	11.4	10.22	7.54		11.2	9.18	10.94	11.2		7.9	
07/31/01		11.49	10.58	11.69	11.75	7.91		11.73	9.73	11.62	11.63		8.28	
08/20/01		9.17	10.59	11.35	10.87	7.7		11.49	9.8	12.05	11.89		8.2	
09/28/01		10	10.57	11.5	11.0	7.9		11.47	9.77	11.2	11.75		8.21	
10/22/01		10.75	10.44	10.89	11.01	7.7		11.01	9.6	10.51	10.7		7.0	
11/27/01		11.98	10.87	12.46	12.46	8.1		12.28	10.01	11.87	12.25		7.26	
12/20/01		11.63	10.22	11.98	11.97	7.82		11.76	8.73	10.61	11.37		7.11	
01/29/02		12.25		12.15	12.59	7.76		12.41	8.09	11.85	12.33		7.16	
02/11/02		11.12		11.79	12.09	7.63		12.13	7.48	11.73	11.8		6.89	
03/25/02		12.38		12.59	12.77	8.01		12.66	8.51	12.11	12.46		7.88	
04/24/02		12		12.26	12.39	7.86		12.34	7.94	11.55	11.95		7.43	
05/21/02		11.86		12.25	12.49	7.94		12.5	7.45	12.16	12.24	7.72	7.22	
06/20/02		11.92		12.26	12.34	8.07		12.28	8.12	11.63	12.2	7.89	7.84	
07/18/02		11.78		12.11	12.16	8.11		12.13	9.82	11.31	11.96	7.81	7.36	
08/06/02		6.95	11.76	7.88	7.63	8.02		8.87	9.76	8.89	9.03	7.64	7.49	
09/12/02		11.93	12.19	12.23	12.32	8.76		12.3	10.81	11.77	12.04	8.16	8.17	
10/30/02		11.91	12.2	12.21	12.24	NM		12.22	8.34	11.89	12.01	7.95	7.63	
11/21/02		11.79	9.46	12.53	12.46	7.64		12.62	7.71	12.42	12.5	7.95	7.37	
12/11/02		11.26	9.41	11.39	11.54	7.56		11.51	7.86	10.76	11.29	7.35	7.18	
01/16/03		12.39		12.55	12.74	8.47		12.82	8.76	12.3	12.52	7.98	8.16	
02/25/03		11.94		12.46	12.49	8.42		12.51	8.71	12.19	12.52	7.89	8.13	
03/14/03		12.16		12.33	12.56	8.26		12.44	8.79	12.11	12.35	8.01	7.79	
04/14/03		11.02		11.63	11.18	7.92		11.62	7.87	10.89	11.89	7.62	7.42	
05/08/03		11.93		12.51	12.55	8.12		12.63	7.77	12.12	12.44	8.43	7.81	
06/19/03		11.87		12.39	12.41	8.02		12.41	7.73	12.01	12.21	8.38	7.79	
07/21/03		11.81		12.12	12.25	7.99		12.32	7.64	11.91	11.98	8.31	7.62	
08/28/03		11.79		12.13	12.24	11.26		12.21	11.52	12.04	12.04	11.46	11.32	
09/30/03		11.27		11.95	11.44	8.65		11.87	9.45	10.33	11.57	8.56	8.68	
10/20/03		11.2		11.8	11.2	8.5		11.6	8	10.42	11.44	8.31	8.01	
11/03/03		11.04		10.91	10.3	8.39		10.63	7.24	10.59	11.24	7.55	7.48	
12/23/03		10.75		11.18	11.17	8.41		11.01	7.66	10.88	11.03	7.13	7.44	

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*MH10*	*OGC-7*	*MH11*	*MW-8*	*OGC-3*	*MH12*	*MH13*	*OGC-8*	*MH14*	*MW-9*	*OGC-4*	*MH15*	*MH16*	*MH17*
Date														
01/21/04		10.69		11.06	11.16	8.39		11.5	(1)	9.98	10.89	9.53	6.25	
02/12/04		10.79	11.42	11.66	11.78	8.96		11.75	(1)	11.09	11.6	8.5	6.66	
03/04/04		10.79	11.07	11.06	11.29	9.02		11.37	11.5	11.25	11.6	9.03	7.75	
04/16/04		11.23	10.42	11.57	11.62	9.22		11.36	11.6	11.11	11.44	9.6	6.54	
05/15/04		11.19	11.78	11.91	12.13	8.34		11.8	11.7	11.61	11.68	9.5	6.62	
06/25/04		11.22	11.35	11.31	11.48	8.86		11.27	11.21	10.84	11.2	9.11	7.48	
07/30/04		11.10	11.00	11.09	11.42	8.6		11.13	8.40	10.69	11.16	9.42	6.84	
08/31/04		10.84	10.95	10.87	11.19	8.07		10.84	7.78	10.48	10.73	8.14	6.57	
09/30/04		11.0	10.87	11.01	11.4	8.44		11.03	8.1	10.7	10.66	8.32	6.75	
10/20/04		10.91	11.07	11.06	11.26	8.22		11.05	10.84	10.3	10.93	8.64	6.85	
11/23/04		11.08	9.39	11.34	11.44	8.33		11.31	8.64	10.92	11.36	9.08	7.63	
12/31/04		10.64	8.92	10.85	11.09	8.48		10.85	8.57	10.58	10.87	8.86	7.09	
01/28/05		10.79	8.99	11.11	11.31	9.16		11.20	(1)	10.76	11.2	8.95	6.64	
02/28/05		10.79	11.05	10.83	10.81	8.44		10.3	(1)	10.03	10.88	8.49	6.57	
03/31/05		11.22	11.28	11.51	11.49	9.04		11.37	8.5	11.17	11.27	7.24	6.94	
04/29/05		11.48	11.75	11.78	11.75	9.17		11.79	9.64	11.39	11.53	8.32	7.40	
05/27/05		13.65	11.64	13.74	11.79	8.91		11.62	8.6	11.07	11.21	9.05	8.08	
06/24/05		11.59	11.9	11.67	11.92	8.73		11.75	10.9	10.51	11.81	9.86	8.07	
07/29/05		9.55	10.46	10.93	11.21	8.28		10.82	8.97	10.35	10.62	8.19	6.97	
08/31/05		10.85	11.12	11.15	11.35	9.02		11.04	9.01	10.7	11.03	8.4	6.93	
10/03/05		10.81	11.1	11.07	11.4	7.61		10.91	7.85	10.66	10.99	8.7	7.56	
10/31/05		10.85	11.34	11.4	11.56	8.13		11.3	7.73	11.15	11.41	8.61	9.69	
11/22/05		10.38	10.25	10.65	10.7	8.5		10.45	7.63	10.36	11.05	8.10	6.60	
12/23/05		11.40	11.58	11.57	11.93	8.11		11.67	7.19	11.23	11.64	7.36	7.30	
01/27/06		11.54	11.75	10.81	12.01	9.04		11.96	7.65	11.51	11.90	7.54	7.84	
02/28/06		11.53	11.57	12.09	12.3	9.73		11.77	7.84	11.43	11.78	7.36	7.22	
03/24/06		11.41	11.53	11.63	11.83	8.88		12.01	8.46	11.54	11.89	7.92	7.09	
04/21/06		11.31	11.65	11.62	11.86	8.79		11.96	7.98	11.40	11.86	8.52	6.97	
05/30/06		11.11	11.43	11.36	11.56	7.45		11.34	8.90	10.73	10.98	8.90	7.68	
06/26/06		11.48	11.62	11.71	11.91	8.92		11.89	8.46	11.6	11.61	8.03	7.18	
07/31/06		10.73	8.01	10.89	11.14	8.53		10.83	8.09	10.71	10.83	7.36	7.35	
08/25/06		11.62	11.9	11.74	12.05	8.83		11.77	9.88	11.44	11.72	10.82	8.11	
09/22/06		11.54	11.85	11.66	12.07	9.05		11.62	11.88	10.98	11.6	11.51	7.31	
10/31/06		11.26	11.37	11.29	11.49	9.35		10.16	8.96	11.05	11.06	8.48	8.86	
11/29/06		11.28	11.45	11.36	11.66	7.15		10.34	11.45	10.19	11.43	11.10	9.36	
12/29/06		11.26	9.82	11.51	11.64	9.02		11.54	11.52	10.45	11.45	11.42	10.85	

Notes:

(1) Buried with snow and could not be accessed.

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*MH10*	*OGC-7*	*MH11*	*MW-8*	*OGC-3*	*MH12*	*MH13*	*OGC-8*	*MH14*	*MW-9*	*OGC-4*	*MH15*	*MH16*	*MH17*
Date														
01/26/07		11.63	11.33	11.82	12.07	9.27		11.87	9.70	11.65	11.84	7.73	7.17	
02/27/07		11.58	10.76	11.66	12.07	8.39		11.91	7.29	11.17	11.92	8.31	7.07	
03/30/07		11.39	9.58	11.61	11.95	8.65		11.78	11.57	11.03	11.69	11.27	8.38	
04/30/07		11.19	10.01	11.42	11.63	8.44		11.40	11.48	11.38	10.73	10.76	7.29	
05/25/07		11.16	11.00	11.41	11.70	8.26		11.35	11.51	10.99	11.26	11.10	7.46	

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*City MH1*	*City MH2*	*City MH3*
Date			
07/24/00	6.3	7.3	
10/24/00	7.08	7.52	7.41
03/29/01	7.52	7.50	7.16
06/15/01	7.7	7.69	7.4
06/22/01	8.0	7.9	7.8
07/31/01	8.0	8.0	7.7
08/20/01	8.2	8.3	8.0
09/28/01	8.1	8.3	7.9
10/22/01	8.0	8.0	7.8
11/27/01	7.9	8.2	8.01
12/20/01	*	*	*
01/29/02	7.62	7.93	7.97
02/11/02	7.52	7.73	7.79
03/25/02	*	*	*
04/24/02	7.46	7.62	7.69
05/21/02	7.47	7.66	7.72
06/20/02	7.57	7.69	7.78
07/18/02	7.72	7.84	8.01
08/06/02	7.63	7.68	7.92
09/12/02	7.72	7.79	7.98
10/30/02	7.73	7.8	7.93
11/21/02	7.32	7.37	7.41
12/11/02	7.29	7.31	7.35
01/16/03	7.62	7.7	7.79
02/25/03	7.64	7.71	7.89
03/14/03	7.39	7.54	7.61
04/14/03	7.22	7.39	7.41
05/08/03	7.29	7.43	7.48
06/19/03	7.27	7.39	7.41
07/21/03	7.25	7.36	7.38
08/28/03	7.29	7.44	7.41
09/30/03	7.29	7.45	7.40
10/20/03	7.4	7.71	7.39
11/03/03	8.46	7.14	7.27
12/23/03	9.34	7.63	7.57

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*City MH1*	*City MH2*	*City MH3*
Date			
01/21/04	(2)	8.12	(2)
02/12/04	8.45	7.77	7.65
03/04/04	8.21	7.76	7.79
04/16/04	10.95	8.38	8.32
05/14/04	7.30	7.62	7.75
06/25/04	8.06	7.99	7.94
07/30/04	7.85	7.90	7.81
08/31/04	10.2	7.5	7.4
09/30/04	8.6	7.7	7.9
10/20/04	7.59	7.56	7.61
11/23/04	9.64	7.6	7.67
12/31/04	9.09	7.68	7.38
01/28/05	8.92	7.58	7.40
02/28/05	(1)	8.16	7.90
03/31/05	8.49	7.59	7.55
04/29/05	8.74	8.05	7.89
05/27/05	9.24	8.33	8.27
06/24/05	10.53	8.44	8.24
07/29/05	7.3	7.16	6.96
08/31/05	8.06	6.87	7.13
10/03/05	10.3	8.1	NM
10/31/05	10.76	7.9	7.93
11/22/05	9.50	8.54	7.34
12/23/05	10.58	(3)	(3)
01/27/06	10.76	7.87	7.84
02/28/06	11.29	8.73	8.64
03/24/06	11.18	7.98	7.78
04/21/06	NM	8.28	8.05
05/30/06	10.88	7.73	7.63
06/26/06	8.84	7.73	7.68
07/31/06	7.51	7.02	7.24
08/25/06	9.72	7.82	7.67
09/22/06	11.29	8.34	8.99
10/31/06	10.70	8.61	8.13
11/29/06	10.77	8.27	8.04
12/29/06	10.60	8.07	7.73

Notes:

* - pH meter malfunctioned.
NM - Not Measured.
(1) - Buried with snow.
(2) - Road conditions were not safe to allow for monitoring.
(3) - pH probe damaged.

TABLE 2.7

PH READINGS
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Monitoring Location	*City MH1*	*City MH2*	*City MH3*
Date			
01/26/07	11.20	7.76	7.81
02/27/07	8.72	8.15	7.86
03/30/07	10.90	8.29	8.42
04/30/07	10.71	8.52	8.30
05/25/07	10.99	7.74	7.68

TABLE 2.8

EFFLUENT SAMPLING SUMMARY
JUNE 2001 TO FEBRUARY 2007
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

LOCATIONS

effluent monitoring station at Site discharge point

FREQUENCY

monthly (as dictated by the City of North Tonawanda Industrial Wastewater Discharge Permit)

PARAMETERS

Volatiles

Acetone
Benzene
2-Butanone
Chlorobenzene
1,1-Dichloroethane
1,2-Dichloroethane
trans-1,2-Dichloroethene
Ethylbenzene
Methylene Chloride
Styrene
Tetrachloroethene
Toluene
1,1,1-Trichloroethane
Trichloroethene
Vinyl Chloride
Xylenes (Total)

Semi-Volatiles

1,4-Dichlorobenzene
1,2-Dichlorobenzene
2,4-Dimethylphenol
2-Methylphenol
4-Methylphenol
Naphthalene
Di-n-octylphthalate
Phenols (4AAP)

Inorganics

Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Sodium
Zinc

Wet Chemistry

Alkalinity (Bicarbonate)
Alkalinity (Total)
BOD
Chloride
COD
Cyanide
Hardness
NH3
NO3
Oil and Grease
pH
Phosphorous
Sulfate
Sulfide
TDS
TKN
TOC
TSS

TABLE 2.9

EFFLUENT SAMPLING SUMMARY
SUBSEQUENT TO FEBRUARY 2007
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

LOCATIONS

effluent monitoring station at Site discharge point

FREQUENCY

Semi-Annual (Spring and Fall as dictated by the City of North Tonawanda Industrial Wastewater Discharge Permit)

PARAMETERS

Volatiles

Acetone
Benzene
2-Butanone
Chlorobenzene
1,1-Dichloroethane
1,2-Dichloroethane
trans-1,2-Dichloroethene
Ethylbenzene
Methylene Chloride
Styrene
Tetrachloroethene
Toluene
1,1,1-Trichloroethane
Trichloroethene
Vinyl Chloride
Xylenes (Total)

Semi-Volatiles

1,4-Dichlorobenzene
1,2-Dichlorobenzene
2,4-Dimethylphenol
2-Methylphenol
4-Methylphenol
Naphthalene
Di-n-octylphthalate
Phenols (4AAP)

