2017 Annual Periodic Review Report

Hyde Park Landfill
Niagara Falls, New York
NYSDEC Site No. 932021

Glenn Springs Holdings, Inc.

GHD | 2055 Niagara Falls Boulevard Niagara Falls New York 14304 USA

001069 | Report No 365 | April 30, 2018

Executive Summary

The following report describes the Operation, Maintenance, and Monitoring (OM&M) activities for 2017 at the Hyde Park Landfill Site (Site) located at 4825 Hyde Park Boulevard, Niagara Falls, Town of Niagara, Niagara County, New York. The Site is approximately 30 acres in size and is comprised of two parcels owned by Occidental Chemical Corporation (OCC) and one parcel owned by National Grid (formerly Niagara Mohawk Power Corporation). These parcels contain the landfill (28.1 acres) and the treatment system and associated buildings (1.9 acres). OCC owns another 30 parcels that are located to the west and north of the Site that encompass a total area of approximately 29 acres. These parcels were purchased to act as a buffer to the Site or to facilitate remediation. Management of the Site is performed on behalf of OCC by Glenn Springs Holdings, Inc. (GSH), an affiliate of OCC. Since October 1, 2008, GHD Services Inc. (GHD), formerly Conestoga-Rovers & Associates (CRA), has performed OM&M and reporting activities for the Site under contract to and direct management of GSH.

During 2017, the remedial system components at the Site performed as designed. The Source Control (SC), Overburden Requisite Remedial Technology (RRT), and Bedrock RRT Systems removed 28.8 million gallons of groundwater from the Site and surrounding formations. The RRT systems continued to provide containment and Flow Zone 9 remained dewatered between the Site and the face of the Niagara River Gorge (Gorge). All aqueous phase liquid (APL) analytes were found below reporting levels in APL Flux Monitoring, indicating no chemical loading to the Gorge seeps. Non-aqueous phase liquid (NAPL) continues to be contained by the Overburden RRT System, with no NAPL being found in overburden monitoring wells (OMWs) outside of the system. The community continues to be protected by the Site remedial systems. In 2017, 7,496 lbs of NAPL was shipped off Site for disposal.

The 2017 data indicate that there has been no significant change in chemical and hydrogeological conditions at the Site. Quarterly manual NAPL removal from Source Control (SC) wells will continue in 2018 except at SC-3 where removal will be performed on an approximate monthly basis. The frequency and continued need for NAPL recovery from the SC wells will be reevaluated in the 2018 Annual Periodic Review Report.

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1. Introduction

The following Periodic Review Report (PRR) describes the Operation, Maintenance, and Monitoring (OM&M) activities for 2017 at the Hyde Park Landfill Site (Site) located at 4825 Hyde Park Boulevard, Niagara Falls, Town of Niagara, Niagara County, New York (Figure 1.1). Management of the Site is performed on behalf of Occidental Chemical Corporation (OCC) by Glenn Springs Holdings, Inc. (GSH), an affiliate of OCC. Since October 1, 2008, GHD Services Inc. (GHD), formerly Conestoga-Rovers & Associates (CRA), has performed OM&M and reporting activities for the Site under contract to and direct management of GSH.

1.1 Site Location

The Site is located in the northwest corner of the Town of Niagara, New York, adjacent to the Town of Lewiston to the north and the City of Niagara Falls to the west. The location of the Site is shown on Figure 1.1. The Site is bounded by Hyde Park Boulevard to the west, the Power Authority Service Road (a New York Power Authority [NYPA] access road) to the north, Ferro Electronic Materials, Inc. (formerly TAM Ceramics) to the south, and vacant property owned by Armand Cerrone, Inc. to the east. The Site is located approximately 2,000 feet east of the Niagara River Gorge (Gorge).

The Site is approximately 30 acres in size and is comprised of two parcels owned by OCC and one parcel owned by National Grid (formerly Niagara Mohawk Power Corporation). These parcels contain the landfill (28.1 acres) and the treatment system and associated buildings (1.9 acres). OCC owns another 30 parcels that are located to the west and north of the Site that encompass a total area of approximately 29 acres. These parcels were purchased to act as a buffer to the Site or to facilitate remediation.

1.2 Site History

The Hyde Park Landfill is a closed disposal facility where Hooker Chemical placed liquid, sludge, and solid production waste from 1953 until 1975 when the landfill was closed. In 1978, OCC capped the landfill with clay. In 1981, OCC, the State of New York representing the New York State Department of Environmental Conservation (NYSDEC), and the United States of America representing the United States Environmental Protection Agency (USEPA) entered into a "Stipulation and Judgment Approving Settlement Agreement" (Settlement Agreement). Investigations as part of the approved Settlement Agreement indicated significant chemical migration into the bedrock, including the presence of non-aqueous phase liquid (NAPL). The USEPA added the Site to the National Priorities List in September 1983. Further negotiations among OCC, NYSDEC, and USEPA resulted in a second court agreement; the "Stipulation on Requisite Remedial Technology Program" (November 1985) (RRT Stipulation). In August 2010, OCC issued a "Declaration of Restrictive Covenants and Environmental Easement" (Environmental Easement) granting an easement on the portion of the Site owned by OCC to the Town of Niagara, guaranteeing that the institutional and engineering components of the Remedial Action (RA) will be maintained and transferred with ownership of the property.

In July 2011, NYSDEC reclassified the Site on the Registry of Inactive Hazardous Waste Disposal Sites to a Class 4 site, indicating that it no longer presents a significant threat to public health and/or

the environment. Effective October 23, 2013, USEPA deleted the Site from the National Priorities List. As published in the Federal Register, Vol. 78, No. 205, Pg. 63099, "The EPA and the State of New York, through the Department of Environmental Conservation, have determined that all appropriate response actions under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) other than operation, maintenance, and 5-year reviews, have been completed".

1.3 Remedial Goals

The original monitoring and remedial performance requirements for the Site were defined in the 1985 RRT Stipulation. Extensive remediation, investigation, and evaluation of the Site have been completed and documented in previous reports to the NYSDEC and USEPA since the RRT Stipulation was approved. The current monitoring and reporting requirements are detailed in the NYSDEC and USEPA-approved 2006 Performance Monitoring Plan (PMP). A checklist of all tasks required by the PMP is provided in Table 1.1. Action levels specified in the PMP are shown in the applicable analytical data tables.

1.4 Remedial Components and Monitoring

Site remedial components consist of the following:

- Source Control (SC) System, shown on Figure 1.2
    - Six SC wells installed within the landfill; only five are currently active
- Overburden RRT System, shown on Figure 1.3
    - Existing barrier collection system (EBCS) surrounding the original landfill
    - Overburden barrier collection system (OBCS) outside and to the north, west, and south of the original landfill
- Bedrock RRT System, shown on Figure 1.4
    - NAPL containment system (17 purge wells)
    - Aqueous Phase Liquids (APL) Plume containment system (two purge wells)

All groundwater collected by these components is treated in an on-Site granular activated carbon treatment system before discharge to the publicly owned treatment works (POTW) under Niagara Falls Water Board Significant Industrial User (SIU) Permit #49. NAPL decanted from the groundwater is stored on Site until a sufficient quantity is available for transport to an approved hazardous waste disposal facility.

The PMP requires annual evaluation of the effectiveness of these components using the following three monitoring programs:

- Overburden Monitoring Program (OMP), locations shown on Figure 1.5
- Bedrock Monitoring Program (BMP), locations shown on Figure 1.6
- Community Monitoring Program (CMP), locations shown on Figure 1.7

2. Institutional and Engineering Controls

The required Institutional and Engineering Controls are listed in the completed Institutional and Engineering Controls Certification Form included as Appendix A. Institutional controls include restrictions on uses of Site land, buildings, groundwater, and surface water, and require the implementation of both a Monitoring Plan and an Operation and Maintenance (O&M) Plan. The most recent versions of these documents are the NYSDEC and USEPA approved 2006 PMP and the 2015 Operation and Maintenance Manual (O&M Manual). Engineering controls include groundwater containment through a leachate collection system, collected groundwater treated on Site, a maintained cover system on the landfill, and restricted Site access controlled through perimeter fencing.

3. Site Monitoring Programs and Results

3.1 Overburden Monitoring Program

The OMP involves the monitoring of the SC wells and the Overburden RRT System. The SC wells are a series of production wells installed within the landfill to recover NAPL, while the Overburden RRT System is comprised of two collection systems designed to control the lateral migration of APL and NAPL in the overburden.

The 2017 performance monitoring data for the overburden systems are presented as follows:

SC System Well Locations	Figure 1.2
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2017 Overburden Quarterly Groundwater Elevation Summary	Table 3.2
2017 Overburden NAPL Presence Monitoring	Table 3.3
2017 Overburden Collection Systems Monthly Average Flow Summary	Table 3.4
Total SC Wells APL/NAPL Purged, NAPL Presence in SC-2, -4, and -5	Figure 5.1

3.2 Bedrock Monitoring Program

The BMP includes the Lockport Bedrock APL and NAPL Plume Containment Systems and the Bloody Run Creek Monitoring Program. The Lockport Bedrock APL and NAPL Plume Containment Systems consist of 19 purge wells that control lateral migration of dissolved phase constituents and NAPL in the bedrock, while the Bloody Run Creek Monitoring Program ensures that Site-related parameters are not adversely impacting groundwater in the upper bedrock subsequent to the remediation of Bloody Run Creek. The Group B Bedrock Piezometers are sampled on a quarterly basis. Piezometers associated with the Lockport Bedrock APL and NAPL Plume Containment Systems are sampled on a routine basis in two groups. The Group A Bedrock Piezometers are sampled every fifth quarter, which occurred in the fourth quarter of 2017. The Bloody Run monitoring wells are sampled every 5 years, which occurred in July 2016, with the next event planned for 2021.

The 2017 performance monitoring data for the bedrock systems are presented as follows:

Bedrock Monitoring Program Locations	Figure 1.4
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2017 Bedrock Purge Well Monthly Flow Rate Summary	Table 3.6
Analytical Results Summary: Quarterly Group B Bedrock Piezometer Sampling	Tables 3.7a-d
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The PMP also specifies water level setpoints for each of the purge wells in the Bedrock RRT System. Only major issues associated with achieving these setpoints are discussed in this PRR, while the day-to-day maintenance of these setpoints was previously presented in the 2017 Quarterly Operations Reports.

In addition to maintaining water levels within target setpoint ranges in the purge wells, the water level in flow zone FZ-09 in the area between the landfill and the APL purge wells (APW-1 and APW-2) is to be maintained at an elevation of 526 feet above mean sea level (AMSL) or lower. This level ensures that the FZ-09 outcrop along the NYPA access road remains unsaturated. Piezometer PMW-1M-09 is used to monitor the FZ-09 water level elevation in this area. A pressure transducer installed in PMW-1M-09 has been programmed to collect water level data at 1-hour intervals. These continuous water level elevation data were reported in the 2017 Quarterly Operation Reports.

3.3 Community Monitoring Program

The Community Monitoring program was developed to ensure that the public is not being adversely exposed to Site-related parameters. The Community Monitoring program includes the Gorge Face Seep Program, the APL Flux Monitoring Program, and the Residential Community Monitoring Program. The Gorge Face Seep Program involves biennial inspections of the Gorge to ensure that Site-specific parameters are not discharging to a publicly accessible area. The APL Flux Monitoring Program involves annual sampling and ensures that the mass loading via groundwater discharged to the Gorge is less than the defined Flux Action Level. The Residential Community Monitoring Program involves annual vapor monitoring and ensures that residents in the area are not adversely exposed to Site-related constituents in the groundwater or from soil vapors above the groundwater.

The 2017 performance monitoring data for the community monitoring are presented as follows:

APL Flux Well Locations	Figure 3.2
2017 Analytical Results Summary: Annual AFW Composite	Table 3.10
Community Monitoring Locations	Figure 1.7
2017 Quarterly Hydraulic Gradient Summary	Table 3.11
2017 Community Monitoring Well Soil Vapor Monitoring	Table 3.12

4. Site Operation and Maintenance

Maintaining the Site remedial elements is critical to the Site's remedial performance. Therefore, inspections of hydraulic and chemical monitoring points, the landfill cap, and the security fence surrounding the landfill have been included in the PMP and O&M Manual. Although not required by the PMP, the monitoring program for the Site groundwater treatment system is discussed briefly in this report. Full details on Site operation and maintenance activities are presented in the 2015 O&M Manual.

Analytical results from the treatment system monitoring program have been presented previously in the 2017 Quarterly Operations Reports. These include the following:

- Daily treated effluent total water flows and pH
- Weekly treated effluent APL sampling
- Quarterly treated effluent APL sampling

The following treatment system monitoring was also conducted in 2016:

Quarterly NAPL Decanter Volume Monitoring	Table 4.1
Weekly Carbon Interstage APL Sampling	Table 4.2
Quarterly Leachate Feed APL Sampling	Table 4.3
Quarterly Sac Bed Interstage APL Sampling	Table 4.4

The 2006 PMP also requires weekly fence inspections, annual well and piezometer inspections, and annual landfill cap inspections. All of the required inspections were performed in 2017. The inspections did not identify any issues of concern beyond routine maintenance items. Records of these inspections are maintained at the Site and are available upon request, in accordance with the 2006 PMP.

5. Evaluation and Conclusions

5.1 Overburden Monitoring Program

There were no deviations from the OMP in 2017 and monitoring was conducted in accordance with the 2006 PMP. The results of the OMP are discussed below and summarized in Tables 3.1 through 3.4.

5.1.1 Source Control System

The SC wells (SC-2 to SC-6) were historically operated on a monthly basis to pump down the APL/NAPL level to approximately the top of the pump in each well. The 2014 Annual Periodic Review Report recommended that monthly purging of the SC wells and subsequent water level and NAPL thickness measurements be discontinued; however in order to provide additional data to support discontinuation, it also recommended that the frequency be changed to quarterly for one year. After one year, the original recommendation to discontinue would be reevaluated. NYSDEC approved the quarterly frequency of SC water level and NAPL thickness measurements in a letter

dated May 5, 2015; however, GSH maintained monthly water level and NAPL thickness measurements throughout 2015. Starting in 2016, the SC water levels and NAPL thickness were measured quarterly.

In an effort to further demonstrate that the SC wells do not produce significant amounts of NAPL, monthly manual NAPL removal from SC-6 was implemented in April 2015. The NAPL thickness in SC-6 prior to removal in April 2015 was approximately 10 feet. Approximately 18 gallons of NAPL were removed. In subsequent months, the volume of NAPL removed decreased from 8 gallons in May to 3 gallons in October 2015 when manual removal of NAPL ceased due to cold temperatures. Based on the declining amount of NAPL removed, the frequency was revised to quarterly.

Based on the results of manual NAPL removal from SC-6, quarterly manual NAPL removal was implemented at SC-2, SC-3, SC-4, and SC-5 in October 2016. The volume of NAPL recovered from these wells was 5.5 gallons, 33.25 gallons, 15.25 gallons, and 1.5 gallons, respectively. Based on the volumes of NAPL recovered, it was recommended in the 2016 PRR that quarterly manual NAPL removal from SC wells will continue in 2017 except at SC-3 where removal will be performed on an approximate monthly basis.

The 2017 SC well NAPL thickness and recovery data are summarized in Table 3.1. The amounts of NAPL recovered in 2017 from SC-2, SC-3, SC-4, SC-5, and SC-6 were 2.75 gallons, 476.5 gallons, 46.75 gallons, 0 gallons, and 5.1 gallons, respectively. Based on the amounts recovered, quarterly manual NAPL recovery will continue in 2018 except at SC-3 where recovery will be performed on an approximate monthly basis.

The total amount of NAPL recovered in 2017 was 531.1 gallons. The APL/NAPL volumes removed from the SC wells from 2006 through 2017 are as follows:

Year	Gallons Purged from SC Wells
2006	799
2007	287
2008	236
2009	173
2010	155
2011	262
2012	339
2013	316
2014	265
2015	120
2016	65.5
2017	531.1

5.1.2 Overburden Groundwater Elevations

The overburden groundwater elevation data, provided in Table 3.2, were used to generate potentiometric surface maps that were presented in the 2017 Quarterly Operations Reports. These potentiometric surface maps indicated hydraulic containment for each quarter of 2017.

5.1.3 Overburden NAPL Presence Monitoring

NAPL presence checks are to be completed annually in the OBCS, Overburden Monitoring Wells (OMWs), and the OBCS manholes. The NAPL presence monitoring data from the OMWs and manholes are presented in Table 3.3. The data indicate that NAPL was present in 4 of the 17 manholes monitored (MH-29, MH-30, MH-31, and MH-32) and in 1 of the 2 wet wells (Wet Well D). The three manholes are located at the southwest corner of the landfill and all flow to Wet Well D. The data also indicate that NAPL is not present in any of the OMWs. These wells are located outside of the OBCS to the south, west, and northwest of the four manholes and one wet well where NAPL was present (see Figure 1.3). The lack of NAPL presence in these OMWs indicates that overburden NAPL is contained within the boundaries of the OBCS and is not bypassing the OBCS.

5.1.4 Overburden RRT System Flow Rates

The OBCS and EBCS monthly average flow rates, presented in Table 3.4, indicate seasonal fluctuations in flow rates with the highest average flow rates occurring during the spring months of 2017.

5.1.5 Overburden Monitoring Conclusions

Based on the overburden data collected in 2017, as shown in Tables 3.1 through 3.4 and the potentiometric surface maps that were presented in the 2017 Quarterly Operations Reports, the SC and Overburden RRT Systems are operating as designed, and overburden containment is being achieved.

5.2 Bedrock Monitoring Program

There were no deviations from the BMP in 2017 and monitoring was conducted in accordance with the 2006 PMP. The results of the BMP in 2017 are discussed below and summarized in Tables 3.5 through 3.8.

5.2.1 Bedrock Groundwater Elevations

The bedrock flow zone groundwater elevation data, presented in Table 3.5, were used to generate groundwater potentiometric surface maps for each of the monitored flow zones. These maps have been presented previously in the 2017 Quarterly Operations Reports. The potentiometric surface maps for each monitored flow zone during each quarter of 2017 indicated containment.

5.2.2 Bedrock RRT System Flow Rates and Setpoints

The 2017 bedrock purge well monthly average flow rate data, presented in Table 3.6, are consistent with historic flow rates.

Maintenance of operating water level setpoints by each of the purge wells has been discussed in the 2017 Quarterly Operations Reports. These reports indicate that, with the exception of the maintenance issues identified, the water levels were maintained within target setpoint ranges at each of the purge wells throughout 2017.

Based on the hourly data from the PMW-1M-09 pressure transducer, the water level elevation in this area of FZ-09 was maintained at an average elevation of 517.75 feet AMSL throughout 2017,

with a maximum elevation observed of 518.46 feet AMSL. The average and maximum elevations were below the 526 feet AMSL action elevation setpoint, which ensures that the FZ-09 outcrop along the NYPA access road remains unsaturated. The data were corroborated by the quarterly hand water level measurements of PMW-1M-09 presented in Table 3.5, which show an average water level of 517.75 feet AMSL in 2017.

5.2.3 Bedrock Analytical Results

In accordance with the 2006 PMP, quarterly groundwater samples were collected from the Group B Bedrock piezometers in 2017. The quarterly groundwater sampling events were performed during March 2017, June 2017, September 2017, and December 2017. The annual (5th quarter Group "A" Bedrock piezometer sampling) event, as defined in the PMP, was performed during November and December 2017.

The 2017 quarterly Group "B" Bedrock piezometer sampling results are presented in Tables 3.7a through 3.7d. Samples were analyzed for the Site-specific list of organic acids. Site-specific screening levels presented in the PMP have been included in these tables and exceedances of these values have been highlighted.

The 5th quarter sampling results for the Group "A" Bedrock piezometers are presented in Table 3.8. Analyses include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organic acids, and sulfate. The Site-specific screening levels presented in the PMP have been included in this table and exceedances of these values have been highlighted.

The 2017 data for the quarterly Group "B" Bedrock piezometer and the 5th quarter Group "A" Bedrock piezometer sampling events indicate that samples from a number of locations exhibited concentrations of Site Indicator Organics (SIOs) that exceeded the Site-specific screening levels, as summarized below:

Site Organic Indicators	Location Exceeding Site-Specific Screening Level
Chlorendic Acid	AGW-1M-09, ABP-7-09, AGW-1M-07, AGW-1U-06, B2L-11, D1M-09, D1U-05, D2U-05, F2U-02, F2U-04, G6-04, H2U-02, H5-09
Benzene	B2L-11, D1L-11, E6-09, E6-11, F2L-11, F6-11, G1L-11, G6-04, G6-05, G6-11, H2M-09, H2U-02, H5-09, J6-11
1,1,2,2-tetrachloroethane	G6-01, G6-02, G6-04, G6-05, H2M-06
Tetrachloroethene	G6-01, G6-02, G6-04
Trichloroethene	G6-01, G6-02, G6-04, G6-05, H2M-06
Vinyl Chloride	AGW-1U-06, G6-01, G6-02, G6-04, G6-05, H2M-06
cis-1,2-Dichloroethene	G6-05

The above exceedances are generally consistent with results from the quarterly Group "B" piezometer and 5th quarter Group "A" Bedrock piezometer sampling events conducted in previous years.

In addition to the above-noted exceedances, there were also a number of locations that exhibited concentrations of non-SOI parameters that exceeded the Site-specific screening levels, as summarized below:

Non-Site Organic Indicators	Location Exceeding Site-Specific Screening Level
Chloroform	G6-05
1,1,2-Trichloroethane	G6-05
bis(2-Ethylexyl)phthalate (DEHP)	E6-04

The parameters identified at G6-05 were also present at this location during the 2003, 2007, 2011, 2012, 2015, and 2016 sampling events. However, this well is located hydraulically upgradient of the Site and groundwater at this location would not be indicative of potential migration of Site materials. The above exceedances for bis(2-ethlyexyl)phthalate (DEHP) were generally consistent with results from the quarterly Group "B" piezometer and 5th quarter Group "A" Bedrock Piezometer sampling events conducted in previous years.

The bedrock groundwater data collected in 2017 demonstrate that the APL and NAPL purge well systems are operating properly and containment is being maintained in each of the flow zones. No changes to the bedrock purge or monitoring systems are recommended at this time.

5.2.4 Bedrock Monitoring Conclusions

The bedrock monitoring data collected in 2017 demonstrate that the APL and NAPL purge well systems are operating properly, and bedrock containment is being achieved in each of the flow zones.

5.3 Community Monitoring Program

The biennial Gorge Face Seep Survey was due to be performed in 2017 but was not completed in 2017. The Gorge Face Seep Survey is scheduled to be performed in early summer of 2018. There were no other deviations from the CMP in 2017.

5.3.1 APL Flux Monitoring Program

The APL plume flux composite sampling results are presented in Table 3.9. None of the APL plume flux parameters were detected above their respective reporting levels. As a result, calculation of the flux to the Gorge is not required.

5.3.2 Quarterly Hydraulic Gradient Summary

Table 3.10 presents a summary of groundwater elevations and vertical hydraulic gradients at the paired community monitoring wells for each quarter of 2017. Downward vertical hydraulic gradients, as demonstrated by a higher groundwater elevation in the overburden monitoring well than in the corresponding bedrock groundwater monitoring well, were maintained at each of the well pairs throughout the year.

5.3.3 Soil Vapor Monitoring

Results of community monitoring well soil vapor monitoring are presented in Table 3.11. Four of the five locations monitored exhibited no recordable concentrations of VOCs during the September 2017 monitoring event. A VOC reading could not be obtained from the fifth location, SPV-3, due to water in the probe. Therefore, in accordance with the field procedure for community

well vapor monitoring presented in Appendix B of the 2014 Annual Periodic Review Report, groundwater sampling was not required.

5.3.4 Gorge Face Seep Survey

The biennial Gorge Face Seep Survey was last conducted on August 25, 2015. The next Gorge Face Seep Survey will be conducted in the summer of 2018.

5.3.5 Community Monitoring Conclusions

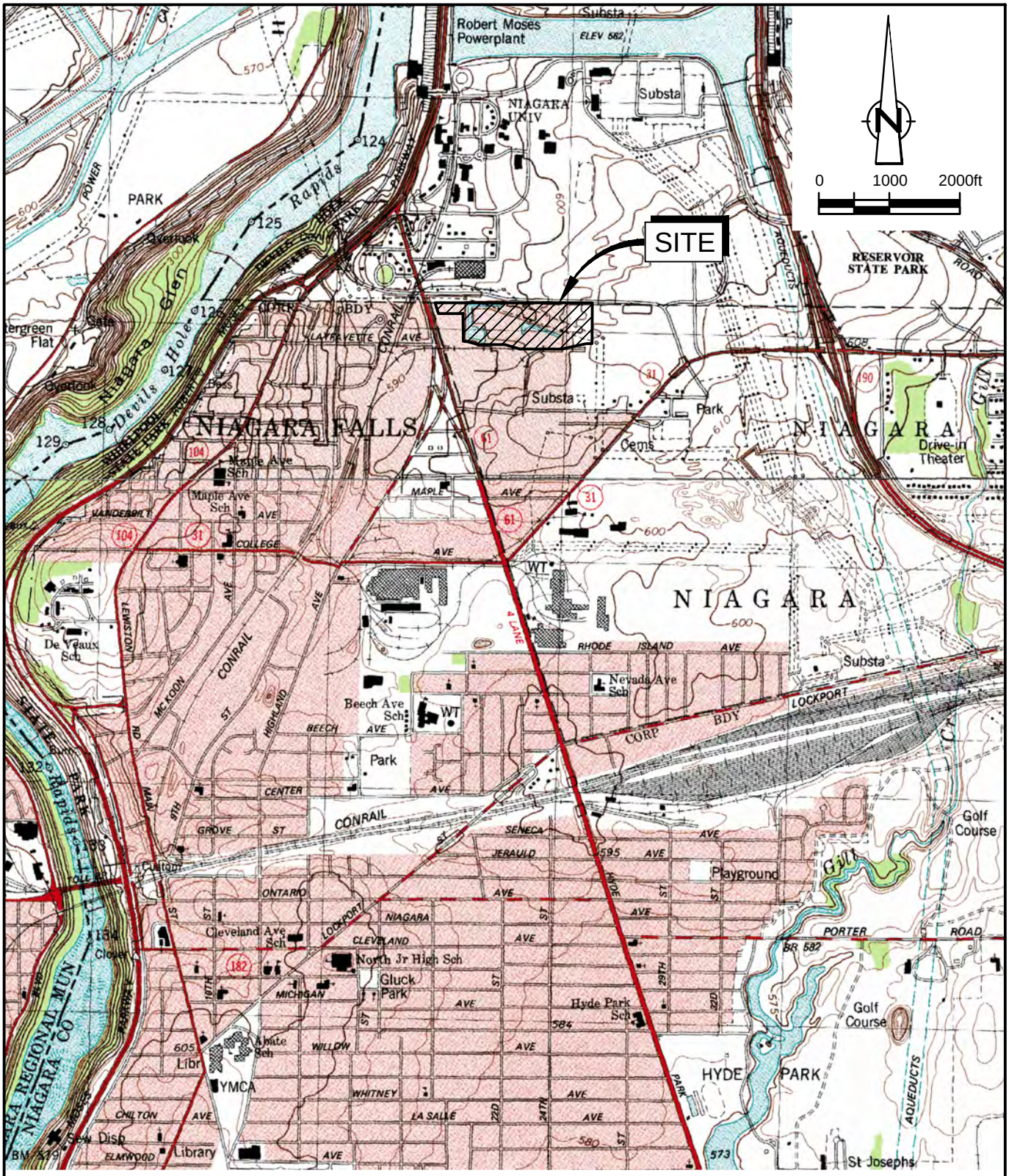
The community monitoring data collected in 2017 demonstrate that the community is being properly protected by Site remedial systems.