Wet Chemistry

Chloride
Cyanide
NH3
NO3
Phosphorous
Sulfate
Sulfide

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:		*Discharge Sample Port GRATWICK-RIVERSIDE*							
Sample Date:		*6/29/2001*	*7/30/2001*	*8/21/2001*	*9/20/2001*	*10/24/2001*	*11/29/2001*	*12/6/2001*	
Parameter	*Unit*								*Surface Water Standard* [1]
Volatiles									
1,1,1-Trichloroethane	µg/L	3.0J	1.8J	1.1J	7.6U	7.6U	3.8U	3.8U	5
1,1-Dichloroethane	µg/L	8.8	7.3	5.8	3.4J	2.1U	2.6J	3.5J	5
1,2-Dichloroethane	µg/L	5.0U	5.0U	5.0U	10U	10U	5.0U	5.0U	0.6
2-Butanone	µg/L	7.6J	10	10U	20U	20U	6.8J	6.7J	50
Acetone	µg/L	77	93	140	36	26	55	55	50
Benzene	µg/L	6.4	7.2	6.2	3.5J	3.2J	3.1J	4.0J	1
Chlorobenzene	µg/L	3.7J	4.9J	5.0J	3.4J	16	3.5J	5.4J	5
Ethylbenzene	µg/L	8.9	11	9	8.6J	3.6J	4.8J	6.8J	5
Methylene chloride	µg/L	1.1J	2.8U	2.8U	5.6U	5.6U	2.8U	2.8U	5
Styrene	µg/L	1.0J	5.0U	5.0U	10U	10U	5.0U	5.0U	5
Tetrachloroethene	µg/L	22	33	25	16	8.3	15	23	0.7 [2]
Toluene	µg/L	74	84	68	42	20	37	50	5
trans-1,2-Dichloroethene	µg/L	2.6	2.1	2.8	3.3J	1.8J	1.5J	2.4	5
Trichloroethene	µg/L	150J	130	87	55	32	56	72	5
Vinyl chloride	µg/L	11	13	13	13J	5.6J	8.0J	13	0.3 [2]
Xylene (total)	µg/L	40	44	34	32	11	17	26	5
Semi-Volatiles									
1,2-Dichlorobenzene	µg/L	9U	2U	1J	6	0.6J	0.9J	9U	3
1,4-Dichlorobenzene	µg/L	21U	4U	1J	2J	1J	4U	1J	3
2,4-Dimethylphenol	µg/L	14	13	19	12	8	17	13	50 [2]
2-Methylphenol	µg/L	49	46	38	28	15	38	37J	NL
4-Methylphenol	µg/L	58	47	46	30	21	46	40J	NL
Di-n-octyl phthalate	µg/L	12U	2U	2U	2U	1J	2U	12U	50 [2]
Naphthalene	µg/L	1J	1J	1J	1J	67J	0.8J	8U	10
Phenol	µg/L	86	64	67	110	230	74	110	1

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:		*Discharge Sample Port GRATWICK-RIVERSIDE*							
Sample Date:		*6/29/2001*	*7/30/2001*	*8/21/2001*	*9/20/2001*	*10/24/2001*	*11/29/2001*	*12/6/2001*	
Parameter	*Unit*								*Surface Water Standard* [1]
Metals									
Aluminum	mg/L	0.31	0.24	0.24	0.34	0.20U	0.20	0.20U	NL
Antimony	mg/L	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.003
Arsenic	mg/L	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.050
Barium	mg/L	0.059	0.063	0.061	0.081	0.067	0.064	0.064	1.0
Beryllium	mg/L	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.003 [2]
Cadmium	mg/L	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.005
Chromium	mg/L	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.050
Copper	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.023 [3]
Iron	mg/L	0.050U	0.050U	0.050U	0.16	0.095	0.057	0.062	0.30
Lead	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.012
Magnesium	mg/L	0.35	0.66	1	0.77	6.8	1.1	0.94	35
Manganese	mg/L	0.0030U	0.0030U	0.0036	0.012	0.028	0.0043	0.004	0.30
Mercury	mg/L	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.0000026 [4]
Nickel	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.10
Selenium	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.0046 [4]
Silver	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.050
Sodium	mg/L	273	271	262	310	290	293	286	NL
Zinc	mg/L	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	2.0 [2]
General Chemistry									
pH	S.U.	NA	NA	9.45	11.23	9.20	10.06	10.71	NL
Hardness	mg/L	524	488	465	529	301	456	410	NL
Total Dissolved Solids (TDS)	mg/L	1500	1450	1530	1520	1280	1200	1200	NL
Total Suspended Solids (TSS)	mg/L	NA	NA	14	19	10	9.0	7.0	NL
Chloride	mg/L	497	123	497	820	577	436	389	250
BOD	mg/L	NA	NA	20	17	20	24	27	NL
COD	mg/L	NA	NA	155	240	240	50	49	NL
Oil and Grease	mg/L	NA	NA	0.60U	1.0	0.87U	1.0U	1.0U	NL
Organic Carbon	mg/L	NA	NA	16	10	18	9.0	11	- -
Alkalinity, Total (As CaCO3)	mg/L	131	115	120	115	20.9	22.2	57	NL
Bicarbonate (as CaCO3)	mg/L	5.0U	5.0U	5.0U	5.0U	20.9	22.2	57	NL
Ammonia	mg/L	NA	NA	6	4.9	4.9	21	11.6	2.0
Nitrate (as N)	mg/L	0.050U	0.050U	0.50U	0.20	0.050U	0.050U	0.050U	10

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:		*Discharge Sample Port GRATWICK-RIVERSIDE*							
Sample Date:		*6/29/2001*	*7/30/2001*	*8/21/2001*	*9/20/2001*	*10/24/2001*	*11/29/2001*	*12/6/2001*	
Parameter	*Unit*								*Surface Water Standard* (1)
General Chemistry									
TKN	mg/L	NA	NA	10	7.6	7.6	14.8	10.6	NL
Sulfate	mg/L	281	20.4	307	196	329	245	263	250
Sulfide	mg/L	13.2	16.0	14.3	5.6	2.5	10.6	14	0.002
Phenol	mg/L	NA	NA	0.28	0.24	0.28	0.15	0.11	0.001
Phosphorous	mg/L	NA	NA	0.29	NA	0.05	0.13	0.06	0.020 (2)
Cyanide	mg/L	NA	NA	0.005U	0.005U	0.005U	0.005U	0.005U	0.0052

Notes:
U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/23/2002*	*2/21/2002*	*3/27/2002*	*4/24/2002*	*5/30/2002*	*6/29/2002*	*6/29/2002*	*7/25/2002*	*8/27/02*	*9/23/02*	*10/17/02*	*11/13/02*	*12/12/2002*	
Parameter	*Unit*														*Surface Water Standard* (1)
Volatiles															
1,1,1-Trichloroethane	µg/L	7.3U	7.6U	7.6U	7.6U	7.6U	7.6U	7.6U	7.6U	3.8U	3.8U	3.8U	3.8U	7.6U	5
1,1-Dichloroethane	µg/L	2.3J	4.1J	4.9J	9.9	9.4U	9.4U	9.4U	2.7J	1.4J	1.8J	1.2J	4.5J	7.3J	5
1,2-Dichloroethane	µg/L	10U	10U	10U	10U	10U	10U	10U	10U	5.0U	5.0U	5.0U	5.0U	10U	0.6
2-Butanone	µg/L	20U	20U	20U	110	20U	20U	20U	20U	10U	10U	2.1J	10U	5.2J	50
Acetone	µg/L	42	53	56	98	52	25	25	130	7.0J	28	15	48	96	50
Benzene	µg/L	2.1J	3.2J	4.6J	9.1	4.7J	2.1J	2.1J	3.3J	1.9J	3.3J	2.1J	5.3	7.8J	1
Chlorobenzene	µg/L	3.8J	6.6J	5.2J	4.4J	8.9J	5.8J	5.8J	5.4J	6.9	4.0J	5.6J	6.1	4.3J	5
Ethylbenzene	µg/L	2.0J	7.6J	9.6J	18	10J	5.3J	5.3J	7.8J	6.4J	7.2	4.6J	13	18	5
Methylene chloride	µg/L	6.4U	5.6U	5.6U	2.9J	5.6U	5.6U	5.6U	3.2J	3.5U	3.5U	3.5U	3.5U	2.2J	5
Styrene	µg/L	10U	10U	10U	10U	10U	10U	10U	10U	5.0U	5.0U	5.0U	5.0U	10U	5
Tetrachloroethene	µg/L	4.9J	23	28	46	48	27	27	19	9.6	12	6.0	42	48	0.7 (2)
Toluene	µg/L	15	46	57	110	42	33	33	41	18	30	14	64	110	5
trans-1,2-Dichloroethene	µg/L	3.6U	2.4J	2.5J	4.2	3.6U	3.6U	3.6U	2.1J	2.2	1.8U	2.0	1.8U	3.2J	5
Trichloroethene	µg/L	27	92	140	260	140	80	80	74	20	48	20	130	230	5
Vinyl chloride	µg/L	8.4J	20U	5.1J	14J	13J	8.6J	8.6J	6.6J	11	10	11	18	15J	0.3 (2)
Xylene (total)	µg/L	7.3J	29	40	76	37	21	21	30	20	24	15	50	78	5
Semi-Volatiles															
1,2-Dichlorobenzene	µg/L	2J	1J	1J	3	9U	0.8J	0.8J	1J	0.6J	0.6J	1J	0.9J	3	3
1,4-Dichlorobenzene	µg/L	2J	2J	1J	3J	2J	1J	1J	1J	1J	0.8J	2J	1J	3J	3
2,4-Dimethylphenol	µg/L	11J	9J	8	14	5J	4	4	9	6	7	8	12	21	50 (2)
2-Methylphenol	µg/L	28J	21J	17	36	10J	8J	8J	18	8J	13	15	19	32	NL
4-Methylphenol	µg/L	40J	27J	24	57	19J	13	13	27	13	20	21	30	61	NL
Di-n-octyl phthalate	µg/L	14U	12U	2U	2U	12U	2U	2U	2U	2U	0.3J	3U	2U	2U	50 (2)
Naphthalene	µg/L	57	24	12	1J	7U	15	15	13	23	8	29	2U	1J	10
Phenol	µg/L	210	96	42	73	46	51	51	41	66	28	84	35	38	1

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:															
Sample Date:		*1/23/2002*	*2/21/2002*	*3/27/2002*	*4/24/2002*	*5/30/2002*	*6/29/2002*	*6/29/2002*	*7/25/2002*	*8/27/02*	*9/23/02*	*10/17/02*	*11/13/02*	*12/12/2002*	
Parameter	*Unit*														*Surface Water Standard* (1)
Metals															
Aluminum	mg/L	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	NL
Antimony	mg/L	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.003
Arsenic	mg/L	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.050
Barium	mg/L	0.077	0.075	0.078	0.095	0.064	0.058	0.058	0.059	0.073	0.054	0.064	0.068	0.096	1.0
Beryllium	mg/L	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.003 (2)
Cadmium	mg/L	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.005
Chromium	mg/L	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.050
Copper	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.023 (3)
Iron	mg/L	0.050U	0.050U	0.050U	0.050U	0.090	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.10	0.050U	0.30
Lead	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.012
Magnesium	mg/L	1.5	1.4	0.92	0.34	2.5	1.7	1.7	1.8	8.8	3.5	6.4	1.9	0.43	35
Manganese	mg/L	0.0034	0.0042	0.0049	0.003U	0.0090	0.0030U	0.0030U	0.0030U	0.0094	0.0030U	0.0098	0.0030U	0.0030U	0.30
Mercury	mg/L	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.0000026 (4)
Nickel	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.10
Selenium	mg/L	0.010U	0.010UJ	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.0046 (4)
Silver	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.050
Sodium	mg/L	317	336	360	242	329	318	318	270	189	195	204	289	272	NL
Zinc	mg/L	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	2.0 (2)
General Chemistry															
pH	S.U.	10.91	10.96	10.92	11.46	10.4	10.66	10.66	10.37	8.44	8.97	8.84	10.11	10.72	NL
Hardness	mg/L	415	449	440	484	349	300	300	300	316	277	274	372	507	NL
Total Dissolved Solids (TDS)	mg/L	1450	1490	1640	1610	1530	1130	1130	1100	868	1040	945	1330	1410	NL
Total Suspended Solids (TSS)	mg/L	5.0	11.0	9	8	6	8	8	8	12	6	1.5	2	2.3	NL
Chloride	mg/L	514	545	577	545	518	452	452	424	377	320	329	502	489	250
BOD	mg/L	25	21	22	29	13	9	9	12	14	8	11	16	15	NL
COD	mg/L	45	58	255	50	23	26	26	58	49	19	46	16	64	NL
Oil and Grease	mg/L	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NL
Organic Carbon	mg/L	14	6	10	12	9	11	11	8	6.9	10	7	(5)	(5)	NL
Alkalinity, Total (As CaCO3)	mg/L	62.4	53.8	102	126	36.3	43.1	43.1	16.7	27.2	5.0U	22.4	14.3	110	NL
Bicarbonate (as CaCO3)	mg/L	5.0U	5.0U	5.0U	5.0U	5.0U	5.0U	5.0U	16.7	27.2	5.0U	22.4	14.3	5.0U	NL
Ammonia	mg/L	9.1	6.0	6.0	5.2	SL	2.0	2.0	1.7	9.1	10.5	9.4	9.4	7.0	2.0
Nitrate (as N)	mg/L	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	10

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

`

Sample ID:															
Sample Date:		*1/23/2002*	*2/21/2002*	*3/27/2002*	*4/24/2002*	*5/30/2002*	*6/29/2002*	*6/29/2002*	*7/25/2002*	*8/27/02*	*9/23/02*	*10/17/02*	*11/13/02*	*12/12/2002*	
Parameter	*Unit*														*Surface Water Standard* (1)
General Chemistry															
TKN	mg/L	8.1	4.5	5.0	4.8	SL	2.0	2.0	1.7	5.6	6.2	7.8	10.5	10.8	NL
Sulfate	mg/L	261	250	262	239	239	226	226	215	236	214	213	254	302	250
Sulfide	mg/L	9.9	9.9	11.2	13.7	4.4	1.0U	1.0U	1.0U	1.4	1.0U	1.0U	7.4	21.6	0.002
Phenol	mg/L	0.12	0.28	0.22	0.22	SL	0.40	0.40	0.27	0.16	0.16	0.16	0.12	0.12	0.001
Phosphorous	mg/L	0.09	0.08	0.09	0.17	0.02	0.10	0.10	0.04	0.018	0.04	0.06	0.12	0.10	0.020 (2)
Cyanide	mg/L	0.005U	0.005U	0.040J	0.005U	0.005	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.0052

Notes:
U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form
(5) - TOC analyzer malfunction prevented analysis of this compound.