5.4 Site Operations and Maintenance

There were no deviations in 2017 from the treatment system monitoring specified in the 2006 PMP. Ongoing operations and maintenance issues are discussed in the 2017 Quarterly Operations Reports.

6. Recommendations

Quarterly manual NAPL removal from SC wells will continue in 2018 except at SC-3 where removal will be performed on an approximate monthly basis (temperature dependent). The frequency and continued need for NAPL recovery from the SC wells will be reevaluated in the 2018 Annual PRR.



SOURCE: USGS QUADRANGLE MAPS;
NIAGARA FALLS, NEW YORK - ONTARIO, 1980
LEWISTON, NEW YORK, 1980

figure 1.1

SITE LOCATION
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

GHD

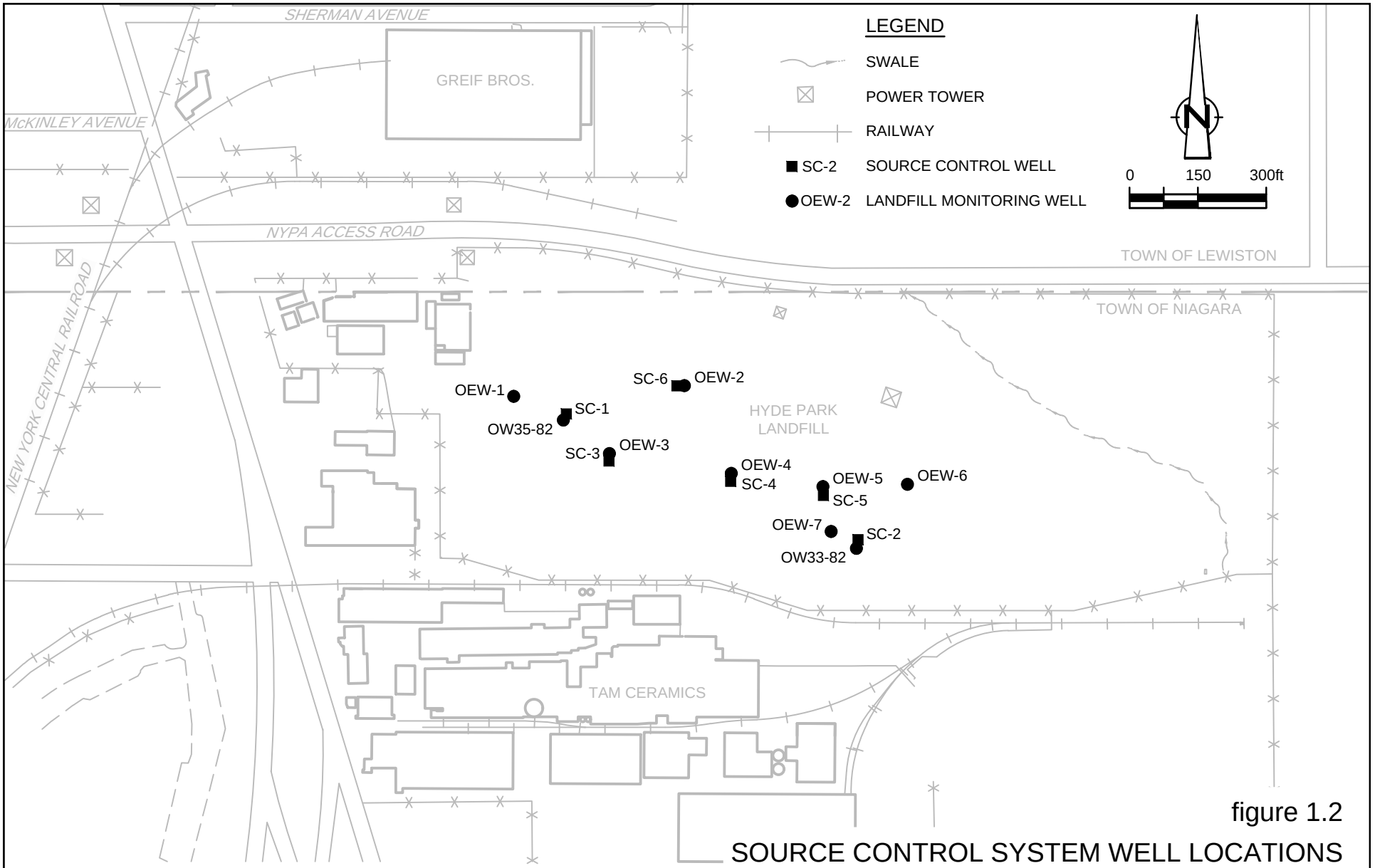


figure 1.2

SOURCE CONTROL SYSTEM WELL LOCATIONS
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

NOTE:
SITE BENCHMARK IS A P.K. NAIL SET IN THE EAST FACE OF A POWER POLE LOCATED AT THE WEST END OF THE EXISTING HYDE PARK LANDFILL, ELEVATION = 612.77. DATUM NOT VERIFIED.

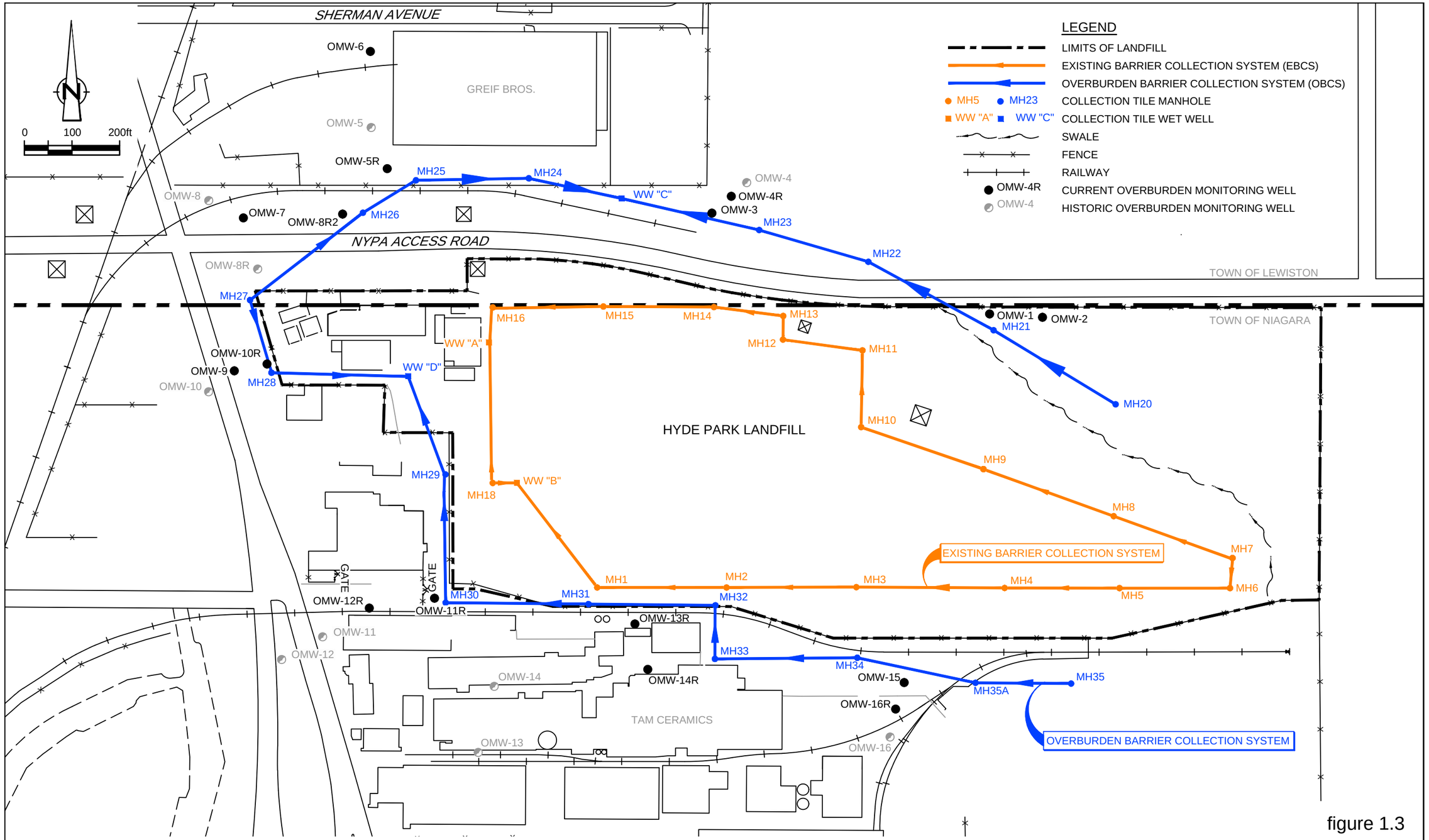


figure 1.3

OVERBURDEN RRT SYSTEM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

GHD

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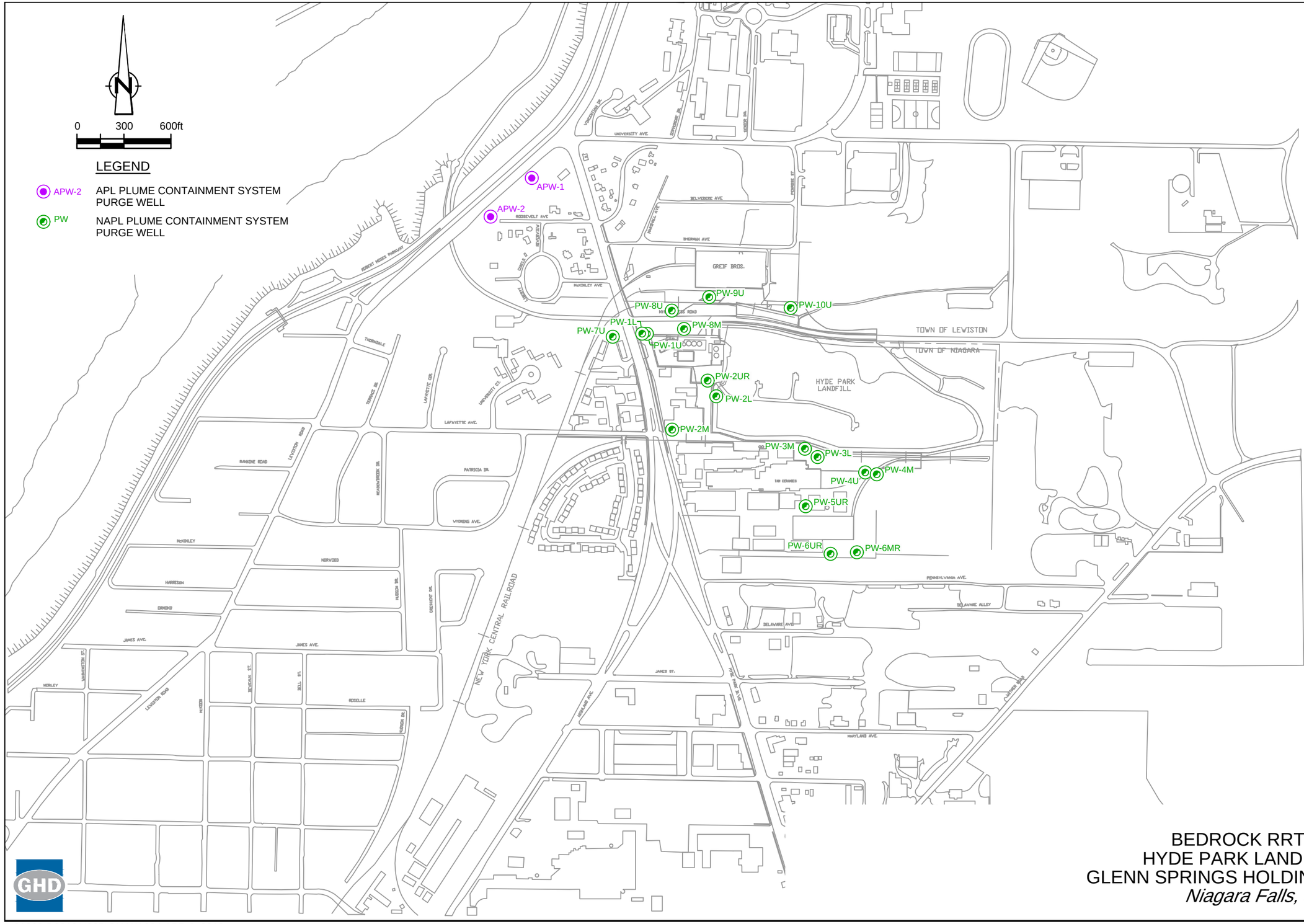

figure 1.4

BEDROCK RRT SYSTEM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

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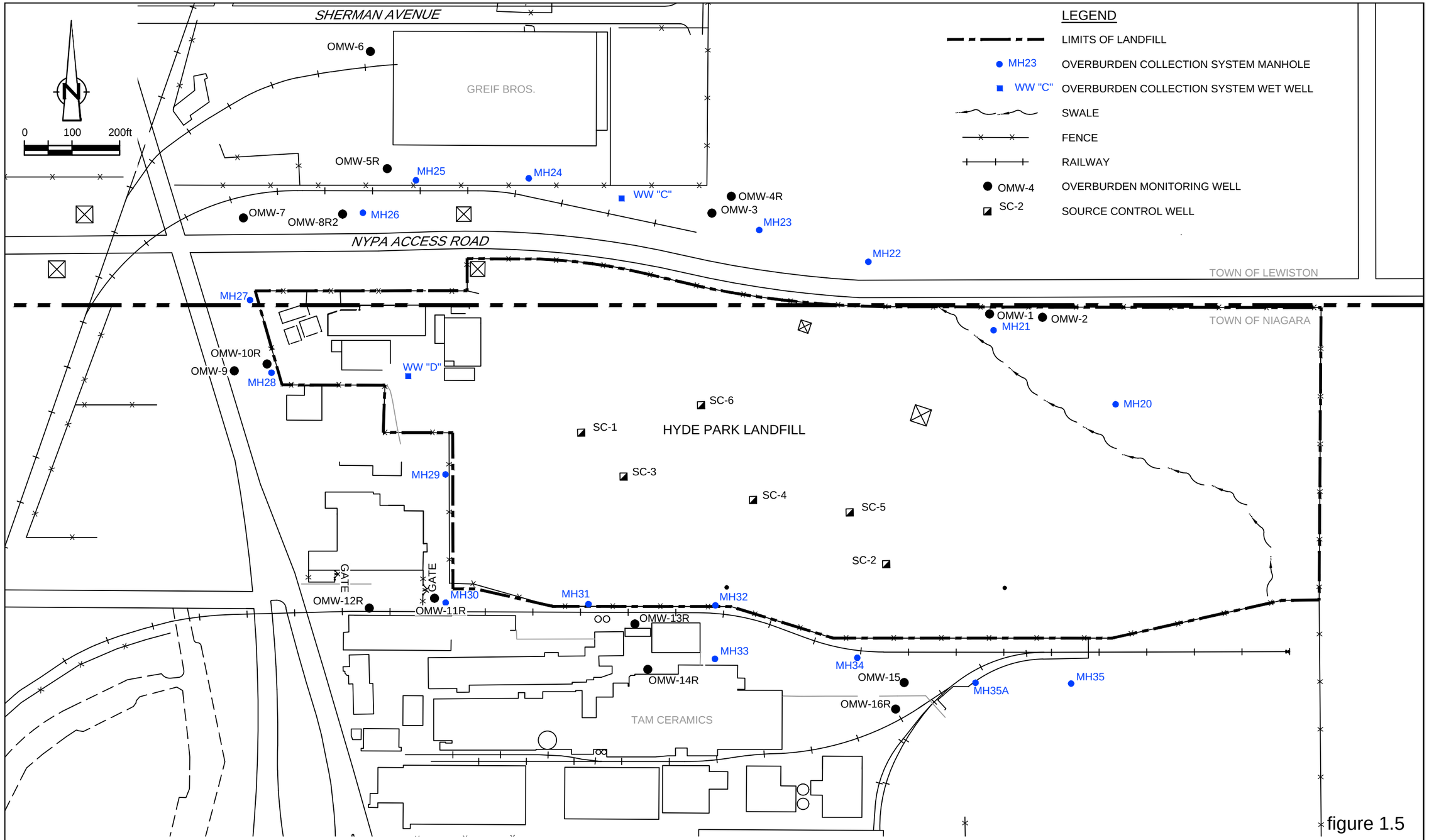

figure 1.5

OVERBURDEN MONITORING PROGRAM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

GHD

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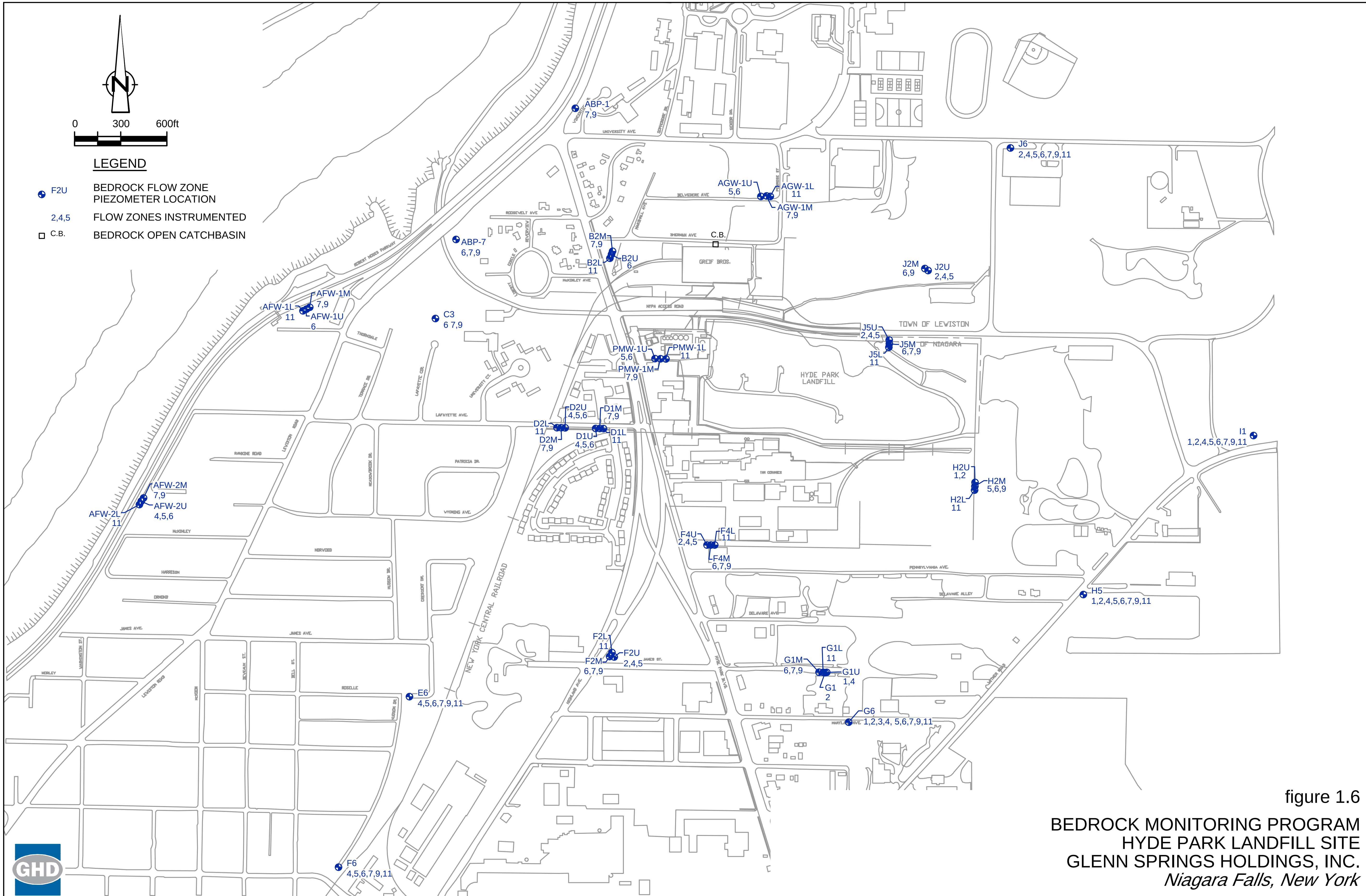
N
0 300 600ft
LEGEND
F2U BEDROCK FLOW ZONE PIEZOMETER LOCATION
2,4,5 FLOW ZONES INSTRUMENTED
C.B. BEDROCK OPEN CATCHBASIN
ABP-1 7,9
J6 2,4,5,6,7,9,11
AGW-1U 5,6
AGW-1L 11
AGW-1M 7,9
ABP-7 6,7,9
B2M 7,9
B2L 11
B2U 6
C.B.
GREIF BROS.
J2M 6,9
J2U 2,4,5
AFW-1M 7,9
AFW-1L 11
AFW-1U 6
C3 6 7,9
J5U 2,4,5
J5M 6,7,9
J5L 11
TOWN OF LEWISTON
PMW-1U 5,6
PMW-1L 11
PMW-1M 7,9
HYDE PARK LANDFILL
D2U 4,5,6
D1M 7,9
D2L 11
D2M 7,9
D1U 4,5,6
D1L 11
I1 1,2,4,5,6,7,9,11
H2U 1,2
H2M 5,6,9
H2L 11
AFW-2M 7,9
AFW-2U 4,5,6
AFW-2L 11
F4U 2,4,5
F4L 11
F4M 6,7,9
NEW YORK CENTRAL RAILROAD
PENNSYLVANIA AVE.
H5 1,2,4,5,6,7,9,11
F2L 11
F2U 2,4,5
F2M 6,7,9
G1L 11
G1M 6,7,9
G1U 1,4
G1 2
E6 4,5,6,7,9,11
G6 1,2,3,4, 5,6,7,9,11
F6 4,5,6,7,9,11
GHD

figure 1.6

BEDROCK MONITORING PROGRAM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01069-D23101(365)GN-WA006 APR 6, 2018

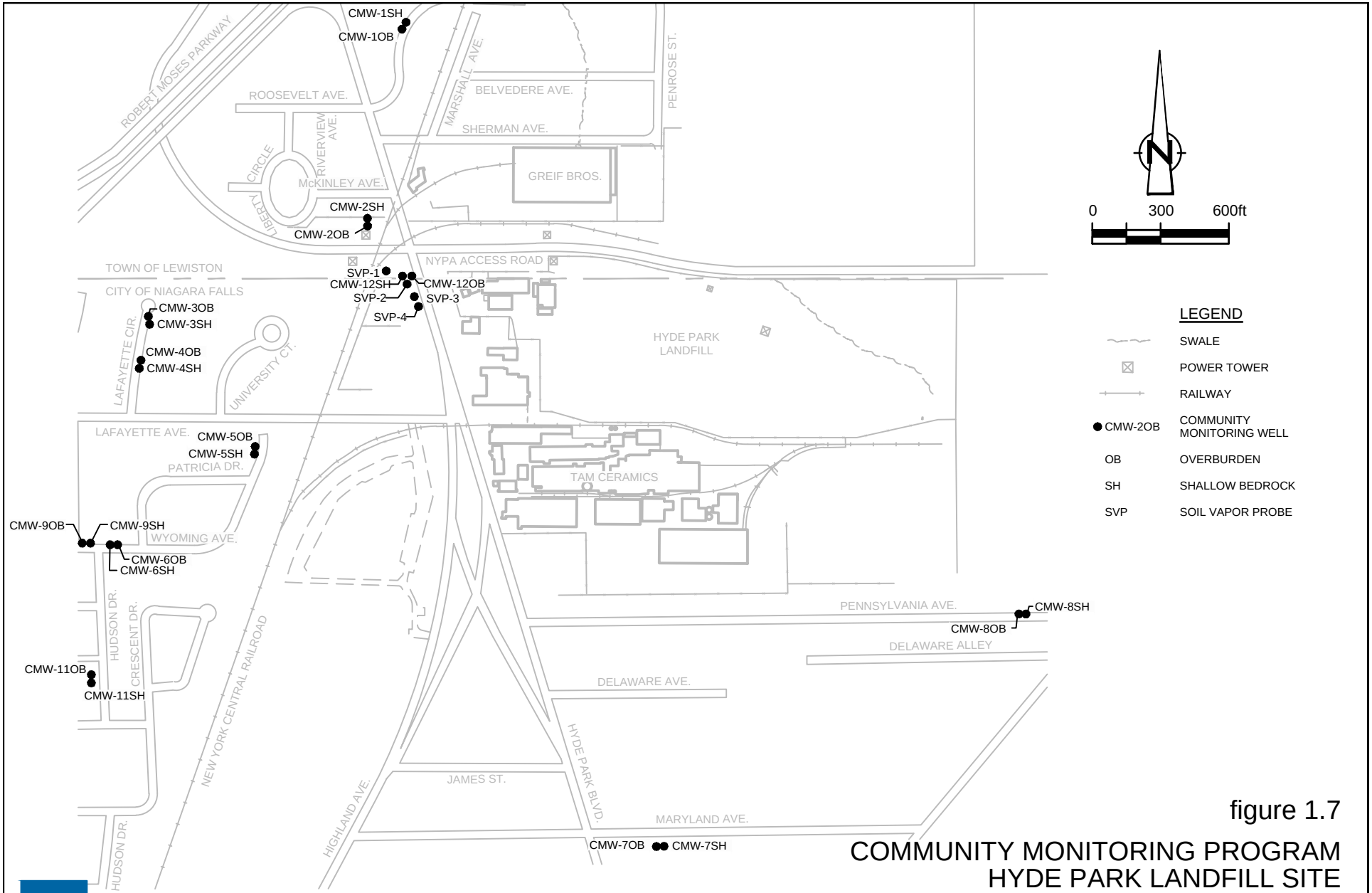

figure 1.7

COMMUNITY MONITORING PROGRAM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