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/16/03*	*2/06/03*	*3/11/03*	*4/04/03*	*5/09/03*	*6/10/03*	*7/10/03*	*8/7/03*	*9/4/03*	*10/10/03*	*11/7/03*	*12/10/03*	*Surface Water Standard* (1)
Parameter	*Unit*													
Volatiles														
1,1,1-Trichloroethane	µg/L	2.6U	2.6U	2.6U	5.2U	1.3U	2.6U	5.2U	5.2U	5.2U	1.3U	2.6U	2.6U	5
1,1-Dichloroethane	µg/L	4.1	9.6	5.6	6.4	0.84U	5.4	7.4	4.6	3.3U	0.84U	1.7U	7.0	5
1,2-Dichloroethane	µg/L	1.7U	1.7U	1.7U	3.4U	0.85U	1.7U	3.4U	3.4U	3.4U	0.85U	1.7U	1.7U	0.6
2-Butanone	µg/L	9.3U	9.3U	9.3U	19U	4.6U	9.3U	19U	19U	19U	4.6U	9.3U	9.3U	50
Acetone	µg/L	21	56	51	42	10U	28	52	42U	42U	10U	21U	35	50
Benzene	µg/L	3.4	7.9	6.2	4.4U	1.1U	3.2	4.6	4.4U	4.4U	1.1U	2.2U	7.2	1
Chlorobenzene	µg/L	6.1	6.6	6.9	7.5	6.9	4.1	7.0	5.0	3.6U	5.4	9.3	6.3	5
Ethylbenzene	µg/L	9.9	2.3	15	12	1.9	11	12	9.5	4.3	1.8	2.1	17	5
Methylene chloride	µg/L	7.0U	7.0U	7.0U	14U	3.5U	7.0U	14U	14U	14U	3.5U	7.0U	7.0U	5
Styrene	µg/L	5.2U	5.2U	5.2U	10U	2.6U	5.2U	10U	10U	10U	2.6U	5.2U	5.2U	5
Tetrachloroethene	µg/L	22	59	46	31	8.3	45	38	32	12	1.3U	2.5U	47	0.7 (2)
Toluene	µg/L	37	110	81	56	7.1	46	57	39	17	1.2U	3.2	82	5
trans-1,2-Dichloroethene	µg/L	3.0U	4.3	3.0U	6.0U	1.8	4.5	6.0U	6.0U	6.0U	1.5U	3.0U	3.3	5
Trichloroethene	µg/L	92	260	220	160	17	140	170	110	53	1.7	5.7	180	5
Vinyl chloride	µg/L	10	20	11	9.6	5.8	12	9.5	5.7U	5.7U	1.9	2.8U	11	0.3 (2)
Xylene (total)	µg/L	41	99	64	50	7.0	44	56	40	28U	6.9U	14U	73	5
Semi-Volatiles														
1,2-Dichlorobenzene	µg/L	4U	20U	20U	20U	20U	20U	19U	16U	16U	16U	16U	16U	3
1,4-Dichlorobenzene	µg/L	4U	18U	19U	19U	19U	19U	18U	15U	15U	15U	15U	14U	3
2,4-Dimethylphenol	µg/L	10	18U	19U	19U	19U	19U	18U	12U	20	12U	13U	18	50 (2)
2-Methylphenol	µg/L	12	16U	22	16U	16U	16U	15U	15U	15U	15U	16U	15	NL
4-Methylphenol	µg/L	24	35	45	31	18U	19	17U	15U	46	15U	16U	57	NL
Di-n-octyl phthalate	µg/L	4U	19U	20U	19U	19U	20U	19U	26U	26U	26U	27U	26U	50 (2)
Naphthalene	µg/L	3U	18U	18U	18U	18U	18U	17U	17U	17U	17U	18U	17U	10
Phenol	µg/L	61	30	62	94	64	61	74	46	28	16	150	46	1

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/16/03*	*2/06/03*	*3/11/03*	*4/04/03*	*5/09/03*	*6/10/03*	*7/10/03*	*8/7/03*	*9/4/03*	*10/10/03*	*11/7/03*	*12/10/03*	*Surface Water Standard*	
Parameter	*Unit*														
Metals															
Aluminum	mg/L	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	NL	
Antimony	mg/L	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.003	
Arsenic	mg/L	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.0070U	0.010U	0.010U	0.010U	0.010U	0.050	
Barium	mg/L	0.091	0.097	0.090	0.094	0.065	0.070	0.080	0.074	0.082	0.072	0.092	0.10	1.0	
Beryllium	mg/L	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0020U	0.0020U	0.0020U	0.0020U	0.003	(2)
Cadmium	mg/L	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.005	
Chromium	mg/L	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0040U	0.0055	0.0040U	0.0040U	0.050	
Copper	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.023	(3)
Iron	mg/L	0.050U	0.050U	0.050U	0.11	0.050U	0.050U	0.17	0.050U	0.050U	0.072	0.050U	0.050U	0.30	
Lead	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.0060U	0.0060U	0.0060U	0.0060U	0.012	
Magnesium	mg/L	1.4	0.26	0.31	3.6	4.8	1.6	2.3	1.4	1.2	7.4	5.9	0.72	35	
Manganese	mg/L	0.0030U	0.0030U	0.0030U	0.012	0.0030	0.0030U	0.0080	0.0030U	0.0030U	0.018	0.0055	0.0030U	0.30	
Mercury	mg/L	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.0000026	(4)
Nickel	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.10	
Selenium	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.015U	0.015U	0.015U	0.015U	0.0046	(4)
Silver	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.050	
Sodium	mg/L	343	391	195	401	310	276	293	231UJ	272	239	375	361	NL	
Zinc	mg/L	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.020U	0.020U	0.020U	0.020U	0.020U	2.0	(2)
General Chemistry															
pH	S.U.	10.71	11.55	11.3	10.91	9.75	8.0	10.73	10.8	10.59	7.92	8.48	11.13	NL	
Hardness	mg/L	388	435	459	430	368	374	365	294	431	380	399	420	NL	
Total Dissolved Solids (TDS)	mg/L	1500	1580	1590	1750	1120	1230	1440	1050	1400	1000	1590	1400	NL	
Total Suspended Solids (TSS)	mg/L	2.0	6.0	3.0	18.0	3.0	4	9	4	11	15	15	3	NL	
Chloride	mg/L	511	512	628	778	524	416	474	410	347	383	615	834	250	
BOD	mg/L	13	10	20	22	12	9	9	11	7	6	11	22	NL	
COD	mg/L	55	73	46	44	39	73	48	24	21	8	40	53	NL	
Oil and Grease	mg/L	1.0U	0.28	1.0U	1.0	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NL	
Organic Carbon	mg/L	6	13	12	12	9	8	9	6	10	5	10	9	NL	
Alkalinity, Total (As CaCO3)	mg/L	104	155	121	48	7.9	NA	74	119	58.0	38.0	13.4	74.8	NL	
Bicarbonate (as CaCO3)	mg/L	22.5	5.0U	5.0U	5.0U	7.9	NA	10U	10U	10U	38.0	13.4	10U	NL	
Ammonia	mg/L	7.35	3.15	2.10	5.6	5.25	6.3	5.25	3.15	3.15	2.45	4.2	3.5	2.0	
Nitrate (as N)	mg/L	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.051	0.050U	0.050U	10	

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/16/03*	*2/06/03*	*3/11/03*	*4/04/03*	*5/09/03*	*6/10/03*	*7/10/03*	*8/7/03*	*9/4/03*	*10/10/03*	*11/7/03*	*12/10/03*	*Surface Water Standard* (1)
Parameter	*Unit*													
General Chemistry														
TKN	mg/L	9.24	2.52	1.1	4.48	5.04	8.4	6.7	5.88	5.88	2.24	7.28	5.88	NL
Sulfate	mg/L	202	177	184	230	236	234	170	208	254	149	242	386	250
Sulfide	mg/L	3.2	4.0	8.0	10	2.2	4.0	4.8	4.8	2.4	1.0U	1.0U	2.0	0.002
Phenol	mg/L	0.11	0.10	0.009	0.006	0.01U	0.008U	0.034	0.08U	0.014U	0.006U	0.012U	0.015U	0.001
Phosphorous	mg/L	0.12	0.10	0.18	0.10	0.04	0.11	0.10	0.13	0.16	0.11	0.24	0.13	0.020 (2)
Cyanide	mg/L	0.005U	0.005U	0.005U	0.005	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.0052

Notes:
U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form
(5) - TOC analyzer malfunction prevented analysis of this compound.

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/8/04*	*2/6/04*	*3/16/04*	*04/13/04*	*05/14/04*	*06/10/04*	*07/09/94*	*08/12/04*	*09/10/04*	*10/08/04*	*11/05/04*	*12/03/04*	*Surface Water Standard* (1)
Parameter	*Unit*													
Volatiles														
1,1,1-Trichloroethane	µg/L	2.6U	5.2U	1.3U	5.2U	1.3U	5.2U	1.3U	1.3U	5.2U	5.2U	5.2U	1.3U	5
1,1-Dichloroethane	µg/L	9.2	3.3U	11	14	4.1	11	5.9	10	5.2U	5.2U	3.3U	6.5	5
1,2-Dichloroethane	µg/L	1.7U	3.4U	0.85U	3.4U	0.85U	3.4U	0.85U	0.85U	5.2U	5.2U	3.4U	0.85U	0.6
2-Butanone	µg/L	9.3U	19U	4.6U	19U	4.6U	19U	4.6U	4.6U	5.2U	5.2U	19U	4.6U	50
Acetone	µg/L	53	42U	38	42U	12	42U	22	34	5.2U	5.2U	42U	19	50
Benzene	µg/L	7.8	4.4U	6.1	4.4	2.1	5.3	2.9	5.6	5.2U	5.2U	4.4U	3.3	1
Chlorobenzene	µg/L	6.7	8.8	3.0	3.6U	8.8	3.6U	4.4	2.9	19	13	12	4.5	5
Ethylbenzene	µg/L	19	0.11U	17	14	6.4	18	8.7	18	6.4	0.11U	0.11U	12	5
Methylene chloride	µg/L	7.0U	14U	3.5U	14U	3.5U	15	3.5U	3.5U	14U	14U	14U	3.5U	5
Styrene	µg/L	5.2U	10U	2.6U	10U	2.6U	10U	2.6U	2.6U	14U	14U	10U	2.6U	5
Tetrachloroethene	µg/L	60	5.0U	50	38	16	63	22	52	14U	14U	5.0U	31	0.7 (2)
Toluene	µg/L	98	4.9U	80	75	26	78	38	83	14U	14U	4.9	46	5
trans-1,2-Dichloroethene	µg/L	3.6	6.0U	4.0	6.0U	1.8	6.0U	2.1	3.6	14U	14U	6.0U	1.5U	5
Trichloroethene	µg/L	260	7.5	200	220	82	240	97	200	4.8	4.8U	4.8U	130	5
Vinyl chloride	µg/L	14	5.7U	10	8.9	4.9	11	5.6	12	6.1	5.7U	5.7U	6.7	0.3 (2)
Xylene (total)	µg/L	91	28U	81	78	29	87	42	83	28U	28U	28U	5.4	5
Semi-Volatiles														
1,2-Dichlorobenzene	µg/L	16U	16U	16U	16U	16U	16U	16U	16U	16U	16U	16U	16U	3
1,4-Dichlorobenzene	µg/L	15U	15U	15U	15U	15U	15U	15U	14U	15U	14U	15U	15U	3
2,4-Dimethylphenol	µg/L	15	12U	13U	12U	12U	13U	13U	12U	14	12U	13U	13U	50 (2)
2-Methylphenol	µg/L	16U	15U	16U	15U	15U	16U	16U	15	15U	15U	16U	16U	NL
4-Methylphenol	µg/L	48	15U	24	16	15U	16U	20	32	29	15U	16U	16U	NL
Di-n-octyl phthalate	µg/L	27U	27U	27U	26U	27U	27U	27U	26U	26U	26U	27U	27U	50 (2)
Naphthalene	µg/L	18U	37	18U	17U	20	18U	18U	17U	17U	20	18U	18U	10
Phenol	µg/L	39	140	11	14	91	16	67	13	6U	55	6U	11	1

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/8/04*	*2/6/04*	*3/16/04*	*04/13/04*	*05/14/04*	*06/10/04*	*07/09/94*	*08/12/04*	*09/10/04*	*10/08/04*	*11/05/04*	*12/03/04*	*Surface Water Standard*	
Parameter	*Unit*														
Metals															
Aluminum	mg/L	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	NL	
Antimony	mg/L	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	00020U	00020U	00020U	00020U	0.003	
Arsenic	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.050	
Barium	mg/L	0.095	0.092	0.11	0.096	0.085	0.083	0.068	0.076	0.059	0.079	0.070	0.077	1.0	
Beryllium	mg/L	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.003	(2)
Cadmium	mg/L	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.005	
Chromium	mg/L	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.050	
Copper	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.023	(3)
Iron	mg/L	0.050U	0.066	0.050U	0.055	0.26	0.050U	0.056	0.097	0.20	0.22	0.11	0.050U	0.30	
Lead	mg/L	0.0060U	0.0060U	0.0060U	0.0060U	0.0060U	0.0060U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.012	
Magnesium	mg/L	0.68	4.2	1.2	1.0	5.4	0.66	2.8	0.57	5.4	5.2	5.2	2.7	35	
Manganese	mg/L	0.0030U	0.19	0.0033	0.0058	0.018	0.0030U	0.012	0.0030U	0.022	0.031	0.022	0.067	0.30	
Mercury	mg/L	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.0000026	(4)
Nickel	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.10	
Selenium	mg/L	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.0046	(4)
Silver	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.050	
Sodium	mg/L	362	425	425	422	423	349	319	305	334	447	360	294	NL	
Zinc	mg/L	0.030	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	2.0	(2)

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*1/8/04*	*2/6/04*	*3/16/04*	*04/13/04*	*05/14/04*	*06/10/04*	*07/09/94*	*08/12/04*	*09/10/04*	*10/08/04*	*11/05/04*	*12/03/04*	*Surface Water Standard* (1)
Parameter	*Unit*													
General Chemistry														
pH	S.U.	11	9.13	11.13	11.16	9.44	11.26	8.81	11.19	9.21	7.26	9.10	10.95	NL
Hardness	mg/L	450	452	446	484	408	430	336	312	430	372	348	360	NL
Total Dissolved Solids (TDS)	mg/L	1490	1770	1780	1760	1920	1560	1490	1390	1560	1720	1320	1220	NL
Total Suspended Solids (TSS)	mg/L	6	4	11	20	6	11	5	8	8	10	18	5	NL
Chloride	mg/L	742	986	869	809	1020	792	728	678	692	913	676	599	250
BOD	mg/L	18	10	13	19	17	16	6	11	15	11	6	15	NL
COD	mg/L	55	30	51	51	58	26	67	43	46	59	17	24	NL
Oil and Grease	mg/L	1.0U	1.0U	1.0U	1.0U	0.57	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NL
Organic Carbon	mg/L	9	9	6	5	6	6	8	7	8	9	8	7	NL
Alkalinity, Total (As CaCO3)	mg/L	56.0	23.0	71.2	110.0	12.3	122	45.7	113	37.8	44.6	46.5	55.7	NL
Bicarbonate (as CaCO3)	mg/L	10UJ	23	10U	10U	12.3	47.1	10U	10U	37.8	44.6	46.5	55.7	NL
Ammonia	mg/L	0.32	0.7	0.35	1.75	1.05	0.70	0.35	0.70	1.05	0.7	1.05	1.4	2.0
Nitrate (as N)	mg/L	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	10
TKN	mg/L	0.56	2.8	1.4	0.28	0	0.84	0.56	1.68	1.12	0.56	0.84	1.12	NL
Sulfate	mg/L	276	315	381	568	356	360	283	279	265	311	225	2.54	250
Sulfide	mg/L	4.0	1.2	3.2	5.6	1.6	1.6	8.4J	2.4	2.4J	5.6	2.4	2	0.002
Phenol	mg/L	0.015U	0.008U	0.009U	0.012U	0.010U	0.008U	0.010U	0.010U	0.010U	0.007U	0.008U	0.008U	0.001
Phosphorous	mg/L	0.20	0.11	0.24	0.23	0.13	0.05	0.20	0.06	0.14	0.10	0.14	0.10	0.020 (2)
Cyanide	mg/L	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.0052

Notes:

U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form
(5) - TOC analyzer malfunction prevented analysis of this compound.

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID: / *Sample Date:* / *Parameter*	*Unit*	*01/07/05*	*02/03/05*	*03/04/05*	*04/08/05*	*05/06/05*	*06/10/05*	*07/08/05*	*08/05/05*	*09/09/05*	*10/07/05*	*11/04/05*	*12/08/05*	*Surface Water Standard*	(1)
Volatiles															
1,1,1-Trichloroethane	µg/L	2.6U	2.6U	2.6U	2.6U	13U	2.6U	6.6U	1.3U	5.2U	5.2U	5.2U	5.2U	5	
1,1-Dichloroethane	µg/L	1.7U	1.7U	1.7U	1.7U	8.4U	9.0	4.2U	6.6	5.7	3.3U	11	7.9	5	
1,2-Dichloroethane	µg/L	1.7U	1.7U	1.7U	1.7U	8.5U	1.7U	4.2U	0.85U	3.4U	3.4U	3.4U	3.4U	0.6	
2-Butanone	µg/L	9.3U	9.3U	9.3U	9.3U	46U	9.3U	23U	4.6U	19U	19U	19U	19U	50	
Acetone	µg/L	21U	21U	21U	21U	100U	30	53U	10U	42U	42U	42U	42U	50	
Benzene	µg/L	2.2U	2.2U	2.2U	2.2U	11U	2.5	5.5U	1.3	4.4U	4.4U	4.4U	4.4U	1	
Chlorobenzene	µg/L	14	18	16	6.4	9.0U	1.8U	5.5	2.6	4.0	7.5	3.6U	4.7	5	
Ethylbenzene	µg/L	3.2	2.2	0.056U	0.056U	0.28U	9.0	8.4	9.4	4.6	6.6	11	8.3	5	
Methylene chloride	µg/L	7.0U	7.0U	7.0U	7.0U	35U	7.0U	17U	3.5U	14U	14U	14U	14U	5	
Styrene	µg/L	5.2U	5.2U	5.2U	5.2U	26U	5.2U	13U	2.6U	10U	10U	10U	10U	5	
Tetrachloroethene	µg/L	2.5U	2.5U	3.5	2.5U	13U	24	34	28	12	17	20	15	0.7	(2)
Toluene	µg/L	4.0	2.4U	5.3	3.1	14	45	40	44	23	25	45	34	5	
trans-1,2-Dichloroethene	µg/L	3.0U	3.0U	3.0U	3.0U	15U	3.0U	7.6U	1.5U	6.0U	6.0U	6.0U	6.0U	5	
Trichloroethene	µg/L	8.7	2.4U	12	8.5	29	140	100	90	67	61	120	86	5	
Vinyl chloride	µg/L	3.6	2.8U	2.8U	2.8U	14U	5.1	7.1U	1.4U	5.7U	6.6	5.7U	5.7U	0.3	(2)
Xylene (total)	µg/L	14U	14U	14U	14U	69U	46	35	46	28U	28U	55	41	5	
Semi-Volatiles															
1,2-Dichlorobenzene	µg/L	16U	16U	16U	16U	16U	1	1U	1U	1UJ	1	2	2	3	
1,4-Dichlorobenzene	µg/L	15U	14U	15U	15U	15U	1	1	1	1	2	2	2	3	
2,4-Dimethylphenol	µg/L	16	12U	13U	13U	12U	5	3	4	3	6	7	11	50	(2)
2-Methylphenol	µg/L	16U	15U	16U	16U	15U	6	4	7	1	5	8	7	NL	
4-Methylphenol	µg/L	49	15U	16	16U	15U	12	10	15	0.7U	12	21	21	NL	
Di-n-octyl phthalate	µg/L	27U	26U	27U	27U	27U	0.8U	0.8U	0.9U	0.9U	0.9U	0.9U	0.8U	50	(2)
Naphthalene	µg/L	18U	17U	33	18U	19	0.8U	0.8U	3	0.8U	0.8U	0.8U	0.8U	10	
Phenol	µg/L	34	6U	130	120J	68	0.4U	7	9	0.4U	17	4	50	1	

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*01/07/05*	*02/03/05*	*03/04/05*	*04/08/05*	*05/06/05*	*06/10/05*	*07/08/05*	*08/05/05*	*09/09/05*	*10/07/05*	*11/04/05*	*12/08/05*	*Surface Water Standard*	
Parameter	*Unit*														(1)
Metals															
Aluminum	mg/L	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20	0.20U	NL	
Antimony	mg/L	0.020U	0.020U	0.020U	0.020U	0.020U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.003	
Arsenic	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.050	
Barium	mg/L	0.068	0.069	0.085	0.15	0.088	0.067	0.055	0.063	0.073	0.082	0.093	0.10	1.0	
Beryllium	mg/L	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.003	(2)
Cadmium	mg/L	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.005	
Chromium	mg/L	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.050	
Copper	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.023	(3)
Iron	mg/L	0.098	0.54	0.37	3.4	0.22	0.050U	0.050U	0.050U	0.17	0.056	0.050U	0.050U	0.30	
Lead	mg/L	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.012	
Magnesium	mg/L	4.3	5.7	5.6	14.2	6.3	0.50	2.8	1.8	3.2	3.4	0.26	1.2	35	
Manganese	mg/L	0.01	0.035	0.033	0.34	0.053	0.0030U	0.0068	0.0030U	0.022	0.022	0.0030U	0.0030U	0.30	
Mercury	mg/L	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.0000026	(4)
Nickel	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.10	
Selenium	mg/L	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.0046	(4)
Silver	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.050	
Sodium	mg/L	387	422	448	504	347	289	229	235	264	292	302	357	NL	
Zinc	mg/L	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.020U	0.032	0.020U	0.020U	2.0	(2)

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*01/07/05*	*02/03/05*	*03/04/05*	*04/08/05*	*05/06/05*	*06/10/05*	*07/08/05*	*08/05/05*	*09/09/05*	*10/07/05*	*11/04/05*	*12/08/05*	*Surface Water Standard* (1)
Parameter	*Unit*													
General Chemistry														
pH	S.U.	9.71	8.94	9.27	8.18	9.3	11.13	8.42	10.67	9.91	9.54	11.25	11.04	NL
Hardness	mg/L	372	390	398	468	400	352	275	268	255	280	360	344	NL
Total Dissolved Solids (TDS)	mg/L	1520	1480	1620	2010	1540	1370	1110	1140	1050	1320	1320	1380	NL
Total Suspended Solids (TSS)	mg/L	278	147	27	82	21	12	11	6	6	4	6	4	NL
Chloride	mg/L	950	836J	1060	1200	883	729	516	408	451	716	664	762	250
BOD	mg/L	12	15	12	11	10	11	14	10	12	14	15	16	NL
COD	mg/L	52	48	52	65	35	51	56	38	47	31	31	61	NL
Oil and Grease	mg/L	0.28	1.0U	1.0U	1.0U	1.0U	0.28	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NL
Organic Carbon	mg/L	8	9	9	10	9	10	5.1	5.2	5.1	5.6	6.4	9.2	NL
Alkalinity, Total (As CaCO3)	mg/L	44	46.4	40	105	43.5	99.2	36.3	66	10.2	29.0	114	42	NL
Bicarbonate (as CaCO3)	mg/L	44	46.4	40	105	43.5	10U	36.3	66	10.2	29.0	114	42	NL
Ammonia	mg/L	0.7	0.7	0.7	0.35	1.05	0.35	0.35	0.7	0.35	0.70	0.70	0.70	2.0
Nitrate (as N)	mg/L	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	10
TKN	mg/L	0.56	0.28	0.56	0.28	1.4	0.28	0.56	0.56	0.28	0.56	0.56	0.84	NL
Sulfate	mg/L	273	232	431	256	279	276	223	199	206	291	256	263	250
Sulfide	mg/L	8.8	4	5.2	1.0U	1.0U	1.0U	1.0U	2.0	2.0	2.0	5.6	8.8	0.002
Phenol	mg/L	0.006U	0.012U	0.010U	0.014U	0.012U	0.009U	0.009U	0.007U	0.010U	0.010U	0.006U	0.008U	0.001
Phosphorous	mg/L	0.15	0.08	0.11	0.1	0.13	0.08	0.08	0.11	0.14	0.14	0.20	0.04	0.020 (2)
Cyanide	mg/L	0.005U	0.005U	0.005U	0.005U	0.005U	0.0050U	0.0050U	0.005U	0.005U	0.005U	0.005U	0.005U	0.0052

Notes:

U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form
(5) - TOC analyzer malfunction prevented analysis of this compound.

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*01/06/06*	*02/14/06*	*03/10/06*	*04/07/06*	*05/04/06*	*06/09/06*	*07/07/06*	*08/08/06*	*09/22/06*	*10/06/06*	*11/09/06*	*12/08/06*	*Surface Water Standard*	(1)
Parameter	*Unit*														
Volatiles															
1,1,1-Trichloroethane	µg/L	5.2U	5.2U	5.2U	5.2U	5.2U	5.2U	1.3U	1.3U	2.6U	2.6U	1.3U	1.3 U	5	
1,1-Dichloroethane	µg/L	8.9	10	11	12	3.3U	3.3U	1.1	8.3	1.7U	2.8	12	2.8	5	
1,2-Dichloroethane	µg/L	3.4U	3.4U	3.4U	3.4U	3.4U	3.4U	0.85U	0.85U	1.7U	1.7U	0.85U	0.85 U	0.6	
2-Butanone	µg/L	19U	19U	19U	19U	19U	19U	4.6U	4.6U	9.3U	9.3U	4.6U	4.6 U	50	
Acetone	µg/L	42U	42U	42U	42U	42U	42U	12	26	21U	21U	22	23	50	
Benzene	µg/L	4.4U	4.4U	4.4U	4.4U	4.4U	4.4U	1.4	4.1	3.0	3.4	1.5	3.4	1	
Chlorobenzene	µg/L	5.1	5.0	5.0	3.6U	8.6	7.8	6.3	7.7	9.8	11	3.9	6.0	5	
Ethylbenzene	µg/L	7.9	10	12	8.2	7.0U	7.0U	2.4	9.5	16	16	8.8	9.4	5	
Methylene chloride	µg/L	14U	14U	14U	6.8U	6.8U	14	1.7U	1.7U	3.4U	3.4U	1.7U	1.7U	5	
Styrene	µg/L	10U	10U	10U	6.6U	6.6U	6.6U	1.7U	1.7U	3.4U	3.4U	1.7U	1.7U	5	
Tetrachloroethene	µg/L	15	19	27	21	9.1	13	5.4	25	18	21	10	22	0.7	(2)
Toluene	µg/L	36	46	56	41	11	28	13	57	13	24	36	44	5	
trans-1,2-Dichloroethene	µg/L	6.0U	6.0U	6.0U	6.0U	6.0U	6.0U	1.5U	3.9	3.0U	3.0U	2.2	1.9	5	
Trichloroethene	µg/L	100	130	150	130	23	54	20	94	23	52	130	82	5	
Vinyl chloride	µg/L	5.7U	5.8	6.4	5.7U	5.7U	5.7U	2.9	11	4.3	5.2	4.6	1.4 U	0.3	(2)
Xylene (total)	µg/L	37	28U	55	41	28U	28U	9.1	41	14U	70	46	41	5	
Semi-Volatiles															
1,2-Dichlorobenzene	µg/L	2	2	2	2	1	0.2U	0.2U	0.2U	4	3	0.2U	0.2U	3	
1,4-Dichlorobenzene	µg/L	2	2	2	2	3	0.4U	2	2	6	4	2	0.4U	3	
2,4-Dimethylphenol	µg/L	9	11	14	10	5	4	3	6	19	9	22	6 J	50	(2)
2-Methylphenol	µg/L	6	7	8	5	4	6	3	10	5	4	0.3U	3	NL	
4-Methylphenol	µg/L	21	28	34	13	12	7	5	21	63	43	2	5	NL	
Di-n-octyl phthalate	µg/L	0.8U	0.9U	0.8U	0.8U	4U	21U	21U	21U	21U	21U	23U	21 U	50	(2)
Naphthalene	µg/L	12	11	1	0.8U	50	16	16	38	0.4U	0.4U	0.4U	0.4 U	10	
Phenol	µg/L	43	40	31	0.4U	150	21	46	170	41	10	0.1U	6	1	

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:															
Sample Date:		*01/06/06*	*02/14/06*	*03/10/06*	*04/07/06*	*05/04/06*	*06/09/06*	*07/07/06*	*08/08/06*	*09/22/06*	*10/06/06*	*11/09/06*	*12/08/06*	*Surface Water Standard*	(1)
Parameter	*Unit*														
Metals															
Aluminum	mg/L	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	NL	
Antimony	mg/L	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.20U	0.003	
Arsenic	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.050	
Barium	mg/L	0.10	0.11	0.94	0.093	0.082	0.074	0.071	0.061	0.074	0.076	0.086	0.06	1.0	
Beryllium	mg/L	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.0020U	0.003	(2)
Cadmium	mg/L	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.0010U	0.005	
Chromium	mg/L	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.0040U	0.050	
Copper	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.023	(3)
Iron	mg/L	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.074	0.054	0.20	0.27	0.30	
Lead	mg/L	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.0050U	0.012	
Magnesium	mg/L	2.3	1.2	0.57	0.46	7.6	1.6	7.0	3.0	3.2	2.1	58	4.8	35	
Manganese	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.011	0.011	0.0034	0.0093	0.30	
Mercury	mg/L	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.00020U	0.0000026	(4)
Nickel	mg/L	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.010U	0.10	
Selenium	mg/L	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.015U	0.0046	(4)
Silver	mg/L	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.0030U	0.050	
Sodium	mg/L	357	425	454	419	361	350	278	282	366	337	371	305	NL	
Zinc	mg/L	0.020U	0.020U	0.010U	0.010U	0.010U	0.010U	0.010U	0.018	0.0109	0.012	0.014	0.015	2.0	(2)

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:														
Sample Date:		*01/06/06*	*02/14/06*	*03/10/06*	*04/07/06*	*05/04/06*	*06/09/06*	*07/07/06*	*08/08/06*	*09/22/06*	*10/06/06*	*11/09/06*	*12/08/06*	*Surface Water Standard* (1)
Parameter	*Unit*													
General Chemistry														
pH	S.U.	10.73	11.07	10.99	10.96	9.74	10.62	8.32	9.86	10.82	11.08	11.19	8.53	NL
Hardness	mg/L	329	342	400	408	289	310	292	260	342	320	296	200	NL
Total Dissolved Solids (TDS)	mg/L	1510	1700	1670	1730	1500	1470	1180	1170	1440	1430	1350	1020	NL
Total Suspended Solids (TSS)	mg/L	6	6	10	5	4	3	27	13	6	26	8	9	NL
Chloride	mg/L	910	897	914	962J	914	737	493	495	728	791	752	412	250
BOD	mg/L	10	10	9	10	12	7	10	12	12	11	15	14	NL
COD	mg/L	38	45	47	47	47	47	47	161	177	47	27	20	NL
Oil and Grease	mg/L	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0 U	NL
Organic Carbon	mg/L	7.9	8.1	8.3	8.9	9.3	8.1	6.7	9.1	8	6.2	6.7	7.1	NL
Alkalinity, Total (As CaCO3)	mg/L	69	71.4	95.1	75.4	26.9	44.9	92.6	30.3	64.5	93.4	72.0	44.2	NL
Bicarbonate (as CaCO3)	mg/L	69	10U	10U	75.4	26.9	44.9	92.6	30.3	64.5	93.4	10U	44.2	NL
Ammonia	mg/L	0.35	1.05	0.28	0.70	0.70	0.28	0.70	1.05	0.70	1.05	0.70	1.05	2.0
Nitrate (as N)	mg/L	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050 U	10
TKN	mg/L	0.28	0.84	0.56	0.84	0.56	0.84	0.56	1.12	0.84	0.56	0.28	1.12	NL
Sulfate	mg/L	297	288	285	351	296	259	182	242	230	208	269	207	250
Sulfide	mg/L	4.0	2.9	5.2	6.0	4.4	6.8	2.8	6.4	8.0	8.0	7.2	6.4	0.002
Phenol	mg/L	0.008U	0.010U	0.009U	0.011U	0.007U	0.008U	0.012U	0.007U	0.011U	0.013U	0.007U	0.006 U	0.001
Phosphorous	mg/L	0.06	0.37	0.13	0.05	0.10	0.12	0.07	0.17	0.14	0.14	0.18	0.13	0.020 (2)
Cyanide	mg/L	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005U	0.005 U	0.0052

Notes:

U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form
(5) - TOC analyzer malfunction prevented analysis of this compound.