GHD

01069-D23101(365)GN-WA007 APR 6, 2018

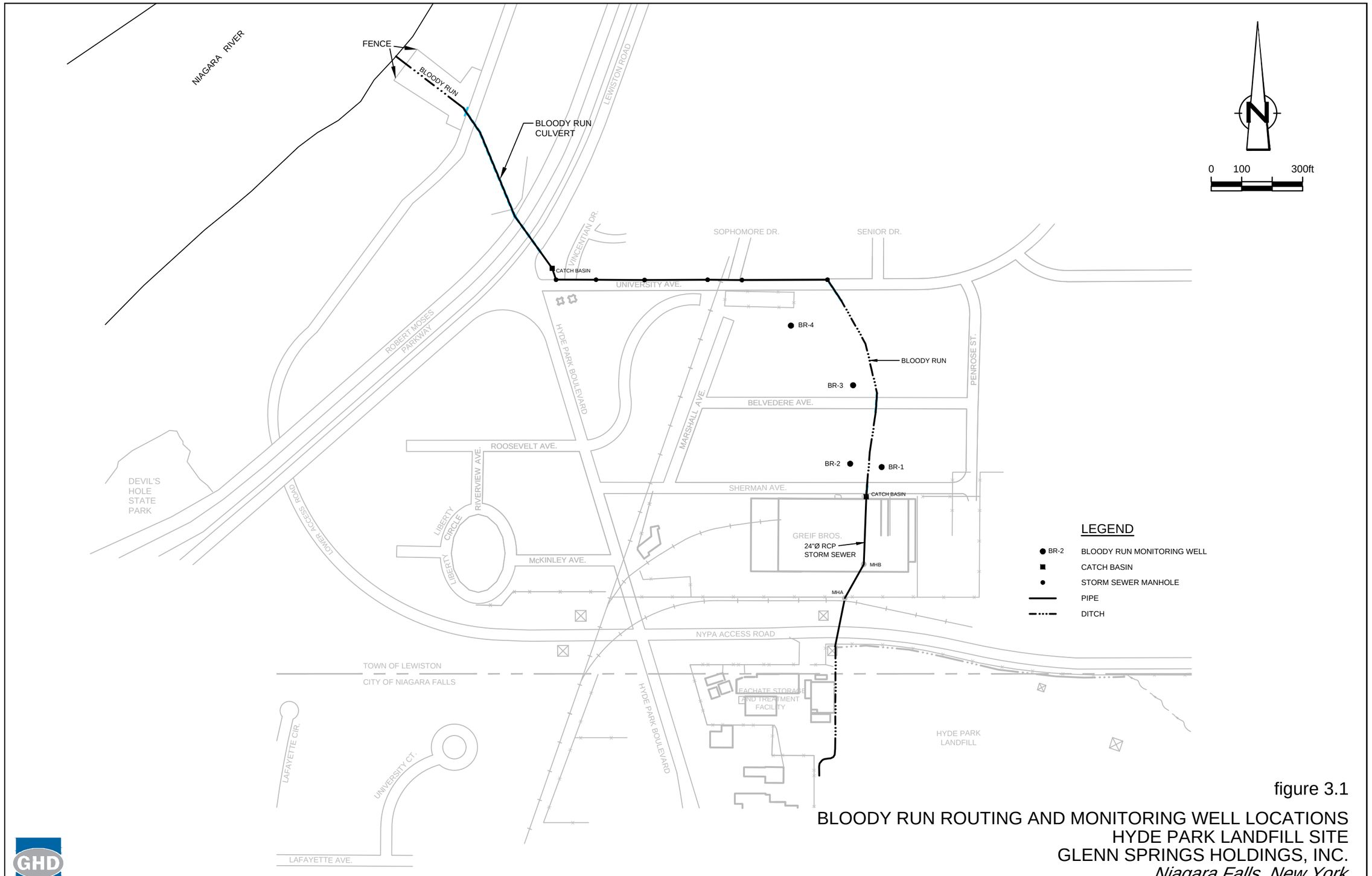

figure 3.1

BLOODY RUN ROUTING AND MONITORING WELL LOCATIONS
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

GHD

01069-D23101(365)GN-WA008 APR 6, 2018

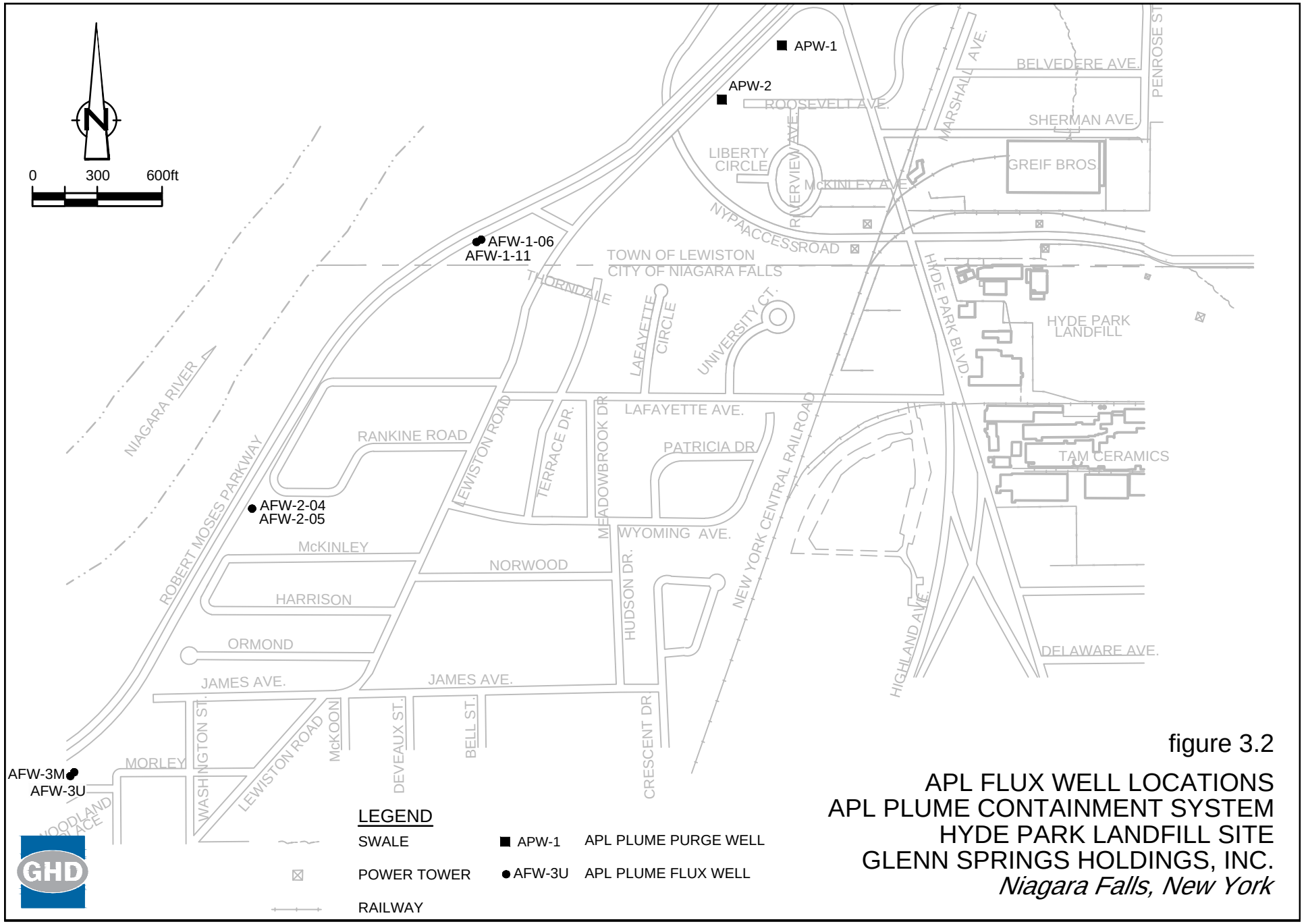

figure 3.2

APL FLUX WELL LOCATIONS
APL PLUME CONTAINMENT SYSTEM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01069-D23101(365)GN-WA009 APR 6, 2018

Table 1.1

PMP Monitoring Tasks - 2017
Hyde Park Landfill Site
Town of Niagara, New York

Program	Frequency	Activity	Location/Description	PMP Table Reference	PRR Report Reference	Completed (Yes/No)	Comment
Overburden	Continuous	Water Level Measurement	Wet Wells	--	--	Yes	
	Daily	Total Water Flow	Decanters	--	--	Yes	
	Monthly	Purge NAPL	Source Control NAPL Recovery Wells	Table 3.3	Table 3.1	Yes	
		Water Level Measurement	Source Control NAPL Recovery Wells	Table 3.3	Table 3.1	Yes	
		NAPL Thickness	Source Control NAPL Recovery Wells	Table 3.3	Table 3.1	Yes	
	Quarterly	Hand Water Level Measurement	Manholes	Table 3.2	Table 3.2	Yes	
		Hand Water Level Measurement	OBCS Overburden Monitoring Wells	Table 3.2	Table 3.2	Yes	
		Hand Water Level Measurement	Source Control Monitoring Wells	Table 3.3	Table 3.2	Yes	
		NAPL Thickness	Source Control Monitoring Wells	Table 3.3	--	Yes	
	Annual	NAPL Presence	Manholes	Table 3.2	Table 3.3	Yes	
		NAPL Presence	OBCS Overburden Monitoring Wells	Table 3.2	Table 3.3	Yes	
Bedrock	Continuous	Water Level Measurement	NAPL and APL Purge Wells	Table 4.1	--	Yes	See quarterly reports
	Hourly	Water Level Measurement	Bedrock Piezometer PMW-1M-09	--	--	Yes	See quarterly reports
	Daily	Total Water Flow	Decanters	--	--	Yes	
	Monthly	Total Water Flow	Bedrock Purge Wells	--	Table 3.6	Yes	
	Quarterly	Hand Water Level Measurement	All Bedrock Piezometers	--	Table 3.5	Yes	
		APL Sampling	Group B Bedrock Piezometers	Table 4.2	Tables 3.7 a-d	Yes	
	Every Fifth Quarter	APL Sampling	Group A Bedrock Piezometers	Table 4.2	Table 3.8	Yes	
	Annual	APL Sampling	Open Catch Basin	--	Table 5.2	Yes	
		NAPL Presence	Open Catch Basin	--	--	Yes	None present
	Five-Year	APL Sampling	Bloody Run Monitoring Wells	Table 7.1	--	--	Completed in 2016
		APL Sampling	Operating APL and NAPL Purge Wells	Table 7.1	--	--	Completed in 2016

Table 1.1

PMP Monitoring Tasks - 2017
Hyde Park Landfill Site
Town of Niagara, New York

Program	Frequency	Activity	Location/Description	PMP Table Reference	PRR Report Reference	Completed (Yes/No)	Comment
Community	Quarterly	Hand Water Level Measurement	Bedrock Monitoring Wells	Table 5.4	Table 3.10	Yes	
		Hand Water Level Measurement	Overburden Monitoring Wells	Table 5.4	Table 3.10	Yes	
	Annual	APL Plume Flux Composite Sample	APL Flux Piezometers and Purge Wells (APWs and AFWs)	Table 5.3/App D	Table 3.9	Yes	
		Vapor Monitoring	Overburden Monitoring Wells	Table 5.4	Table 3.11	Yes	
	Biennial	Gorge Face Seep Inspection	Seeps	Table 5.2	--	No	Complete in 2018
Treatment	Continuous	APL Sampling	Treated Effluent	Table 6.1	--	Yes	See quarterly reports
		Total Water Flow	Treated Effluent	Table 6.1	--	Yes	See quarterly reports
	Weekly	APL Sampling	Carbon Interstage	Table 6.1	Table 4.2	Yes	
		APL Sampling	Treated Effluent	Table 6.1	--	Yes	See quarterly reports
	Quarterly	NAPL Volumes	Decanters	--	Table 4.1	Yes	
		APL Sampling	Leachate Feed	Table 6.1	Table 4.3	Yes	
Estimated concentration		APL Sampling	Sac Bed Interstage	Table 6.1	Table 4.4	Yes	
		APL Sampling	Treated Effluent	Table 6.1	--	Yes	See quarterly reports
Maintenance	Weekly	Fence Inspections	--	App A	--	Yes	Available upon request
	Annual	Well Inspections	--	App A	--	Yes	Available upon request
		Cap Inspection	--	App A	--	Yes	Available upon request
Site-Wide	Quarterly	Report	--	--	--	Yes	Completed in 2018
	Annual	Report	--	--	--	Yes	Completed in 2018
	Five-Year	Report	--	--	--	Yes	Completed in 2017

Notes:

APL - Aqueous Phase Liquid
NAPL - Non-Aqueous Phase Liquid
OBCS - Overburden Barrier Collection System
PMP - Performance Monitoring Plan
PRR - Annual Periodic Review Report
-- - Not applicable

Table 3.1

2017 Source Control Well NAPL Pumping Summary
Hyde Park Landfill Site
Town of Niagara, New York

Month	SC-2			SC-3			SC-4			SC-5			SC-6			Total
	NAPL Thickness (feet)	Water Level Elevation (ft. AMSL)	NAPL Recovered (gallons)	NAPL Thickness (feet)	Water Level Elevation (ft. AMSL)	NAPL Recovered (gallons)	NAPL Thickness (feet)	Water Level Elevation (ft. AMSL)	NAPL Recovered (gallons)	NAPL Thickness (feet)	Water Level Elevation (ft. AMSL)	NAPL Recovered (gallons)	NAPL Thickness (feet)	Water Level Elevation (ft. AMSL)	NAPL Recovered (gallons)	NAPL Recovered (gallons)
January/March	-(1)	578.3	1.5	-(1)	578.9	174.0	-(1)	577.5	14.25	0.5	589.2	0.0	-(1)	578.2	1.25	191.0
April/June	-(1)	-(1)	0.25	-(1)	-(1)	166.5	-(1)	-(1)	12.5	0.4	-(1)	0.0	-(1)	608.7	1.0	180.3
July/September	-(1)	602.7	1.0	-(1)	597.9	96.5	-(1)	600.4	11.5	0.3	602.6	0.0	-(1)	609.1	0.1	109.1
October/December	0.6	602.8	0.0	3.2	598.0	39.5	3.1	600.4	8.5	0.4	602.6	0.0	2.0	607.3	2.8	50.8
Totals			**2.75**			**476.5**			**46.75**			**0.0**			**5.10**	**531.1**

Notes:

ft. AMSL - Feet Above Mean Sea Level
NAPL - Non-aqueous Phase Liquid
(1) - Not measured due to access issues at retrofitted wells, access points to measure waterlevels were installed in July 2017