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:					
Sample Date:		*01/05/07*	*02/09/07*	*Surface Water Standard*	(1)
Parameter	*Unit*				
Volatiles					
1,1,1-Trichloroethane	µg/L	1.3 U	1.3 U	5	
1,1-Dichloroethane	µg/L	14	8.2	5	
1,2-Dichloroethane	µg/L	0.85 U	0.85 U	0.6	
2-Butanone	µg/L	4.6 U	4.6 U	50	
Acetone	µg/L	19	17	50	
Benzene	µg/L	2.2	1.6	1	
Chlorobenzene	µg/L	4.9	5.6	5	
Ethylbenzene	µg/L	10	9.1	5	
Methylene chloride	µg/L	1.7U	1.7U	5	
Styrene	µg/L	1.7U	1.7U	5	
Tetrachloroethene	µg/L	16	15	0.7	(2)
Toluene	µg/L	57	35	5	
trans-1,2-Dichloroethene	µg/L	2.7	2.2	5	
Trichloroethene	µg/L	160	120	5	
Vinyl chloride	µg/L	1.4U	1.4U	0.3	(2)
Xylene (total)	µg/L	52	43	5	
Semi-Volatiles					
1,2-Dichlorobenzene	µg/L	1	0.2U	3	
1,4-Dichlorobenzene	µg/L	0.4U	0.4U	3	
2,4-Dimethylphenol	µg/L	5	4	50	(2)
2-Methylphenol	µg/L	8	5	NL	
4-Methylphenol	µg/L	14	14	NL	
Di-n-octyl phthalate	µg/L	21U	22U	50	(2)
Naphthalene	µg/L	18	19	10	
Phenol	µg/L	69	62	1	

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:					
Sample Date:		*01/05/07*	*02/09/07*	*Surface Water Standard*	(1)
Parameter	*Unit*				
Metals					
Aluminum	mg/L	0.20U	0.20U	NL	
Antimony	mg/L	0.20U	0.20U	0.003	
Arsenic	mg/L	0.010U	0.010U	0.050	
Barium	mg/L	0.080	0.077	1.0	
Beryllium	mg/L	0.0020U	0.0020U	0.003	(2)
Cadmium	mg/L	0.0010U	0.0010U	0.005	
Chromium	mg/L	0.0040U	0.0040U	0.050	
Copper	mg/L	0.010U	0.010U	0.023	(3)
Iron	mg/L	0.078	0.064	0.30	
Lead	mg/L	0.0050U	0.0050U	0.012	
Magnesium	mg/L	1.9	2.3	35	
Manganese	mg/L	0.0037	0.0071	0.30	
Mercury	mg/L	0.00020U	0.00020U	0.0000026	(4)
Nickel	mg/L	0.010U	0.010U	0.10	
Selenium	mg/L	0.015U	0.015U	0.0046	(4)
Silver	mg/L	0.0030U	0.0030U	0.050	
Sodium	mg/L	376	365	NL	
Zinc	mg/L	0.010U	0.010U	2.0	(2)

TABLE 2.10

ANALYTICAL RESULTS SUMMARY
SITE EFFLUENT
GRATWICK-RIVERSIDE PARK SITE

Sample ID:					
Sample Date:		*01/05/07*	*02/09/07*	*Surface Water Standard*	(1)
Parameter	*Unit*				
General Chemistry					
pH	S.U.	10.94	10.78	NL	
Hardness	mg/L	284	269	NL	
Total Dissolved Solids (TDS)	mg/L	1360	1330	NL	
Total Suspended Solids (TSS)	mg/L	4	8	NL	
Chloride	mg/L	897	741	250	
BOD	mg/L	8	7	NL	
COD	mg/L	74	67	NL	
Oil and Grease	mg/L	1.0 U	1.0 U	NL	
Organic Carbon	mg/L	8.8	11.5	NL	
Alkalinity, Total (As CaCO3)	mg/L	75.9	56.8	NL	
Bicarbonate (as CaCO3)	mg/L	10U	10U	NL	
Ammonia	mg/L	0.70	0.70	2.0	
Nitrate (as N)	mg/L	0.050 U	0.050U	10	
TKN	mg/L	0.84	0.56	NL	
Sulfate	mg/L	267	235	250	
Sulfide	mg/L	6.8J	6.0	0.002	
Phenol	mg/L	0.009U	0.009U	0.001	
Phosphorous	mg/L	0.12	0.01	0.020	(2)
Cyanide	mg/L	0.005 U	0.005 U	0.0052	

Notes:

U - Non-detect at associated value
- - Not Analyzed
J - Estimated
NL - Not Listed
SL - Sample Lost
(1) - Lowest Standard/Guidance Value shown
(2) - Guidance Value
(3) - Calculated using a hardness of 300 ppm
(4) - Applies to dissolved form
(5) - TOC analyzer malfunction prevented analysis of this compound.

TABLE 2.11

GROUNDWATER VOLUMES DISCHARGED
TO NORTH TONAWANDA POTW
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Month	*Volumes (gallons)*	
	Monthly	*Total*
May 2001	2,900,000	2,900,000
June 2001	2,353,800	5,253,800
July 2001	1,488,500	6,742,300
August 2001	712,800	7,455,100
September 2001	473,100	7,928,200
October 2001	1,213,100	9,141,300
November 2001	1,281,100	10,422,400
December 2001	231,700 (1)	10,654,100
January 2002	1,383,200 (2)	12,037,300
February 2002	1,186,000	13,223,300
March 2002	233,600	13,456,900
April 2002	736,000	14,192,900
May 2002	348,200	14,541,100
June 2002	1,137,200	15,678,300
July 2002	869,300	16,547,600
August 2002	1,060,800	17,608,400
September 2002	707,000	18,315,400
October 2002	679,800	18,995,100
November 2002	489,500	19,484,700
December 2002	743,500	20,228,200
January 2003	1,150,700	21,378,900
February 2003	483,300	21,862,200
March 2003	402,300	22,264,500
April 2003	531,900	22,796,400
May 2003	655,600	23,452,000
June 2003	682,100	24,134,000
July 2003	942,000	25,076,100
August 2003	627,500	25,703,600
September 2003	349,600	26,053,200
October 2003	966,500	27,019,700
November 2003	442,200	27,461,900
December 2003	463,900	27,925,800
January 2004	443,900	28,369,700

TABLE 2.11

GROUNDWATER VOLUMES DISCHARGED
TO NORTH TONAWANDA POTW
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Month	*Volumes (gallons)*	
	Monthly	*Total*
February 2004	253,700	28,623,400
March 2004	403,700	29,027,100
April 2004	433,600	29,460,700
May 2004	377,400	29,838,100
June 2004	395,000	30,233,100
July 2004	384,300	30,617,400
August 2004	479,700	31,097,100
September 2004	413,900	31,511,000
October 2004	319,400	31,902,400
November 2004	249,200	32,151,600
December 2004	209,900	32,361,500
January 2005	310,100	32,671,600
February 2005	301,100	32,972,700
March 2005	250,200	33,222,900
April 2005	378,400	33,601,300
May 2005	458,800	34,060,100
June 2005	455,900	34,516,000
July 2005	270,200	34,786,200
August 2005	285,100	35,071,300
September 2005	395,600	35,466,900
October 2005	333,200	35,800,100
November 2005	360,200	36,160,300
December 2005	395,300	36,555,600
January 2006	297,500	36,853,100
February 2006	508,300	37,361,400
March 2006	244,700	37,606,100
April 2006	224,400	37,830,500
May 2006	153,300	37,983,800
June 2006	262,300	38,246,100
July 2006	212,900	38,459,000
August 2006	357,500	38,816,500
September 2006	777,000	39,593,500
October 2006	254,700	39,848,200

TABLE 2.11

GROUNDWATER VOLUMES DISCHARGED
TO NORTH TONAWANDA POTW
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

Month	*Volumes (gallons)*	
	Monthly	*Total*
November 2006	778,700	40,626,900
December 2006	496,600	41,123,500
January 2007	410,500	41,534,000
February 2007	494,600	42,028,600
March, April & May 2007	1,489,200(3)	43,517,800

Notes:

(1) To December 7, 2001.
(2) From December 8, 2001.
(3) Plotted as 496,400 gallons on Figure 2.18 for each of March, April, and May 2007.

TABLE 2.12

SURFACE WATER SAMPLING SUMMARY
OPERATION AND MAINTENANCE MANUAL
GRATWICK-RIVERSIDE PARK SITE
NORTH TONAWANDA, NEW YORK

LOCATIONS

River South
River Middle
River North

FREQUENCY

- quarterly for 2 years following GWS startup (concurrent with groundwater sampling)
- semi-annually for Year 3 (concurrent with groundwater sampling)
- annually for Years 3 through 7 (concurrent with groundwater sampling)
  (review after Year 7, May 2008)

PARAMETERS

Volatiles

Acetone
Benzene
2-Butanone
Chlorobenzene
1,1-Dichloroethane
trans-1,2-Dichloroethene
Ethylbenzene
Methylene Chloride
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
Xylenes (Total)

Semi-Volatiles

1,2-Dichlorobenzene
1,4-Dichlorobenzene
2,4-Dimethylphenol
2-Methylphenol
4-Methylphenol
Naphthalene
Di-n-octylphthalate
Phenol

APPENDIX A

MONTHLY INSPECTION LOGS (JUNE 2006 TO MAY 2007)

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10/6/2016 (MM DD YY)

INSPECTOR(S): D. Tyran / R. Nashett

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 06 26 06 (MM DD YY)

INSPECTOR(S): D. Tyran / R. Nashett

Item	Inspect For	Action Required	Comments
2. Landfill Cap (continued)			
[X]	Access Roads - bare areas, dead/dying veg.	None	
[X]	- erosion		
[X]	- potholes or puddles		
[X]	- obstruction		
3. Wetlands (Area "F")	- dead/dying vegetation	None	
	- change in water budget	Water level high	
	- general condition of wetlands	Good	
4. Other Site Systems			
[ ]	Perimeter Fence - integrity of fence	NA	
[ ]	- integrity of gates		
[ ]	- integrity of locks		
[ ]	- placement and condition of signs		

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10 | 6 | 26 | 0 | 6 (MM DD YY)

INSPECTOR(S): D. Tyran / R. Nashett

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 07/31/06 (MM DD YY)

INSPECTOR(S): Rachel Nashett, Danielle Cara

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 07/31/06 (MM DD YY)

INSPECTOR(S): Rachel Nashett, Danielle Carra

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 07/31/06 (MM DD YY)

INSPECTOR(S): Rachel Nashett, Danielle Carra

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 08/30/06 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT DAVID TYRAN

	Item	*Inspect For*	*Action Required*	*Comments*
1.	**Perimeter Collection System/Off-Site Forcemain**			
X	Manholes	- cover on securely	NONE	
X		- condition of cover		
X		- condition of inside of manhole		
X		- flow conditions		
X	Wet Wells	- cover on securely		
X		- condition of cover		
X		- condition of inside of wet well		
2.	**Landfill Cap**			
X	Vegetated Soil Cover	- erosion	NONE	
X		- bare areas		
X		- washouts		
X		- leachate seeps		
X		- length of vegetation		
X		- dead/dying vegetation	SAME AS BEFORE (BUSHES, TREES, GRASS)	

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 08/25/06 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT DAVE TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 08/25/06 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT DAVID TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 09/24/16 (MM DD YY)

INSPECTOR(S): ~~RBA~~ DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 09 / 22 / 06 (MM DD YY)

INSPECTOR(S): DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10/12/2016 (MM DD YY)

INSPECTOR(S): DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 1/31/96 (MM DD YY)

INSPECTOR(S): RBN / DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 1/6/3/1/0/6 (MM DD YY)

INSPECTOR(S): RBN/DDT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 1/10/31/10/6 (MM DD YY)

INSPECTOR(S): RBN/DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 11/29/06 (MM DD YY)

INSPECTOR(S): D. Tyran

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 11/29/06 (MM DD YY)

INSPECTOR(S): D. Tyran

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 11/13/96 (MM DD YY)

INSPECTOR(S): D. Tyran

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 11/28/06 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT / DAVID TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 12/29/06 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT / DAVID TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 1 2 2 9 0 6 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT / DAVID TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 01/26/17 (MM DD YY)

INSPECTOR(S): RBN, DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10/26/07 (MM DD YY)

INSPECTOR(S): RBN, DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10/26/17 (MM DD YY)

INSPECTOR(S): RBN, DJT

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10|2|2|7|0|7| (MM DD YY)

INSPECTOR(S): R. NASHETT D. TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 0 2 2 7 0 7 (MM DD YY)

INSPECTOR(S): R. NASHETT D. TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 02/27/07 (MM DD YY)

INSPECTOR(S): R. NASHETT. D. TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 03/30/07 (MM DD YY)

INSPECTOR(S): D. Tyran

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 01/30/07 (MM DD YY)

INSPECTOR(S): D. Tyran

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 01 / 33 / 07 (MM DD YY)

INSPECTOR(S): D. Tyran

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10/30/97 (MM DD YY)

INSPECTOR(S): D. Tyran, R. Nesbett

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 04/30/07 (MM DD YY)

INSPECTOR(S): D. Tyran, R. Nesbett

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10|4|30|07 (MM DD YY)

INSPECTOR(S): D. Tyran, R. Nashett

	Item	*Inspect For*	*Action Required*	*Comments*
4.	**Other Site Systems (continued)**			
X	Drainage Ditches/ Swale Outlets	- sediment build-up	None	
X		- erosion		
X		- condition of erosion protection		
X		- flow obstructions		
X		- dead/dying vegetation		
X		- cable concrete/gabion mats and riprap		
X	Culverts	- sediment build-up		
X		- erosion		
X		- condition of erosion protection		
X		- flow obstructions	Some garbage and trees washed up on River North outlet	
X	Gas Vents	- intact / damage	None	
X	Wells	- locks secure		

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 10/5/2/4/0/7 (MM DD YY)

INSPECTOR(S): RACHEL NASHETT / DAVE TYRAN

	Item	*Inspect For*	*Action Required*	*Comments*
1.	**Perimeter Collection System/Off-Site Forcemain**			
X	Manholes	- cover on securely	NONE	
X		- condition of cover		
X		- condition of inside of manhole		
X		- flow conditions		
X	Wet Wells	- cover on securely	NONE	
X		- condition of cover		
X		- condition of inside of wet well		
2.	**Landfill Cap**			
X	Vegetated Soil Cover	- erosion	NONE	
X		- bare areas		
X		- washouts		
X		- leachate seeps		
X		- length of vegetation		
X		- dead/dying vegetation	SAME AS BEFORE (BUSHES, TREES, GRASS)	

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 05/24/07 (MM DD YY)

INSPECTOR(S): R. NASHETT / D. TYRAN

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

FORM 17

GRATWICK-RIVERSIDE PARK SITE
MONTHLY INSPECTION LOG

PROJECT NAME: Gratwick-Riverside Park Site

LOCATION: Wheatfield, New York

DATE: 05/24/07 (MM DD YY)

INSPECTOR(S): R. NASHETT / D. TYRAN

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

FORM 17

APPENDIX B

QA/QC REVIEWS

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 7987DM-95

FROM: Susan C. Scrocchi/jbh/81-NF

DATE: August 17, 2006

E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
June 2006

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during June 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy. The BS was prepared in duplicate for the SVOC analysis. All recoveries were similar yielding acceptable analytical precision.

A matrix spike was prepared and analyzed for metals. All results were acceptable indicating good analytical accuracy for these analytes.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualification.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTERWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK
JUNE 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*6/9/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	5.2 U
1,1-Dichloroethane	µg/L	3.3 U
1,2-Dichloroethane	µg/L	3.4 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	19 U
Acetone	µg/L	42 U
Benzene	µg/L	4.4 U
Chlorobenzene	µg/L	7.8
Ethylbenzene	µg/L	7.0 U
Methylene chloride	µg/L	14
Styrene	µg/L	6.6 U
Tetrachloroethene	µg/L	13
Toluene	µg/L	28
trans-1,2-Dichloroethene	µg/L	6.0 U
Trichloroethene	µg/L	54
Vinyl chloride	µg/L	5.7 U
Xylene (total)	µg/L	28 U
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U
2,4-Dimethylphenol	µg/L	4
2-Methylphenol	µg/L	6
4-Methylphenol	µg/L	7
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	16
Phenol	µg/L	21
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.074
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.050 U
Lead	mg/L	0.0050 U
Magnesium	mg/L	1.6
Manganese	mg/L	0.0030 U
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	350
Zinc	mg/L	0.010 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTERWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK
JUNE 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*6/9/2006*
Parameters	*Units*	
General Chemistry		
Alkalinity, Total (As CaCO3)	mg/L	44.9
Ammonia	mg/L	0.28
Bicarbonate (as CaCO3)	mg/L	44.9
Biochemical Oxygen Demand (BOD)	mg/L	7
Chemical Oxygen Demand (COD)	mg/L	47
Chloride	mg/L	737
Cyanide (total)	mg/L	0.005 U
Hardness	mg/L	310
Nitrate (as N)	mg/L	0.050 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u.	10.62
Phenolics (Total)	mg/L	0.008 U
Phosphorus	mg/L	0.12
Sulfate	mg/L	259
Sulfide	mg/L	6.8
Total Dissolved Solids (TDS)	mg/L	1470
Total Kjeldahl Nitrogen (TKN)	mg/L	0.84
Total Organic Carbon (TOC)	mg/L	8.1
Total Suspended Solids (TSS)	mg/L	3
Volatile Suspended Solids	mg/L	2

Note:
U Non-detect at associated value.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 7987DM-95

FROM: Karen Bevilacqua/jbh/82-NF KB/jbh

DATE: September 13, 2006

E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
July 2006

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during July 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy. The BS was prepared in duplicate for the SVOC analysis. All recoveries were similar yielding acceptable analytical precision with the exception of a high relative percent difference (RPD) for di-n-octyl phthalate. All associated sample results were non-detect and no qualification of data was necessary.

A matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed for sulfide. All results were acceptable indicating good analytical accuracy and precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualification.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
JULY 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*7/7/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	1.3 U
1,1-Dichloroethane	µg/L	1.1
1,2-Dichloroethane	µg/L	0.85 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	4.6 U
Acetone	µg/L	12
Benzene	µg/L	1.4
Chlorobenzene	µg/L	6.3
Ethylbenzene	µg/L	2.4
Methylene chloride	µg/L	1.7 U
Styrene	µg/L	1.7 U
Tetrachloroethene	µg/L	5.4
Toluene	µg/L	13
trans-1,2-Dichloroethene	µg/L	1.5 U
Trichloroethene	µg/L	20
Vinyl chloride	µg/L	2.9
Xylene (total)	µg/L	9.1
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	0.2 U
1,4-Dichlorobenzene	µg/L	2
2,4-Dimethylphenol	µg/L	3
2-Methylphenol	µg/L	3
4-Methylphenol	µg/L	5
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	16
Phenol	µg/L	46
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.071
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.050 U
Lead	mg/L	0.0050 U
Magnesium	mg/L	7.0
Manganese	mg/L	0.021
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	278
Zinc	mg/L	0.010 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
JULY 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*7/7/2006*
Parameters	*Units*	
General Chemistry		
Alkalinity, Total (As CaCO3)	mg/L	92.6
Bicarbonate (as CaCO3)	mg/L	92.6
Chloride	mg/L	493
Hardness	mg/L	292
Nitrate (as N)	mg/L	0.050 U
Sulfate	mg/L	182
Sulfide	mg/L	2.8
Total Dissolved Solids (TDS)	mg/L	1180
Ammonia	mg/L	0.70
Biochemical Oxygen Demand (BOD)	mg/L	10
Chemical Oxygen Demand (COD)	mg/L	47
Cyanide (total)	mg/L	0.005 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u.	8.32
Phenolics (Total)	mg/L	0.012 U
Phosphorus	mg/L	0.07
Total Kjeldahl Nitrogen (TKN)	mg/L	0.56
Total Organic Carbon (TOC)	mg/L	6.7
Total Suspended Solids (TSS)	mg/L	27
Volatile Suspended Solids	mg/L	13

Note:
U Non-detect at associated value.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 7987DM-95

FROM: Karen Bevilacqua/jbh/83-NF KB/jbh

DATE: October 24, 2006

E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
August 2006

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during August 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy.

A matrix spike (MS) was prepared and analyzed for sulfate. All results were acceptable indicating good analytical accuracy.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualification.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
AUGUST 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*8/8/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	1.3 U
1,1-Dichloroethane	µg/L	8.3
1,2-Dichloroethane	µg/L	0.85 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	4.6 U
Acetone	µg/L	26
Benzene	µg/L	4.1
Chlorobenzene	µg/L	7.7
Ethylbenzene	µg/L	9.5
Methylene chloride	µg/L	1.7 U
Styrene	µg/L	1.7 U
Tetrachloroethene	µg/L	25
Toluene	µg/L	57
trans-1,2-Dichloroethene	µg/L	3.9
Trichloroethene	µg/L	94
Vinyl chloride	µg/L	11
Xylene (total)	µg/L	41
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	0.2 U
1,4-Dichlorobenzene	µg/L	2
2,4-Dimethylphenol	µg/L	6
2-Methylphenol	µg/L	10
4-Methylphenol	µg/L	21
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	38
Phenol	µg/L	170
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.061
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.050 U
Lead	mg/L	0.0050 U
Magnesium	mg/L	3.0
Manganese	mg/L	0.0030 U
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
AUGUST 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*8/8/2006*
Parameters	*Units*	
Metals (Cont'd.)		
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	282
Zinc	mg/L	0.018
GeneralChemistry		
Alkalinity, Total (As CaCO3)	mg/L	30.3
Bicarbonate (as CaCO3)	mg/L	30.3
Chloride	mg/L	495
Hardness	mg/L	260
Nitrate (as N)	mg/L	0.050 U
Sulfate	mg/L	242
Sulfide	mg/L	6.4
Total Dissolved Solids (TDS)	mg/L	1170
Ammonia	mg/L	1.05
Biochemical Oxygen Demand (BOD)	mg/L	12
Chemical Oxygen Demand (COD)	mg/L	161
Cyanide (total)	mg/L	0.005 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u	9.86
Phenolics (Total)	mg/L	0.007 U
Phosphorus	mg/L	0.17
Total Kjeldahl Nitrogen (TKN)	mg/L	1.12
Total Organic Carbon (TOC)	mg/L	9.1
Total Suspended Solids (TSS)	mg/L	13
Volatile Suspended Solids	mg/L	7

Note:
U Non-detect at associated value.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 7987DM-95

FROM: Karen Bevilacqua/jbh/84-NF

DATE: October 31, 2006

E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
September 2006

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during September 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis with the exception of 1,4-dichlorobenzene. All associated sample results were significantly greater than the concentration found in the blank and no qualification of data was necessary.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy. The BS was prepared in duplicate for the SVOC analysis. All recoveries were similar yielding acceptable analytical precision.

A trip blank was collected and analyzed with the volatile samples. All results were non-detect.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualification.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
SEPTEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*9/22/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	2.6 U
1,1-Dichloroethane	µg/L	1.7 U
1,2-Dichloroethane	µg/L	1.7 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	9.3 U
Acetone	µg/L	21 U
Benzene	µg/L	3.0
Chlorobenzene	µg/L	9.8
Ethylbenzene	µg/L	16
Methylene chloride	µg/L	3.4 U
Styrene	µg/L	3.3 U
Tetrachloroethene	µg/L	18
Toluene	µg/L	13
trans-1,2-Dichloroethene	µg/L	3.0 U
Trichloroethene	µg/L	23
Vinyl chloride	µg/L	4.3
Xylene (total)	µg/L	14 U
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	4
1,4-Dichlorobenzene	µg/L	6
2,4-Dimethylphenol	µg/L	19
2-Methylphenol	µg/L	5
4-Methylphenol	µg/L	63
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	0.4 U
Phenol	µg/L	41
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.074
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.074
Lead	mg/L	0.0050 U
Magnesium	mg/L	3.2

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
SEPTEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*9/22/2006*
Parameters	*Units*	
Metals (Cont'd.)		
Manganese	mg/L	0.011
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	366
Zinc	mg/L	0.010 U
General Chemistry		
Alkalinity, Total (As CaCO3)	mg/L	64.5
Bicarbonate (as CaCO3)	mg/L	64.5
Chloride	mg/L	728
Hardness	mg/L	342
Nitrate (as N)	mg/L	0.050 U
Sulfate	mg/L	230
Sulfide	mg/L	8.0
Total Dissolved Solids (TDS)	mg/L	1440
Ammonia	mg/L	0.70
Biochemical Oxygen Demand (BOD)	mg/L	12
Chemical Oxygen Demand (COD)	mg/L	177
Cyanide (total)	mg/L	0.005 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u.	10.82
Phenolics (Total)	mg/L	0.011 U
Phosphorus	mg/L	0.14
Total Kjeldahl Nitrogen (TKN)	mg/L	0.84
Total Organic Carbon (TOC)	mg/L	8
Total Suspended Solids (TSS)	mg/L	6
Volatile Suspended Solids	mg/L	3

Note:
U Non-detect at associated value.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 007987DM-95

FROM: Karen Bevilacqua/jbh/85-NF

DATE: December 20, 2006

E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
October 2006

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during October 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy.

A matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed for SVOCs. All recoveries were acceptable indicating good analytical accuracy and precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualification.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTER WATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
OCTOBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*10/6/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	2.6 U
1,1-Dichloroethane	µg/L	2.8
1,2-Dichloroethane	µg/L	1.7 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	9.3 U
Acetone	µg/L	21 U
Benzene	µg/L	3.4
Chlorobenzene	µg/L	11
Ethylbenzene	µg/L	16
Methylene chloride	µg/L	3.4 U
Styrene	µg/L	3.3 U
Tetrachloroethene	µg/L	21
Toluene	µg/L	24
trans-1,2-Dichloroethene	µg/L	3.0 U
Trichloroethene	µg/L	52
Vinyl chloride	µg/L	5.2
Xylene (total)	µg/L	70
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	3
1,4-Dichlorobenzene	µg/L	4
2,4-Dimethylphenol	µg/L	9
2-Methylphenol	µg/L	4
4-Methylphenol	µg/L	43
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	0.4 U
Phenol	µg/L	10
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.076
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.054
Lead	mg/L	0.0050 U
Magnesium	mg/L	2.1
Manganese	mg/L	0.011
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	337
Zinc	mg/L	0.012

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTER WATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
OCTOBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*10/6/2006*
Parameters	*Units*	
General Chemistry		
Alkalinity, Total (As CaCO3)	mg/L	93.4
Ammonia	mg/L	1.05
Bicarbonate (as CaCO3)	mg/L	93.4
Biochemical Oxygen Demand (BOD)	mg/L	11
Chemical Oxygen Demand (COD)	mg/L	47
Chloride	mg/L	791
Cyanide (total)	mg/L	0.005 U
Hardness	mg/L	320
Nitrate (as N)	mg/L	0.050 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u.	11.08
Phenolics (Total)	mg/L	0.013 U
Phosphorus	mg/L	0.14
Sulfate	mg/L	208
Sulfide	mg/L	8.0
Total Dissolved Solids (TDS)	mg/L	1430
Total Kjeldahl Nitrogen (TKN)	mg/L	0.56
Total Organic Carbon (TOC)	mg/L	6.2
Total Suspended Solids (TSS)	mg/L	26
Volatile Suspended Solids	mg/L	2

Note:
U Non-detect at associated value.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 007987DM-95

FROM: Karen Bevilacqua/jbh/86-NF

DATE: December 20, 2006
E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
November 2006

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during November 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy.

A matrix spike (MS) was prepared and analyzed for nitrate. All recoveries were acceptable indicating good analytical accuracy.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualification.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTER WATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
NOVEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*11/9/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	1.3 U
1,1-Dichloroethane	µg/L	12
1,2-Dichloroethane	µg/L	0.85 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	4.6 U
Acetone	µg/L	22
Benzene	µg/L	1.5
Chlorobenzene	µg/L	3.9
Ethylbenzene	µg/L	8.8
Methylene chloride	µg/L	1.7 U
Styrene	µg/L	1.7 U
Tetrachloroethene	µg/L	10
Toluene	µg/L	36
trans-1,2-Dichloroethene	µg/L	2.2
Trichloroethene	µg/L	130
Vinyl chloride	µg/L	4.6
Xylene (total)	µg/L	46
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	0.2 U
1,4-Dichlorobenzene	µg/L	2
2,4-Dimethylphenol	µg/L	22
2-Methylphenol	µg/L	0.3 U
4-Methylphenol	µg/L	2
Di-n-octyl phthalate	µg/L	23 U
Naphthalene	µg/L	0.4 U
Phenol	µg/L	0.1 U
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.086
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.20
Lead	mg/L	0.0050 U
Magnesium	mg/L	0.58
Manganese	mg/L	0.0034
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	371
Zinc	mg/L	0.014

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTER WATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
NOVEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*11/9/2006*
Parameters	*Units*	

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTER WATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
NOVEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*11/9/2006*
Parameters	*Units*	
General Chemistry		
Alkalinity, Total (As CaCO3)	mg/L	72.0
Ammonia	mg/L	0.70
Bicarbonate (as CaCO3)	mg/L	10 U
Biochemical Oxygen Demand (BOD)	mg/L	15
Chemical Oxygen Demand (COD)	mg/L	27
Chloride	mg/L	752
Cyanide (total)	mg/L	0.005 U
Hardness	mg/L	296
Nitrate (as N)	mg/L	0.050 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u.	11.19
Phenolics (Total)	mg/L	0.007 U
Phosphorus	mg/L	0.18
Sulfate	mg/L	269
Sulfide	mg/L	7.2
Total Dissolved Solids (TDS)	mg/L	1350
Total Kjeldahl Nitrogen (TKN)	mg/L	0.28
Total Organic Carbon (TOC)	mg/L	6.7
Total Suspended Solids (TSS)	mg/L	8
Volatile Suspended Solids	mg/L	4

Note:
U Non-detect at associated value.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 007987DM-95

FROM: Karen Bevilacqua/jbh/87-NF KB/jbh

DATE: February 9, 2007
E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
December 2006

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during December 2006. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy. The SVOC BS was prepared in duplicate to assess laboratory precision. All recoveries showed acceptable precision with the exception of 2,4-dimethylphenol yielding a relative percent difference (RPD) outside the laboratory control limits. The associated positive sample result was qualified as estimated based on the implied variability (see Table 2).