Table 3.2

2017 Overburden Quarterly Groundwater Elevation Summary
Hyde Park Landfill Site
Town of Niagara, New York

Well	Reference Elevation (ft. AMSL)	Water Level Elevation Quarter 1 3/1/2017 (ft. AMSL)	Water Level Elevation Quarter 2 6/7/2017 (ft. AMSL)	Water Level Elevation Quarter 3 9/5/2017 (ft. AMSL)	Water Level Elevation Quarter 4 12/8/2017 (ft. AMSL)
OMW-1	605.28	601.20	599.19	598.41	599.69
OMW-2	605.99	603.60	602.15	600.87	602.60
OMW-3	598.63	592.90	588.97	587.33	589.00
OMW-4R	601.17	588.98	590.03	589.36	589.74
OMW-5R	591.31	586.75	585.25	584.30	585.50
OMW-6	587.62	585.64	585.53	585.30	585.49
OMW-7	592.74	586.07	584.84	584.93	585.44
OMW-8R2	594.67	586.71	585.49	586.19	585.76
OMW-9	595.52	588.04	587.35	587.31	587.47
OMW-10R	595.13	586.33	586.16	586.23	586.36
OMW-11R	597.52	592.44	591.72	591.07	592.10
OMW-12R	597.20	593.10	593.11	592.29	592.85
OMW-13R	601.50	591.46	591.55	591.53	591.65
OMW-14R	599.64	593.82	593.60	592.99	593.54
OMW-15	607.48	602.13	603.14	601.35	602.36
OMW-16R	607.62	603.85	603.35	602.69	603.38
SC-2	625.61	578.30	*	602.73	602.78
SC-3	638.72	578.90	*	597.89	598.03
SC-4	639.35	577.50	*	600.40	600.41
SC-5	634.07	589.20	*	602.56	602.59
SC-6	631.15	578.20	608.73	609.06	607.26
MH-20	605.87	601.20	601.21	601.24	601.16
MH-21	599.77	593.67	593.68	593.68	593.69
MH-22	593.37	586.71	586.57	585.79	586.39
MH-23	587.05	575.01	574.91	574.88	574.91
MH-24	582.57	576.92	575.37	574.75	574.89
MH-25	583.82	578.49	577.01	576.39	576.58
MH-26	584.48	577.54	576.19	Dry	576.05
MH-27	586.12	575.76	575.43	575.44	575.43
MH-28	585.23	572.58	569.12	569.41	568.81
MH-29	582.90	589.77	588.65	589.61	589.62
MH-30	588.37	589.49	589.39	589.43	589.40
MH-31	590.10	580.63	580.51	580.52	580.55
MH-32	592.01	582.38	582.37	582.35	582.33
MH-33	592.51	583.83	583.81	583.77	583.76
MH-34	597.64	591.22	591.23	591.19	591.19
MH-35	605.69	599.16	599.15	598.38	599.11
MH-35A	605.69	598.57	598.53	599.14	598.50

Notes:

Dry - No water present in well
ft. AMSL - Feet Above Mean Sea Level
* - Waterlevel could not be measured in retrofitted wells, access points to measure waterlevels were installed in July 2017

Table 3.3

2017 Overburden NAPL Presence Monitoring
Hyde Park Landfill Site
Town of Niagara, New York

Well I.D.	February 22 - March 8, 2017 (Yes/No)
OMW-1	No
OMW-2	No
OMW-3	No
OMW-4R	No
OMW-5R	No
OMW-6	No
OMW-7	No
OMW-8R2	No
OMW-9	No
OMW-10R	No
OMW-11	No
OMW-12R	No
OMW-13R	No
OMW-14R	No
OMW-15	No
OMW-16R	No
MH-20	No
MH-21	No
MH-22	No
MH-23	No
MH-24	No
MH-25	No
MH-26	No
MH-27	No
MH-28	No
MH-29	Yes
MH-30	Yes
MH-31	Yes
MH-32	Yes
MH-33	No
MH-34	No
MH-35	No
MH-35A	No
Wet Well C	No
Wet Well D	Yes

Table 3.4

2017 Overburden Collection Systems Monthly Average Flow (gpm) Summary
Hyde Park Landfill Site
Town of Niagara, New York

Month	EBCS WET WELL A	OBCS WET WELL C	OBCS WET WELL D	Total EBCS	Total OBCS
January	0.5	9.5	16.0	0.5	25.5
February	1.1	10.2	22.0	1.1	32.2
March	1.3	10.9	32.3	1.3	43.2
April	2.7	10.2	40.6	2.7	50.8
May	2.5	14.9	33.0	2.5	47.9
June	0.4	10.4	4.4	0.4	14.7
July	0.1	8.7	6.4	0.1	15.2
August	0.10	6.3	3.9	0.1	10.2
September	0.00	1.5	1.9	0.0	3.4
October	0.01	4.5	5.1	0.0	9.6
November	0.38	10.9	10.7	0.4	21.5
December	0.28	9.3	6.0	0.3	15.3
Annual Average	0.8	8.9	15.2	0.8	24.1

Notes:

GPM - Gallons per minute
EBCS - Existing Barrier Collection System
OBCS - Overburden Barrier Collection System

Table 3.5

2017 Bedrock Quarterly Water Level Elevation Summary - Piezometers
Hyde Park Landfill Site
Town of Niagara, New York

Well	Reference Elevation (ft. AMSL)	Water Level Elevation Quarter 1 3/1/2017 (ft. AMSL)	Water Level Elevation Quarter 2 6/7/2017 (ft. AMSL)	Water Level Elevation Quarter 3 9/5/2017 (ft. AMSL)	Water Level Elevation Quarter 4 12/8/2017 (ft. AMSL)
Flow Zone 1					
G1U-01	617.08	602.73	604.35	601.68	602.37
G6-01	609.24	602.34	604.13	601.02	602.19
H2U-01	620.92	612.22	612.38	609.12	610.86
H5-01	617.61	597.33	594.59	593.11	594.42
I1-01	625.58	600.93	601.08	598.67	599.67
Flow Zone 2					
F2U-02	599.89	575.71	575.55	574.79	575.35
F4U-02	602.32	586.02	585.88	585.04	585.90
G1-02	616.86	592.14	592.15	591.26	592.34
G6-02	608.65	591.70	591.65	590.60	591.70
H2U-02	620.88	594.47	594.24	592.46	594.04
H5-02	617.47	594.12	594.08	592.57	593.93
I1-02	625.47	589.48	589.38	586.15	588.37
J2U-02	609.66	599.62	596.75	593.54	596.28
J5U-02	606.21	600.00	597.38	593.57	596.37
J6-02	609.23	600.45	597.07	594.98	597.21
Flow Zone 4					
AFW-2U-04	593.48	575.95	577.15	575.81	576.00
D1U-04	593.77	582.96	581.27	580.17	581.34
D2U-04	590.65	581.34	579.65	578.24	579.40
E6-04	578.23	567.12	565.87	565.25	566.43
F2U-04	599.76	578.25	578.04	576.73	577.74
F4U-04	602.19	586.00	585.79	584.74	585.77
F6-04	588.06	569.69	570.02	569.84	570.00
G1U-04	616.96	591.98	592.13	590.95	592.06
G6-04	609.15	592.01	591.99	590.94	591.93
H5-04	617.40	594.02	593.88	592.22	593.78
I1-04	625.30	587.83	586.52	583.68	586.37
J2U-04	609.42	596.25	593.59	591.34	593.19
J5U-04	606.05	587.75	586.87	584.68	586.37
J6-04	609.12	582.04	579.84	578.69	579.74
Flow Zone 5					
AFW-2U-05	593.33	575.93	577.10	575.60	575.65
AGW-1U-05	591.80	588.09	585.43	585.02	585.07
D1U-05	593.51	581.29	579.92	578.98	580.22
D2U-05	590.56	581.09	579.66	578.66	579.97
E6-05	578.04	567.22	566.16	565.37	566.55
F2U-05	599.64	578.58	578.24	577.08	578.19
F4U-05	602.06	583.10	581.97	581.19	582.73
F6-05	587.85	569.61	569.96	569.74	569.93
G6-05	609.13	591.74	591.72	590.70	591.60
H2M-05	621.59	591.10	592.31	589.31	590.54
H5-05	617.31	593.04	592.83	591.39	592.80
I1-05	625.25	552.13	553.32	553.02	551.75
J2U-05	609.30	580.44	578.16	576.88	578.01
J5U-05	605.87	580.49	578.14	576.91	578.05
J6-05	609.02	581.75	579.46	578.38	579.34
PMW-1U-05	598.00	579.21	577.79	577.37	578.79

2017 Bedrock Quarterly Water Level Elevation Summary - Piezometers
Hyde Park Landfill Site
Town of Niagara, New York

Well	Reference Elevation (ft. AMSL)	Water Level Elevation Quarter 1 3/1/2017 (ft. AMSL)	Water Level Elevation Quarter 2 6/7/2017 (ft. AMSL)	Water Level Elevation Quarter 3 9/5/2017 (ft. AMSL)	Water Level Elevation Quarter 4 12/8/2017 (ft. AMSL)
Flow Zone 6					
ABP-7-06	575.78	Dry	Dry	Dry	Dry
AFW-1U-06	571.83	557.57	557.07	557.15	557.21
AFW-2U-06	593.22	545.34	545.04	545.20	545.13
AGW-1U-06	591.66	552.77	553.05	552.48	552.34
B2U-06	589.29	553.45	554.16	553.27	553.26
C3-06	585.78	Dry	548.37	Dry	Dry
D1U-06	593.25	548.05	548.26	548.05	547.94
D2U-06	590.38	549.17	549.17	548.91	549.43
E6-06	577.99	573.68	573.62	573.08	573.58
F2M-06	599.06	554.45	554.86	554.73	554.55
F4M-06	602.05	551.94	552.93	552.26	552.46
F6-06	587.84	573.59	573.53	555.85	573.42
G1M-06	616.75	573.73	573.77	573.16	573.56
G6-06	609.09	575.29	575.87	575.84	575.67
H2M-06	621.42	564.91	567.03	569.39	565.50
H5-06	617.17	592.17	593.79	592.08	590.85
I1-06	625.15	549.10	548.97	548.58	548.14
J2M-06	608.94	553.52	554.07	554.42	551.76
J5M-06	606.22	548.19	548.16	547.90	547.69
J6-06	608.93	555.52	555.95	555.14	554.70
PMW-1U-06	597.92	547.49	549.20	548.35	547.93
Flow Zone 7					
ABP-1-07	576.44	547.68	535.47	547.61	547.82
ABP-7-07	575.73	534.45	533.85	533.81	534.11
AFW-1M-07	571.41	Dry	Dry	Dry	Dry
AFW-2M-07	593.44	526.65	526.62	526.64	526.66
AGW-1M-07	592.91	543.50	550.58	552.48	540.22
B2M-07	589.52	532.01	531.54	Dry	531.83
C3-07	585.62	543.99	544.13	542.68	543.45
D1M-07	594.15	531.35	531.47	531.60	531.84
D2M-07	590.77	525.77	525.25	526.15	526.11
E6-07	577.91	554.39	554.55	554.53	554.43
F2M-07	598.91	518.92	518.41	518.17	518.02
F4M-07	601.91	529.29	528.83	528.86	527.92
F6-07	587.68	567.30	567.32	567.24	567.30
G1M-07	616.68	582.23	582.99	580.16	581.33
G6-07	609.06	581.97	582.76	580.18	581.18
H5-07	617.05	554.46	553.81	554.02	573.56
I1-07	625.14	543.60	549.09	549.54	541.05
J5M-07	606.07	544.15	549.69	551.19	541.29
J6-07	608.85	543.97	548.67	549.75	541.57
PMW-1M-07	598.50	529.77	528.96	529.09	529.22

Table 3.5

2017 Bedrock Quarterly Water Level Elevation Summary - Piezometers
Hyde Park Landfill Site
Town of Niagara, New York

Well	Reference Elevation (ft. AMSL)	Water Level Elevation Quarter 1 3/1/2017 (ft. AMSL)	Water Level Elevation Quarter 2 6/7/2017 (ft. AMSL)	Water Level Elevation Quarter 3 9/5/2017 (ft. AMSL)	Water Level Elevation Quarter 4 12/8/2017 (ft. AMSL)
Flow Zone 9					
ABP-1-09	575.49	534.99	547.10	534.68	534.17
ABP-7-09	575.67	533.65	533.00	531.77	532.69
AFW-1M-09	571.12	524.66	526.71	524.80	524.71
AFW-2M-09	593.32	521.10	521.04	521.14	521.13
AGW-1M-09	592.75	544.23	550.52	552.12	540.82
B2M-09	589.34	-	-	-	-
C3-09	585.00	542.08	542.39	541.77	541.89
D1M-09	594.02	518.54	517.75	518.00	518.31
D2M-09	590.66	518.49	517.64	517.44	517.47
E6-09	577.82	553.70	553.30	553.62	552.89
F2M-09	598.71	518.27	517.52	517.29	517.29
F4M-09	601.79	518.20	517.48	517.23	517.20
F6-09	587.53	572.13	573.45	572.22	572.28
G1M-09	616.58	578.54	581.58	579.24	579.35
G6-09	608.98	582.86	583.55	580.80	581.98
H2M-09	621.32	546.03	551.11	553.05	546.02
H5-09	616.93	543.63	548.38	549.12	540.78
I1-09	624.91	563.15	563.57	562.79	562.82
J2M-09	608.77	544.65	548.84	549.89	541.81
J5M-09	605.82	544.71	549.60	550.60	542.00
J6-09	608.76	562.88	562.95	562.54	559.67
PMW-1M-09	598.34	518.46	517.65	517.43	517.46
Flow Zone 11					
AFW-1L-11	572.10	509.59	508.58	506.18	507.34
AFW-2L-11	593.43	495.64	496.92	496.11	496.11
AGW-1L-11	592.71	580.59	580.85	581.08	581.28
B2L-11	589.65	499.14	499.73	499.82	502.82
D1L-11	593.80	507.94	504.21	504.62	504.31
D2L-11	590.21	517.68	517.90	517.63	517.83
E6-11	577.72	534.93	536.32	535.41	535.17
F2L-11	598.94	556.19	557.39	556.42	544.99
F4L-11	602.22	576.42	576.43	575.91	573.89
F6-11	587.40	529.29	530.37	529.99	529.82
G1L-11	616.84	577.26	586.60	589.58	589.03
G6-11	608.89	579.20	586.93	589.45	589.05
H2L-11	620.73	555.05	555.24	555.49	555.79
H5-11	616.81	544.89	544.29	545.52	541.82
I1-11	624.75	548.13	547.63	547.80	547.60
J5L-11	607.20	548.13	551.51	553.08	550.02
J6-11	608.68	584.86	585.25	585.00	584.74
PMW-1L-11	598.84	511.46	510.91	511.12	511.51