A matrix spike (MS) was prepared and analyzed for mercury and sulfate. All recoveries were acceptable indicating good analytical accuracy. The mercury MS was prepared in duplicate to assess laboratory precision. All recoveries were acceptable indicating good analytical precision.

A trip was collected and analyzed for VOCs. All results were non-detect for the compounds of interest.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use with the qualifications noted.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
DECEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*12/8/2006*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	1.3 U
1,1-Dichloroethane	µg/L	2.8
1,2-Dichloroethane	µg/L	0.85 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	4.6 U
Acetone	µg/L	23
Benzene	µg/L	3.4
Chlorobenzene	µg/L	6.0
Ethylbenzene	µg/L	9.4
Methylene chloride	µg/L	1.7 U
Styrene	µg/L	1.7 U
Tetrachloroethene	µg/L	22
Toluene	µg/L	44
trans-1,2-Dichloroethene	µg/L	1.9
Trichloroethene	µg/L	82
Vinyl chloride	µg/L	1.4 U
Xylene (total)	µg/L	41
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U
2,4-Dimethylphenol	µg/L	6 J
2-Methylphenol	µg/L	3
4-Methylphenol	µg/L	5
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	0.4 U
Phenol	µg/L	6
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.058
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.27
Lead	mg/L	0.0050 U
Magnesium	mg/L	4.8
Manganese	mg/L	0.0093
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	305
Zinc	mg/L	0.015

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
DECEMBER 2006

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*12/8/2006*
Parameters	*Units*	
General Chemistry		
Alkalinity, Total (as CaCO3)	mg/L	44.2
Ammonia	mg/L	1.05
Bicarbonate (as CaCO3)	mg/L	44.2
Biochemical Oxygen Demand (BOD)	mg/L	14
Chemical Oxygen Demand (COD)	mg/L	20
Chloride	mg/L	412
Cyanide (total)	mg/L	0.005 U
Hardness	mg/L	200
Nitrate (as N)	mg/L	0.050 U
Oil and Grease	mg/L	1.00 U
pH (water)	s.u.	8.53
Phenolics (Total)	mg/L	0.006 U
Phosphorus	mg/L	0.13
Sulfate	mg/L	207
Sulfide	mg/L	6.4
Total Dissolved Solids (TDS)	mg/L	1020
Total Kjeldahl Nitrogen (TKN)	mg/L	1.12
Total Organic Carbon (TOC)	mg/L	7.1
Total Suspended Solids (TSS)	mg/L	9
Volatile Suspended Solids	mg/L	5

Notes:
J Estimated.
U Non-detect at associated value.

TABLE 2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
DECEMBER 2006

Parameter	*Compound*	*LCS Date*	*Associated Sample ID*	*LCS Recovery (percent)*	*LCSD Recovery (percent)*	*RPD (percent)*	*Control Limits*		*Sample Results*	*Units*	*Qualifier*
							Recovery (percent)	*RPD (percent)*			
Semi-Volatiles	2,4-Dimethylphenol	12/13/06	GRATWICK RIVERSIDE	66	81	20	42-110	18	6	µg/L	J

Notes:
J Estimated.
LCS Laboratory Control Sample.
LCSD Laboratory Control Sample Duplicate.
RPD Relative Percent Difference.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 007987DM-95

FROM: Karen Bevilacqua/jbh/88-NF

DATE: March 28, 2007
E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
January 2007

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during January 2007. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy. The SVOC BS was prepared in duplicate to assess laboratory precision. All recoveries showed acceptable analytical precision.

A matrix spike (MS) was prepared and analyzed for hardness, sulfide and nitrate. All recoveries were acceptable indicating good analytical accuracy with the exception of a high recovery for sulfide. The associated positive sample result was qualified as estimated based on the implied high bias (see Table 2).

CONCLUSION

Based on the preceding assessment, the data were acceptable for use with the qualifications noted.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
JANUARY 2007

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*1/5/2007*
Parameters	***Units***	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	1.3 U
1,1-Dichloroethane	µg/L	14
1,2-Dichloroethane	µg/L	0.85 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	4.6 U
Acetone	µg/L	19
Benzene	µg/L	2.2
Chlorobenzene	µg/L	4.9
Ethylbenzene	µg/L	10
Methylene chloride	µg/L	1.7 U
Styrene	µg/L	1.7 U
Tetrachloroethene	µg/L	16
Toluene	µg/L	57
trans-1,2-Dichloroethene	µg/L	2.7
Trichloroethene	µg/L	160
Vinyl chloride	µg/L	1.4 U
Xylene (total)	µg/L	52
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	1
1,4-Dichlorobenzene	µg/L	0.4 U
2,4-Dimethylphenol	µg/L	5
2-Methylphenol	µg/L	8
4-Methylphenol	µg/L	14
Di-n-octyl phthalate	µg/L	21 U
Naphthalene	µg/L	18
Phenol	µg/L	69
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.080
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.078
Lead	mg/L	0.0050 U
Magnesium	mg/L	1.9
Manganese	mg/L	0.0037
Mercury	mg/L	0.00020 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
JANUARY 2007

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*1/5/2007*
Parameters	*Units*	
Metals (Cont'd.)		
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	376
Zinc	mg/L	0.010 U
General Chemistry		
Alkalinity, Total (as CaCO3)	mg/L	75.9
Ammonia	mg/L	0.70
Bicarbonate (as CaCO3)	mg/L	10 U
Biochemical Oxygen Demand (BOD)	mg/L	8
Chemical Oxygen Demand (COD)	mg/L	74
Chloride	mg/L	897
Cyanide (total)	mg/L	0.005 U
Hardness	mg/L	284
Nitrate (as N)	mg/L	0.050 U
Oil and Grease	mg/L	1.0 U
pH (water)	s.u.	10.94
Phenolics (Total)	mg/L	0.009 U
Phosphorus	mg/L	0.12
Sulfate	mg/L	267
Sulfide	mg/L	6.8 J
Total Dissolved Solids (TDS)	mg/L	1360
Total Kjeldahl Nitrogen (TKN)	mg/L	0.84
Total Organic Carbon (TOC)	mg/L	8.8
Total Suspended Solids (TSS)	mg/L	4
Volatile Suspended Solids	mg/L	2

Notes:
J Estimated.
U Non-detect at associated value.

TABLE 2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
JANUARY 2007

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*Control Limits Recovery (percent)*	*Sample Result*	*Units*	*Qualifier*
General Chemistry	GRATWICK RIVERSIDE	Sulfide	156	40-150	6.8	mg/L	J

Notes:
J Estimated.
MS Matrix Spike.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 007987DM-95

FROM: Karen Bevilacqua/jbh/89 KSB/jbh

DATE: April 2, 2007
E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Monthly Wastewater Treatment Plant Sampling
February 2007

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

One effluent sample was collected in support of the Monthly Wastewater Treatment Plant Sampling at the Gratwick-Riverside Park Site (Site) during February 2007. The sample was submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*[1]
Site-Specific Volatile Organic Compounds (VOCs)	USEPA 624
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	USEPA 625
Target Compound List (TCL) Metals	USEPA 200.7
Mercury	USEPA 245.1
Sulfate	USEPA 300.0
Chloride	USEPA 300.0
Alkalinity	USEPA 310.2
Nitrate	USEPA 353.2
Sulfide	USEPA 376.1
Total Dissolved Solids (TDS)	USEPA 160.1
Total Hardness	USEPA 130.2

The analytical results are summarized in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the following documents:

i) "USEPA Contract Laboratory National Functional Guidelines for Organic Data Review" (October 1999); and

ii) "National Functional Guidelines for Inorganic Data Review" (February 1994).

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983.

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

The sample was prepared and/or analyzed within the method specified holding times. The sample was received at the laboratory at 10.4°C. The sample was taken to the laboratory upon collection and immediately refrigerated upon receipt. No qualification of data was necessary.

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest indicating that no compounds were introduced to the samples during preparation and/or analysis.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries were acceptable indicating good analytical accuracy.

A matrix spike (MS) was prepared and analyzed for total alkalinity, total hardness, and nitrate. All recoveries were acceptable indicating good analytical accuracy, with the exception of a low recovery for total hardness. The associated sample result was qualified as estimated based on the implied low bias (see Table 2).

CONCLUSION

Based on the preceding assessment, the data were acceptable for use with the qualifications noted.

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
FEBRUARY 2007

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*2/9/2007*
Parameters	*Units*	
Volatile Organic Compounds		
1,1,1-Trichloroethane	µg/L	1.3 U
1,1-Dichloroethane	µg/L	8.2
1,2-Dichloroethane	µg/L	0.85 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	4.6 U
Acetone	µg/L	17
Benzene	µg/L	1.6
Chlorobenzene	µg/L	5.6
Ethylbenzene	µg/L	9.1
Methylene chloride	µg/L	1.7 U
Styrene	µg/L	1.7 U
Tetrachloroethene	µg/L	15
Toluene	µg/L	35
trans-1,2-Dichloroethene	µg/L	2.2
Trichloroethene	µg/L	120
Vinyl chloride	µg/L	1.4 U
Xylene (total)	µg/L	43
Semi-Volatile Organic Compounds		
1,2-Dichlorobenzene	µg/L	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U
2,4-Dimethylphenol	µg/L	4
2-Methylphenol	µg/L	5
4-Methylphenol	µg/L	14
Di-n-octyl phthalate	µg/L	22 U
Naphthalene	µg/L	19
Phenol	µg/L	62
Metals		
Aluminum	mg/L	0.20 U
Antimony	mg/L	0.020 U
Arsenic	mg/L	0.010 U
Barium	mg/L	0.077
Beryllium	mg/L	0.0020 U
Cadmium	mg/L	0.0010 U
Chromium Total	mg/L	0.0040 U
Copper	mg/L	0.010 U
Iron	mg/L	0.064
Lead	mg/L	0.0050 U
Magnesium	mg/L	2.3
Manganese	mg/L	0.0071
Mercury	mg/L	0.00020 U
Nickel	mg/L	0.010 U
Selenium	mg/L	0.015 U
Silver	mg/L	0.0030 U
Sodium	mg/L	365
Zinc	mg/L	0.010 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
FEBRUARY 2007

	Sample Location:	*Effluent*
	Sample ID:	*GRATWICK RIVERSIDE*
	Sample Date:	*2/9/2007*
Parameters	*Units*	
General Chemistry		
Alkalinity, Total (as CaCO3)	mg/L	56.8
Ammonia	mg/L	0.70
Bicarbonate (as CaCO3)	mg/L	10 U
Biochemical Oxygen Demand (BOD)	mg/L	7
Chemical Oxygen Demand (COD)	mg/L	67
Chloride	mg/L	741
Cyanide (total)	mg/L	0.005 U
Hardness	mg/L	269 J
Nitrate (as N)	mg/L	0.050 U
Oil and Grease	mg/L	1.0 U
pH (water)	s.u.	10.78
Phenolics (Total)	mg/L	0.009 U
Phosphorus	mg/L	0.01
Sulfate	mg/L	235
Sulfide	mg/L	6.0
Total Dissolved Solids (TDS)	mg/L	1330
Total Kjeldahl Nitrogen (TKN)	mg/L	0.56
Total Organic Carbon (TOC)	mg/L	11.5
Total Suspended Solids (TSS)	mg/L	8
Volatile Suspended Solids	mg/L	4

Notes:
J Estimated.
U Non-detect at associated value.

TABLE 2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES
MONTHLY WASTEWATER TREATMENT PLANT SAMPLING
GRATWICK-RIVERSIDE PARK SITE
TONAWANDA, NEW YORK
FEBRUARY 2007

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*Control Limits Recovery (percent)*	*Sample Result*	*Units*	*Qualifier*
General Chemistry	GRATWICK RIVERSIDE	Total Hardness	73	74-130	269	mg/L	J

Notes:
J Estimated.
MS Matrix Spike.

CONESTOGA-ROVERS & ASSOCIATES

2371 George Urban Blvd.
Depew, New York 14043
Telephone: (716) 206-0202 Fax: (716) 206-0201
www.CRAworld.com

MEMORANDUM

TO: Klaus Schmidtke

REF. NO.: 007987

FROM: Susan Scrocchi/jbh/90-NF

DATE: July 12, 2007
E-Mail and Interoffice Mail

RE: **Analytical Results and QA/QC Review**
Annual Groundwater Sampling
Gratwick-Riverside Park Site
May 2007

PREVIOUSLY TRANSMITTED BY E-MAIL

INTRODUCTION

Sixteen (16) samples, including one field duplicate, were collected in support of the Annual Groundwater Sampling at the Gratwick-Riverside Park Site (Site) during May 2007. Samples were submitted to Severn Trent Laboratories (STL) in Amherst, New York, and analyzed for the following:

Parameter	*Methodology*
Site-Specific Volatile Organic Compounds (VOCs)	SW-846 8260[1]
Site-Specific Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270[1]

The sample collection and analysis summary is presented in Table 1. The analytical results are summarized in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the "National Functional Guidelines for Organic Data Review" (October 1999).

Data assessment was based on information obtained from final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were received in good condition and properly preserved.

1 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for VOCs and SVOCs. All VOC and SVOC surrogate recoveries met the method criteria indicating acceptable analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters. The results were non-detect for the compounds of interest indicating acceptable analytical procedures with the exception of 1,4-dichlorobenzene, naphthalene, and di-n-octylphthalate detected at low concentrations. All associated sample results with similar concentrations were qualified as non-detect (see Table 3).

Three trip blanks were submitted with the samples for VOC analysis. All VOC results were non-detect for the compounds of interest with the exception of acetone. The associated sample result was qualified as non-detect (see Table 4).

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some SVOC BSs were extracted in duplicate and showed acceptable analytical precision.

A matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed for VOCs and SVOCs. All recoveries were acceptable indicating adequate analytical accuracy and precision.

A field duplicate was submitted "blind" to the laboratory for analysis as specified in Table 1. All the results showed good precision outside of the estimated regions of detection, indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GRATWICK-RIVERSIDE PARK SITE
MAY 2007

Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Analysis/Parameters*		*Comments*
				Selected VOCs	*Selected SVOCs*	
WG-7987-0507-001	MW-6	05/24/07	10:10	X	X	
WG-7987-0507-002	OGC-1	05/24/07	10:20	X	X	
WG-7987-0507-003	OGC-5	05/24/07	10:36	X	X	
WG-7987-0507-004	OGC-6	05/24/07	11:00	X	X	
WG-7987-0507-005	River Middle	05/24/07	11:30	X	X	
WG-7987-0507-006	MW-7	05/24/07	11:35	X	X	
WG-7987-0507-007	OGC-7	05/24/07	12:05	X	X	
WG-7987-0507-008	MW-8	05/24/07	12:30	X	X	
WG-7987-0507-009	MW-8	05/24/07	12:40	X	X	Field duplicate of WG-7987-0507-008
WG-7987-0507-010	OGC-3	05/24/07	12:50	X	X	
WG-7987-0507-011	River South	05/24/07	13:00	X	X	
WG-7987-0507-012	OGC-8	05/24/07	13:20	X	X	
TB-7987-0502507	Trip Blank	05/24/07	-	X		
WG-7987-0507-014	MW-9	05/25/07	9:15	X	X	
WG-7987-0507-015	OGC-4	05/25/07	9:50	X	X	
WG-7987-0507-016	OGC-2	05/25/07	10:00	X	X	
TB-7987-0502507	Trip Blank	05/25/07	-	X		
WG-7987-0507-017	River North	05/31/07	11:30	X	X	
TB-7987-053107	Trip Blank	05/31/07	-	X		

Notes:
- Not applicable.
SVOCs Semi-Volatile Organic Compounds.
VOCs Volatile Organic Compounds.

TABLE 2

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GRATWICK-RIVERSIDE PARK SITE
MAY 2007

Parameters	Units	Middle River	MW6	MW7	MW8	MW8 duplicate	MW9	NORTH-RIVER	OGC1	OGC2
Sample Location:		*Middle River*	*MW6*	*MW7*	*MW8*	*MW8*	*MW9*	*NORTH-RIVER*	*OGC1*	*OGC2*
Sample ID:		*WG-7987-0507-005*	*WG-7987-0507-001*	*WG-7987-0507-006*	*WG-7987-0507-008*	*WG-7987-0507-009*	*WG-7987-0507-014*	*WG-7987-0507-017*	*WG-7987-0507-002*	*WG-7987-0507-016*
Sample Date:		*5/24/2007*	*5/24/2007*	*5/24/2007*	*5/24/2007*	*5/24/2007*	*5/25/2007*	*5/31/2007*	*5/24/2007*	*5/25/2007*
Volatile Organic Compounds										
2-Butanone (Methyl Ethyl Ketone)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	6.6 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L	5.0 U	5.0 U	3.9 J	6.6	7.5	6.7 U	5.0 U	5.0 U	5.0 U
Benzene	µg/L	0.70 U	0.70 U	0.70 U	1.6	1.5	1.8 U	0.70 U	0.70 U	0.70 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	0.84 J	0.82 J	2.8	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	2.5	2.2	1.7 U	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.2 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.3	1.0 U	1.0 U	16	14	1.8 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	12	11	3.1	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	4.4	3.9	1.7 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.97 J	1.0 U	40	36	2.9	1.0 U	0.53 J	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	3.0 U	3.0 U	3.0 U	9.8	9.1	4.6 U	3.0 U	3.0 U	3.0 U
Semi-Volatile Organic Compounds										
1,2-Dichlorobenzene	µg/L	10 U	9 U	9 U	0.5 J	0.4 J	0.9 J	10 U	10 U	10 U
1,4-Dichlorobenzene	µg/L	10 U	0.8 J	9 U	0.8 J	0.6 J	3 J	10 U	10 U	10 U
2,4-Dimethylphenol	µg/L	5 U	5 U	5 U	7	7	46	5 U	5 U	5 U
2-Methylphenol	µg/L	5 U	0.5 J	5 U	18	16	6	5 U	5 U	5 U
4-Methylphenol	µg/L	5 U	1 J	0.3 J	22	22	170	5 U	5 U	5 U
Di-n-octyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	µg/L	5 U	2 J	5 U	5 U	5 U	0.2 J	5 U	5 U	5 U
Phenol	µg/L	5 U	0.6 J	5 U	20	21	11	5 U	5 U	5 U

Notes:
J Estimated.
U Not detected.

TABLE 2

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GRATWICK-RIVERSIDE PARK SITE
MAY 2007

Sample Location:		*OGC3*	*OGC4*	*OGC5*	*OGC6*	*OGC7*	*OGC8*	*South River*
Sample ID:		*WG-7987-0507-010*	*WG-7987-0507-015*	*WG-7987-0507-003*	*WG-7987-0507-004*	*WG-7987-0507-007*	*WG-7987-0507-012*	*WG-7987-0507-011*
Sample Date:		*5/24/2007*	*5/25/2007*	*5/24/2007*	*5/24/2007*	*5/24/2007*	*5/24/2007*	*5/24/2007*
Parameters	***Units***							
Volatile Organic Compounds								
2-Butanone (Methyl Ethyl Ketone)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	µg/L	0.76	0.70 U	0.54 J	7.2	0.70 U	0.54 J	0.70 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	0.85 J	1.0 U	1.0 U	12	0.87 J	0.53 J	1.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	0.56 J	1.0 U	1.0 U	1400	1.7	2.0	1.0 U
Toluene	µg/L	1.7	1.0 U	1.0 U	97	5.0	4.0	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	7.1	3.8	1.0 U	1.0 U
Trichloroethene	µg/L	4.3	1.0 U	1.0 U	1100	22	4.0	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.95 J	1.5	1.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	2.1 J	3.0 U	3.0 U	46	5.3	1.1 J	3.0 U
Semi-Volatile Organic Compounds								
1,2-Dichlorobenzene	µg/L	0.6 J	10 U	9 U	10 U	10 U	10 U	9 U
1,4-Dichlorobenzene	µg/L	10 U	10 U	9 U	10 U	10 U	10 U	9 U
2,4-Dimethylphenol	µg/L	6	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	µg/L	47	5 U	0.5 J	76	0.6 J	2 J	5 U
4-Methylphenol	µg/L	10	3 J	0.9 J	2 J	0.6 J	6	5 U
Di-n-octyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	µg/L	5 U	5 U	2 J	2 J	5 U	5 U	5 U
Phenol	µg/L	60	84	5 U	8	5 U	5 U	5 U

Notes:
J Estimated.
U Not detected.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
ANNUAL GROUNDWATER SAMPLING
GRATWICK-RIVERSIDE PARK SITE
MAY 2007

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Result*
SVOCs	05/30/07	Di-n-octyl phthalate	5	WG-7987-0507-001	5	5 U
				WG-7987-0507-002	5	5 U
				WG-7987-0507-003	5	5 U
				WG-7987-0507-004	5	5 U
				WG-7987-0507-007	5	5 U
				WG-7987-0507-008	5	5 U
				WG-7987-0507-009	5	5 U
				WG-7987-0507-010	5	5 U
				WG-7987-0507-011	5	5 U
				WG-7987-0507-012	5	5 U
SVOCs	05/31/07	Di-n-octyl phthalate	1	WG-7987-0507-014	2 J	5 U
				WG-7987-0507-015	1 J	5 U
				WG-7987-0507-016	0.9 J	5 U
SVOCs	06/06/07	Di-n-octyl phthalate	2	WG-7987-0507-017	2 J	5 U
SVOCs	05/30/07	Naphthalene	0.3	WG-7987-0507-002	0.4 J	5 U
				WG-7987-0507-008	0.3 J	5 U
				WG-7987-0507-009	0.2 J	5 U
				WG-7987-0507-012	0.3 J	5 U

Notes:
J Estimated.
SVOC Semi-Volatile Organic Compounds.
U Not detected.

TABLE 4

QUALIFIED SAMPLE DATA DUE TO ANALYTE CONCENTRATIONS IN THE TRIP BLANK
ANNUAL GROUNDWATER SAMPLING
GRATWICK-RIVERSIDE PARK SITE
MAY 2007

Parameter	*Blank Date*	*Analyte*	*Blank Result*	*Associated Sample ID*	*Sample Result*	*Sample Qualifier*	*Units*
VOCs	05/31/07	Acetone	8.3	WG-7987-0507-017	1.7 J	5 U	ug/L

Notes:
J Estimated.
U Not detected.
VOCs Volatile Organic Compounds.

APPENDIX C

CITY OF NORTH TONAWANDA O&M CORRESPONDENCE

CITY OF NORTH TONAWANDA

8/20/98

INDUSTRIAL WASTEWATER DISCHARGE PERMIT

Permit Number: 2628011

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: City of North Tonawanda
830 River Road
North Tonawanda, New York 14120

Site: Gratwick-Riverside Park Site
River Road
North Tonawanda, New York 14120

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

for the discharge of: remedial action ground water into the City of North Tonawanda Sewerage System.

This permit is granted in accordance with a request filed on 05/01/96 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 31st day of January, 2007

To expire the 1st day of February, 2010

Paul Joseph Arbor

Treatment Plant Superintendent

Signed this 31st day of January, 2007

PART I. SPECIFIC CONDITIONS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

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

Sample Point	Parameter	Discharge Limitations mg/l except pH Daily Max.	Sampling Period	Sampling Type
001	Total Flow		1 Sampling Day Monthly	continuous
	pH	Monitor Only	1 Sampling Day Monthly	grab
	Vinyl Chloride	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Acetone	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Methylene Chloride	Monitor only	1 Sample Day semi-annual	24 hr comp.
	1,1,1-Tichloroethane	Monitor only	1 Sample Day semi-annual	24 hr comp.
	1,1-Dichloroethane	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	1,2-Dichloroethane (total)	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	2-Butanone	Monitor only	1 Sampling Day semi-annual	24 hr comp.

PERMIT NUMBER: 2628011

Sample Point	Parameter	Discharge Limitations mg/l except pH Daily Max.	Sampling Period	Sampling Type
	Trichloroethene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Benzene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Tetrachloroethene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Toluene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Chlorobenzene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Ethylbenzene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Styrene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Xylenes (total)	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Phenol (4AAP)	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	trans-1,2-Dichloroethene	Monitor only	1 Sample Day semi-annual	24 hr comp.
	1,4-Dichlorobenzene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	1,2-Dichlorobenzene	Monitor only	1 Sampling Day semi-annual	24 hr comp.

PERMIT NUMBER: 2628011

Sample Point	Parameter	Discharge Limitations mg/l except pH Daily Max.	Sampling Period	Sampling Type
	2-Methylphenol	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	4-Methylphenol	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	2,4-Dimethylphenol	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Di-n-octylphthalate	Monitor only	! Sample Day semi-annual	24 hr comp.
	Naphthalene	Monitor only	1 Sampling Day semi-annual	24 hr comp.
	Cyanide	Monitor only	1 Sample Day semi-annual	24 hr comp.
	NH3	Monitor only	1 Sample Day semi-annual	grab
	Chloride	Monitor only	1 Sample Day semi-annual	24 hr comp.
	NO3	Monitor only	1 Sample Day semi-annual	24 hr comp
	Phosphoorous	Monitor only	1 Sample Day semi-annual	24 hr comp.
	Sulfate	Monitor only	1 Sample Day semi-annual	24 hr comp.
	Sulfide	Monitor only	1 Sample Day semi-annual	24 hr comp.

*/ - See special requirements page for sub-note requirements.

PART I. SPECIFIC CONDITIONS

. DISCHARGE REPORTING REQUIREMENTS

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

Sample Point	Parameter	Initial Monitoring Report	Subsequent Monitoring Reports
001	Vinyl Chloride	January 31, 2007	semi-annual for all
	Acetone	January 31, 2007	
	Carbon Disulfide	January 31, 2007	
	1,1-Dichloroethene	January 31, 2007	
	1,1-Dichloroethane	January 31, 2007	
	1,2-Dichloroethane (total)	January 31, 2007	
	2-Butanone	January 31, 2007	
	Trichloroethene	January 31, 2007	
	Benzene	January 31, 2007	
	Tetrachloroethene	January 31, 2007	
	Toluene	January 31, 2007	
	Chlorobenzene	January 31, 2007	
	Ethylbenzene	January 31, 2007	
	Styrene	January 31, 2007	
	Xylenes (total)	January 31, 2007	
	Phenol	January 31, 2007	
	1,3-Dichlorobenzene	January 31, 2007	
	1,4-Dichlorobenzene	January 31, 2007	
	1,2-Dichlorobenzene	January 31, 2007	
	2-Methylphenol	January 31, 2007	

Sample Point	Parameter	Initial Monitoring Report	Subsequent Monitoring Reports
	4-Methylphenol	January 31, 2007	semi-annual for all
	2,4-Dimethylphenol	January 31, 2007	
	1,2,4-Trichlorobenzene	January 31, 2007	
	Naphthalene	January 31, 2007	
	2-Methylnaphthalene	January 31, 2007	
	n-Nitrosodidiphenylamine	January 31, 2007	
	Di-n-butylphthalate	January 31, 2007	

PART I. SPECIFIC CONDITIONS

C. SPECIAL REQUIREMENTS

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

2) Frequency of monitoring is to be re-evaluated after each year. Sampling to be done semi-annual (Spring-Fall).

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

4) It is required that the Permittee have a Site Operations Manual available at all times. All emergency phone numbers must be listed in an appropriate place for easy access by operations personnel. All pumping operations shall be accomplished under no-bypass conditions. The permittee is required to cease all pumping operations upon verbal request of the North Tonawanda Wastewater Treatment Plant Superintendent or his assigns. Pumping operations shall not recommence until approved by the North Tonawanda Wastewater Treatment Plant Superintendent or his assigns.

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

APPENDIX D

CITY OF NORTH TONAWANDA INDUSTRIAL WASTEWATER DISCHARGE PERMIT

7907

MEMO

CITY OF NORTH TONAWANDA, NEW YORK
DEPARTMENT OF PUBLIC WORKS

~~TO~~ —	Klaus Schmidtke, CRA	DATE	August 1, 2006
~~FROM~~	Gary J. Franklin, Supt.	RE:	GRP July Maintenance

Maintenance notes on the Interceptor Trench/ Lift Stations for July 2006, are noteworthy for the following items.

On July 7, 2006 at approximately 13:00 hours the lift station pumps were shut down and placed out-of service. At approximately 11:00 hours our lift station personnel had noticed that a parking lot drain in the northerly lot of the Niagara River Yacht Club was overflowing. This was on a Friday and the weather had been very dry.

He advised the Office and I met with Wastewater Superintendent Drof at the site. The water levels had subsided by the time we arrived and a sample was pulled and analyzed. The sample showed a high pH. I directed the Gratwick Riverside Park liftstations be secured out-of-service until further notice.

Following records research on the construction, we returned to the site on July 11, 2006. We removed the manhole cover on the system discharge chamber and observed while the pumps were operated manually. We observed that the chamber filled up with the park effluent until it overtopped the sluice gate on the river side of the chamber. At that point the fluid level in the parking lot receiver of the Yacht club began to rise. We operated the sluice gate raising it until the flow ceased at which point the chamber continued to fill. We once again secured the pumps out-of-service.

We once again conducted records research and eventually found a 1951 drawing describing a chamber located upstream of the sluice gate chamber in the center of River Road. The drawings describe a two chamber unit with a flap gate in the riverside portion and a 24" diameter sewer exiting the other chamber. The flap gate is configured to allow flow towards the river only.

On July 31, 2006, we entered this chamber on River Road and propped the flap gate open with what apparently was the original board holding it open.

Discussions with members of the Yacht club lead us to believe that this was the first occasion and indication of the problem with fluid overflowing the parking lot receiver. The record drawings are inaccurate in as much as the 24" sanitary sewer is not connected directly to the sluice gate chamber.

Now that we are aware of its accurate configuration we will be able to monitor this situation in the future.

Cc: D. Marshall, P.E., City Engineer