Notes:

ft. AMSL - Feet Above Mean Sea Level
\- - Not available due to obstruction

Table 3.6

2017 Bedrock Purge Well Monthly Flow Rate (gpm) Summary
Hyde Park Landfill Site
Town of Niagara, New York

Month	PW-1U	PW-1L	PW-2UR	PW-2M	PW-2L	PW-3M	PW-3L	PW-4U	PW-4M (1)	PW-5UR	PW-6UR	PW-6MR
January	0.07	0.91	0.62	10.61	0.49	0.10	0.58	0.08	0.33	2.95	0.33	3.00
February	0.16	1.21	0.65	11.42	0.49	0.10	0.08	0.10	0.19	3.03	0.33	3.16
March	0.32	1.39	0.72	11.80	0.92	0.10	1.47	0.13	0.27	3.20	0.51	3.10
April	0.36	2.75	0.91	13.49	1.26	0.12	2.11	0.17	0.41	3.60	0.81	3.19
May	0.41	2.56	0.78	14.52	0.73	0.11	3.41	0.14	0.32	3.24	0.85	3.49
June	0.30	1.43	0.70	11.94	0.35	0.09	1.73	0.11	0.33	3.19	0.68	2.87
July	0.28	0.96	0.65	11.16	0.35	0.13	1.58	0.10	0.19	2.68	0.40	2.93
August	0.28	0.87	0.62	10.89	0.35	0.38	1.50	0.09	0.06	2.73	0.55	2.94
September	0.25	0.69	0.55	9.99	0.31	0.60	1.62	0.08	0.00	2.58	0.43	2.66
October	0.25	0.66	0.54	9.29	0.29	1.14	1.49	0.08	0.01	2.57	0.46	2.68
November	0.26	0.90	0.62	10.14	0.45	0.71	1.55	0.11	0.00	2.63	0.57	2.84
December	0.24	0.81	0.66	9.93	0.37	0.19	1.67	0.12	0.01	2.66	0.57	2.91
Annual Average	0.26	1.26	0.67	11.27	0.53	0.31	1.57	0.11	0.18	2.92	0.54	2.98

Month	PW-7U	PW-8M (1)	PW-8U	PW-9U	PW-10U	APW-1	APW-2
January	0.41	0.00	0.00	0.49	2.59	0.03	0.00
February	0.20	0.00	0.00	0.50	2.64	0.22	0.01
March	0.47	0.06	0.17	0.58	2.96	0.50	0.10
April	0.58	0.96	1.06	1.04	3.53	1.47	0.47
May	0.52	0.68	1.04	0.99	3.54	1.27	0.36
June	0.41	0.00	0.48	0.39	3.02	0.14	0.00
July	0.41	0.00	0.02	0.47	2.85	0.14	0.00
August	0.41	0.00	0.00	0.39	2.72	0.06	0.00
September	0.39	0.00	0.00	0.28	2.47	0.00	0.00
October	0.40	0.00	0.00	0.23	2.49	0.03	0.00
November	0.42	0.00	0.00	0.33	2.66	0.20	0.02
December	0.42	0.00	0.00	0.36	2.60	0.01	0.00
Annual Average	0.42	0.14	0.23	0.50	2.84	0.34	0.08

Notes:

GPM - Gallons per minute

(1) - PW-4M and PW-8M typically run at set point and do not require frequent pumping

Table 3.7a

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
First Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-7-09	AGW-1M-07	AGW-1M-09	AGW-1U-06	B2L-11
Sample ID:			ABP-7-09-0217	AGW-1M-07-0217	AGW-1M-09-0217	AGW-1U-06-0217	B2L-11-0217
Sample Date:			02/23/2017	02/23/2017	02/23/2017	02/23/2017	02/23/2017
Parameters	**Units**	**Screening Level**					
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	17 J
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	25 J	31 J	**140 J**	**130 J**	**100 J**

Sample Location:			C3-07	C3-09	D1M-09	D1U-04	D1U-05
Sample ID:			C3-07-0217	C3-09-0217	D1M-09-0217	D1U-04-0217	D1U-05-0217
Sample Date:			02/23/2017	02/23/2017	02/23/2017	02/23/2017	02/23/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	25 J	35 J	**190 J**	21 J	**63 J**

Sample Location:			F2M-09	F2U-02	F2U-04	G1U-01	G6-01
Sample ID:			F2M-09-0217	F2U-02-0217	F2U-04-0217	G1U-01-0217	G6-01-0217
Sample Date:			02/23/2017	02/23/2017	02/23/2017	02/27/2017	02/23/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	**290**	**410**	250 U	15 J

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			W7-10-0217	G6-04-0217	G6-06-0217	H2U-2-0217	H5-09-0217
Sample Date:			02/23/2017 Duplicate	02/23/2017	02/23/2017	02/24/2017	02/24/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	220	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	1200	30 U	13 J	27 J
4-Chlorobenzoic acid	µg/L	7,300	30 U	740	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	12 J	**67 J**	250 U	**78 J**	**120 J**

Notes:

µg/L - Micrograms per liter
J - Estimated concentration
U - Not detected at the associated reporting limit
0.3 - Concentration exceeds Screening Level

Table 3.7b

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Second Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-7-09	AGW-1M-07	AGW-1M-09	AGW-1U-06	B2L-11
Sample ID:			ABP-7-09-0517	AGW-1M-07-0517	AGW-1M-09-0517	AGW-1U-06-0517	B2L-11-0517
Sample Date:			05/24/2017	05/25/2017	05/25/2017	05/25/2017	05/25/2017
Parameters	**Units**	**Screening Level**					
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	21 J
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	**73 J**	28 J	**140 J**	**83 J**	**150 J**

Sample Location:			C3-07	C3-09	D1M-09	D1U-04	D1U-05
Sample ID:			C3-07-0517	C3-09-0517	D1M-09-0517	D1U-04-0517	D1U-05-0517
Sample Date:			05/24/2017	05/24/2017	05/24/2017	05/24/2017	05/24/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	21 J	**190 J**	42 J	**66 J**

Sample Location:			F2M-09	F2U-02	F2U-04	G1U-01	G6-01
Sample ID:			F2M-09-0517	F2U-02-0517	F2U-04-0517	G1U-01-0517	G6-01-0517
Sample Date:			05/24/2017	05/24/2017	05/24/2017	05/24/2017	05/24/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	20 J	**280**	**410**	250 U	17 J

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			W7-10-0517	G6-04-0517	G6-06-0517	H2U-02-0517	H5-09-0517
Sample Date:			05/24/2017	05/24/2017	05/24/2017	05/25/2017	05/24/2017
			Duplicate				
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	370	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	1900	30 U	5.6 J	60
4-Chlorobenzoic acid	µg/L	7,300	30 U	1200	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	14 J	**96 J**	250 U	**69 J**	**120 J**

Notes:

µg/L - Micrograms per liter
J - Estimated concentration
U - Not detected at the associated reporting limit
- - Data not available
0.3 - Concentration exceeds Screening Level

Table 3.7c

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Third Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-7-09	AGW-1M-07	AGW-1M-09	AGW-1U-06	B2L-11
Sample ID:			ABP-7-09-0817	AGW-1M-07-0817	AGW-1M-09-0817	AGW-1U-06-0817	B2L-11-0817
Sample Date:			08/11/2017	08/10/2017	08/10/2017	08/10/2017	08/11/2017
Parameters	**Units**	**Screening Level**					
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	13 J
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	28 J	31 J	**170 J**	**100 J**	**140 J**

Sample Location:			C3-07	C3-09	D1M-09	D1U-04	D1U-05
Sample ID:			C3-07-0817	C3-09-0817	D1M-09-0817	D1U-04-0817	D1U-05-0817
Sample Date:			08/10/2017	08/10/2017	08/10/2017	08/10/2017	08/10/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	16 J	18 J	**230 J**	20 J	**59 J**

Sample Location:			F2M-09	F2U-02	F2U-04	G1U-01	G6-01
Sample ID:			F2M-09-0817	F2U-02-0817	F2U-04-0817	G1U-01-0817	G6-01-0817
Sample Date:			08/10/2017	08/10/2017	08/10/2017	08/11/2017	08/10/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	18 J	**240 J**	**390**	250 U	250 U

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			W7-10-0817	G6-04-0817	G6-06-0817	H2U-02-0817	H5-09-0817
Sample Date:			08/10/2017	08/10/2017	08/10/2017	08/11/2017	08/11/2017
			Duplicate				
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	500	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	2400	5.0 J	7.2 J	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	1200	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	**120 J**	250 U	**81 J**	**100 J**

Notes:

µg/L	-Micrograms per liter
J	-Estimated concentration
U	- Not detected at the associated reporting limit
0.3	- Concentration exceeds Screening Level

Table 3.7d

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-7-09	AGW-1M-07	AGW-1M-07	AGW-1M-09	AGW-1U-06
Sample ID:			ABP-7-09-1117	AGW-1M-07-1117	X7-10-1117	AGW-1M-09-1117	AGW-1U-06-1117
Sample Date:			11/17/2017	11/14/2017	11/14/2017	11/14/2017	11/14/2017
					Duplicate		
Parameters	**Units**	**Screening Level**					
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 UJ	24,000 J	100 U	100 U
Chlorendic acid	µg/L	50	16 J	30 J	**32,000 J**	**150 J**	**160 J**

Sample Location:			B2L-11	C3-07	C3-09	D1M-09	D1U-04
Sample ID:			B2L-11-1117	C3-07-1117	C3-09-1117	D1M-09-1117	D1U-04-1117
Sample Date:			12/01/2017	11/14/2017	11/14/2017	11/14/2017	11/13/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	12 J	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	**160 J**	20 J	24 J	**210 J**	21 J

Sample Location:			D1U-05	F2M-09	F2U-02	F2U-04	G1U-01
Sample ID:			D1U-05-1117	F2M-09-1117	F2U-02-1117	F2U-04-1117	G1U-01-1117
Sample Date:			11/13/2017	12/01/2017	12/01/2017	12/01/2017	11/16/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	**83 J**	20 J	**260**	**380**	250 U

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			G6-01-1117	G6-04-1117	G6-06-1117	H2U-02-1117	H5-09-1117
Sample Date:			11/13/2017	11/13/2017	11/13/2017	12/05/2017	11/16/2017
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	660	26 J	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	2,800	110	12 J	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	2,000	200	30 U	30 U
Benzoic acid	µg/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	**150 J**	250 U	**90 J**	44 J

Notes:

µg/L - Micrograms per liter
J - Estimated concentration
U - Not detected at the associated reporting limit
0.3 - Concentration exceeds Screening Level

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-1-09	ABP-7-09	AFW-1L-11	AFW-2U-04	AFW-2U-05	AGW-1M-07	AGW-1M-07	AGW-1M-09
Sample ID:			ABP-1-09-1117	ABP-7-09-1117	AFW-1L-11-1117	AFW-2U-04-1117	AFW-2U-05-1117	AGW-1M-07-1117	X7-10-1117	AGW-1M-09-1117
Sample Date:			12/01/2017	11/17/2017	12/04/2017	12/13/2017	12/13/2017	11/14/2017	11/14/2017	11/14/2017
									Duplicate	
Parameters	**Units**	**Screening Level**								
Volatile Organic Compounds										
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37 J
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.40 J	0.42 J	1.3
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.45 J	0.47 J	3.1
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	0.34 J	1.0 U	1.0 U	1.0 U	0.93 J	1.1	5.5
1,4-Dichlorobenzene	µg/L	75	1.0 U	0.83 J	1.0 U	1.0 U	1.0 U	0.90 J	0.91 J	3.9
2-Chlorotoluene	µg/L	120	1.0 U	1.8	1.0 U	1.0 U	1.0 U	2.5	2.4	35
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.32 J
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.7	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	5.3	1.0 U	1.0 U	1.0 U	7.2	7.5	41
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.56 J
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	0.26 J	1.0 U	1.0 U	1.0 U	0.67 J	0.74 J	3.7
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.34 J	1.0 U	1.0 U	1.0 U	0.89 J	0.92 J	7.2
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.72 J	1.0 U	1.0 U	1.0 U	2.2	2.3	11
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	0.24 J	1.0 U	1.0 U	1.0 U	1.0 U	0.49 J

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-1-09	ABP-7-09	AFW-1L-11	AFW-2U-04	AFW-2U-05	AGW-1M-07	AGW-1M-07	AGW-1M-09
Sample ID:			ABP-1-09-1117	ABP-7-09-1117	AFW-1L-11-1117	AFW-2U-04-1117	AFW-2U-05-1117	AGW-1M-07-1117	X7-10-1117	AGW-1M-09-1117
Sample Date:			12/01/2017	11/17/2017	12/04/2017	12/13/2017	12/13/2017	11/14/2017	11/14/2017	11/14/2017
									Duplicate	
Parameters	**Units**	**Screening Level**								
Volatile Organic Compounds (Continued)										
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.89 J
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2 J
Semi-volatile Organic Compounds										
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	110	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	730	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	73	47 U	47 U	47 U	50 U	50 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	47 U	50 U	50 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	47 U	50 U	50 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.4 U	9.4 U	9.4 UJ	10 U	10 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.4 UJ	10 U	10 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.4 UJ	10 U	10 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-1-09	ABP-7-09	AFW-1L-11	AFW-2U-04	AFW-2U-05	AGW-1M-07	AGW-1M-07	AGW-1M-09
Sample ID:			ABP-1-09-1117	ABP-7-09-1117	AFW-1L-11-1117	AFW-2U-04-1117	AFW-2U-05-1117	AGW-1M-07-1117	X7-10-1117	AGW-1M-09-1117
Sample Date:			12/01/2017	11/17/2017	12/04/2017	12/13/2017	12/13/2017	11/14/2017	11/14/2017	11/14/2017
									Duplicate	
Parameters	**Units**	**Screening Level**								
Semi-volatile Organic Compounds (Continued)										
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	240	9.4 U	9.4 U	9.4 UJ	10 U	10 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	4.7 U	4.7 U	4.7 U	5.0 U	5.0 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	47 U	47 U	47 U	50 U	50 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	10 U	10 U	9.4 U	9.4 U	9.4 U
Organic Acid										
2-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	24 J	0.10 U
Chlorendic acid	mg/L	0.05	0.25 U	0.016 J	0.25 U	0.25 U	0.25 U	0.030 J	32 J	0.15 J
General Chemistry										
Sulfate	mg/L	NA	1470	187	143	93.2	245	1320	1310	1460

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			AGW-1U-05	AGW-1U-06	B2L-11	C3-07	C3-09	D1L-11	D1M-09	D1U-04	D1U-05
Sample ID:			AGW-1U-05-1117	AGW-1U-06-1117	B2L-11-1117	C3-07-1117	C3-09-1117	D1L-11-1117	D1M-09-1117	D1U-04-1117	D1U-05-1117
Sample Date:			11/14/2017	11/14/2017	12/01/2017	11/14/2017	11/14/2017	11/14/2017	11/14/2017	11/13/2017	11/13/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	0.52 J	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.74 J	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.1	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.7	1.0 U	1.0 U	0.35 J	8.7	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	**31**	1.0 U	1.0 U	**120**	2.7	1.0 U	1.0 U
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.0 U	1.0 U	0.41 J	0.61 J	0.30 J	71	1.1	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	1.0 U	6.3	0.44 J	1.0 U	1.0 U	24	1.0 U	0.99 J
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	0.49 J	1.5	0.62 J	1.0 U	1.0 U	1.0 U	0.51 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.3	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.39 J	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	0.60 J	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	0.39 J	1.0 U	1.0 U	1.0 U	1.3	1.0 U	1.0 U
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	0.46 J	1.0 U	1.0 U	2.5	0.22 J	1.0 U	1.0 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			AGW-1U-05	AGW-1U-06	B2L-11	C3-07	C3-09	D1L-11	D1M-09	D1U-04	D1U-05
Sample ID:			AGW-1U-05-1117	AGW-1U-06-1117	B2L-11-1117	C3-07-1117	C3-09-1117	D1L-11-1117	D1M-09-1117	D1U-04-1117	D1U-05-1117
Sample Date:			11/14/2017	11/14/2017	12/01/2017	11/14/2017	11/14/2017	11/14/2017	11/14/2017	11/13/2017	11/13/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds (Continued)											
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 J	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	0.58 J	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	1.0 U	**2.2**	1.0 U	1.0 U	1.0 U	1.0 U	0.72 J	1.0 U	1.0 U
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	26	3.0 U	3.0 U	3.0 U
Semi-volatile Organic Compounds											
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ
2,4-Dichlorophenol	µg/L	110	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	730	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	1.8 J	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	73	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	4.1 J	9.4 U	1.6 J	9.4 UJ
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			AGW-1U-05	AGW-1U-06	B2L-11	C3-07	C3-09	D1L-11	D1M-09	D1U-04	D1U-05
Sample ID:			AGW-1U-05-1117	AGW-1U-06-1117	B2L-11-1117	C3-07-1117	C3-09-1117	D1L-11-1117	D1M-09-1117	D1U-04-1117	D1U-05-1117
Sample Date:			11/14/2017	11/14/2017	12/01/2017	11/14/2017	11/14/2017	11/14/2017	11/14/2017	11/13/2017	11/13/2017
Parameters	**Units**	**Screening Level**									
Semi-volatile Organic Compounds (Continued)											
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ
Fluorene	µg/L	240	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	11	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ
Organic Acid											
2-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.012 J	0.030 U	0.030 U	0.0070 J	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chlorendic acid	mg/L	0.05	0.25 U	0.16 J	0.16 J	0.020 J	0.024 J	0.25 U	0.21 J	0.021 J	0.083 J
General Chemistry											
Sulfate	mg/L	NA	169	402	1350	198	179	970	938	104	186

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D2M-09	D2U-04	D2U-05	E6-04	E6-05	E6-06	E6-09	E6-09	E6-11
Sample ID:			D2M-09-1117	D2U-04-1117	D2U-05-1117	E6-04-117	E6-05-1117	E6-06-1117	E6-09-1117	Z7-10-1117	E6-11-1117
Sample Date:			11/14/2017	11/14/2017	11/14/2017	11/20/2017	11/20/2017	11/20/2017	11/20/2017	11/20/2017 Duplicate	11/20/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	0.38 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	0.38 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**100**	**100**	**78**
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.9
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	9.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.2	1.0 U	1.0 U	1.0 U	1.0 U	3.1	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.4	2.4	2.6
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	48	49	35

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D2M-09	D2U-04	D2U-05	E6-04	E6-05	E6-06	E6-09	E6-09	E6-11
Sample ID:			D2M-09-1117	D2U-04-1117	D2U-05-1117	E6-04-117	E6-05-1117	E6-06-1117	E6-09-1117	Z7-10-1117	E6-11-1117
Sample Date:			11/14/2017	11/14/2017	11/14/2017	11/20/2017	11/20/2017	11/20/2017	11/20/2017	11/20/2017 Duplicate	11/20/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds (Continued)											
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.78 J	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.57 J	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	0.79 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	54	56	38
Semi-volatile Organic Compounds											
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	110	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	730	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	3.0 J	3.0 J	1.5 J
2,4-Dinitrophenol	µg/L	73	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.4 U	9.4 U	9.4 U	**110**	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.4 U	1.1 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D2M-09	D2U-04	D2U-05	E6-04	E6-05	E6-06	E6-09	E6-09	E6-11
Sample ID:			D2M-09-1117	D2U-04-1117	D2U-05-1117	E6-04-117	E6-05-1117	E6-06-1117	E6-09-1117	Z7-10-1117	E6-11-1117
Sample Date:			11/14/2017	11/14/2017	11/14/2017	11/20/2017	11/20/2017	11/20/2017	11/20/2017	11/20/2017 Duplicate	11/20/2017
Parameters	**Units**	**Screening Level**									
Semi-volatile Organic Compounds (Continued)											
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	240	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	11	12	2.4 J
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acid											
2-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	22	22	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chlorendic acid	mg/L	0.05	0.20 J	32	**86**	0.25 U	0.25 U	0.027 J	0.25 U	0.25 U	0.032 J
General Chemistry											
Sulfate	mg/L	NA	716	123	271	1240	1460	1370	976	964	1500

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2L-11	F2M-09	F2U-02	F2U-04	F6-04	F6-06	F6-06	F6-11	G1L-11
Sample ID:			F2L-11-1117	F2M-09-1117	F2U-02-1117	F2U-04-1117	F6-04-1117	F6-06-1117	Y7-10-1117	F6-11-1117	G1L-11-1117
Sample Date:			12/01/2017	12/01/2017	12/01/2017	12/01/2017	11/17/2017	11/17/2017	11/17/2017 Duplicate	11/17/2017	11/16/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J
Benzene	µg/L	5	**19**	0.72 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**30**	**60**
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.4	1.5	0.38 J	1.0 U	0.32 J	1.0 U	1.0 U	1.5	3.2
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	0.59 J	1.0 U	1.0 U	1.7	1.9	1.0 U	0.40 J
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	0.82 J	0.35 J	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	4.0
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.36 J
Toluene	µg/L	1000	7.6	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	0.21 J	1.0 U	0.41 J

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2L-11	F2M-09	F2U-02	F2U-04	F6-04	F6-06	F6-06	F6-11	G1L-11
Sample ID:			F2L-11-1117	F2M-09-1117	F2U-02-1117	F2U-04-1117	F6-04-1117	F6-06-1117	Y7-10-1117	F6-11-1117	G1L-11-1117
Sample Date:			12/01/2017	12/01/2017	12/01/2017	12/01/2017	11/17/2017	11/17/2017	11/17/2017 Duplicate	11/17/2017	11/16/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds (Continued)											
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7	2.0	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.70 J	0.66 J	1.0 U	0.41 J
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	10000	12	0.94 J	3.0 U	3.0 U	3.0 U	1.3 J	1.6 J	3.0 U	13
Semi-volatile Organic Compounds											
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	110	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	730	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	73	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2L-11	F2M-09	F2U-02	F2U-04	F6-04	F6-06	F6-06	F6-11	G1L-11
Sample ID:			F2L-11-1117	F2M-09-1117	F2U-02-1117	F2U-04-1117	F6-04-1117	F6-06-1117	Y7-10-1117	F6-11-1117	G1L-11-1117
Sample Date:			12/01/2017	12/01/2017	12/01/2017	12/01/2017	11/17/2017	11/17/2017	11/17/2017 Duplicate	11/17/2017	11/16/2017
Parameters	**Units**	**Screening Level**									
Semi-volatile Organic Compounds (Continued)											
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	240	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acid											
2-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chlorendic acid	mg/L	0.05	0.25 U	0.020 J	0.26	0.38	0.25 U	0.25 U	0.25 U	0.012 J	0.25 U
General Chemistry											
Sulfate	mg/L	NA	83.8	1300	111	133	453	1340	1370	1880	1520

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G1M-06	G1U-01	G6-01	G6-02	G6-04	G6-05	G6-06	G6-07	G6-11
Sample ID:			G1M-06-1117	G1U-01-1117	G6-01-1117	G6-02-1117	G6-04-1117	G6-05-1117	G6-06-1117	G6-07-1117	G6-11-1117
Sample Date:			11/16/2017	11/16/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.3 J	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	**3.4**	**3.3**	**6.5**	**110**	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	0.51 J	0.49 J	0.98 J	**17**	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.7	6.2	0.24 J	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	0.68 J	0.78 J	0.64 J	2.9 J	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	0.27 J	0.24 J	0.22 J	5.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	0.77 J	0.55 J	0.59 J	5.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	0.22 J	0.34 J	**43**	**290**	1.0 U	1.0 U	**110**
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	0.55 J	1.0 U	1.0 U	1.0 U	4.7	40	1.0 U	1.0 U	20
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	1.0 U	1.2	1.3	2.1	18	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	23	**560**	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	0.97 J	38	51	41	**130**	1.5	0.31 J	3.7
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 J	1.0 U	1.0 U	7.4
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.3	1.2	1.1	5.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.7	1.8	1.6	5.0 U	1.0 U	1.0 U	0.21 J
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	7.2	6.9	6.3	5.0 U	0.45 J	1.0 U	0.68 J
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	**14**	**14**	**9.7**	4.0 J	0.64 J	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	0.71 J	9.1	1.0 U	1.0 U	3.3

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G1M-06	G1U-01	G6-01	G6-02	G6-04	G6-05	G6-06	G6-07	G6-11
Sample ID:			G1M-06-1117	G1U-01-1117	G6-01-1117	G6-02-1117	G6-04-1117	G6-05-1117	G6-06-1117	G6-07-1117	G6-11-1117
Sample Date:			11/16/2017	11/16/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds (Continued)											
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	3.2	4.1	14	38	1.0 U	1.0 U	0.70 J
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	0.42 J	0.54 J	**56**	**69**	**52**	**330**	2.8	0.65 J	2.0
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	**2.1**	**2.2**	**20**	**90**	1.0 U	1.0 U	0.64 J
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	5.7 J	3.0 U	3.0 U	50
Semi-volatile Organic Compounds											
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
2,4-Dichlorophenol	µg/L	110	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	730	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	1.8 J
2,4-Dinitrophenol	µg/L	73	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G1M-06	G1U-01	G6-01	G6-02	G6-04	G6-05	G6-06	G6-07	G6-11
Sample ID:			G1M-06-1117	G1U-01-1117	G6-01-1117	G6-02-1117	G6-04-1117	G6-05-1117	G6-06-1117	G6-07-1117	G6-11-1117
Sample Date:			11/16/2017	11/16/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017
Parameters	**Units**	**Screening Level**									
Semi-volatile Organic Compounds (Continued)											
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
Fluorene	µg/L	240	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
Organic Acid											
2-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.66	2.2	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	2.8	8.3	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	2.0	19	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	1.0 U	0.10 U	0.10 U	0.10 U
Chlorendic acid	mg/L	0.05	0.25 U	0.25 U	0.25 U	0.25 U	0.15 J	0.50 J	0.25 U	0.25 U	0.25 U
General Chemistry											
Sulfate	mg/L	NA	1070	135	89.4	79.7	219	1030	343	364	1590

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H2M-06	H2M-09	H2U-01	H2U-02	H5-02	H5-04	H5-05	H5-07	H5-09
Sample ID:			H2M-06-1117	H2M-09-1117	H2U-01-1117	H2U-02-1117	H5-02-1117	H5-04-1117	H5-05-1117	H5-07-1117	H5-09-1117
Sample Date:			12/05/2017	12/05/2017	12/05/2017	12/05/2017	11/16/2017	11/16/2017	11/16/2017	11/16/2017	11/16/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	200	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	**1.8 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	5.0 U	1.0 U	1.0 U	3.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	5.0 U	2.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.4
1,2-Dichlorobenzene	µg/L	600	5.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.4
1,2-Dichloroethane	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	5.0 U	0.98 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	6.5
1,4-Dichlorobenzene	µg/L	75	5.0 U	1.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5
2-Chlorotoluene	µg/L	120	5.0 U	18	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	26
3-Chlorotoluene	µg/L	120	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J
Benzene	µg/L	5	2.3 J	**24**	1.0 U	**5.2**	1.0 U	1.0 U	1.0 U	0.57 J	**37**
Bromodichloromethane	µg/L	80	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	47	1.0 U	1.0 U	1.9	1.0 U	1.0 U	0.24 J	1.7	14
Carbon tetrachloride	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	2.0 J	7.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	27
Chloroethane	µg/L	3.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	36	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	12	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.76 J
cis-1,3-Dichloropropene	µg/L	0.44	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	5.0 U	0.45 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7
Methylene chloride	µg/L	30	3.4 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	5.0 U	3.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.5
o-Monochlorobenzotrifluoride	µg/L	50	5.0 U	8.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0
p-Monochlorobenzotrifluoride	µg/L	50	5.0 U	12	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10
Styrene	µg/L	NA	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	2.3 J	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	17

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H2M-06	H2M-09	H2U-01	H2U-02	H5-02	H5-04	H5-05	H5-07	H5-09
Sample ID:			H2M-06-1117	H2M-09-1117	H2U-01-1117	H2U-02-1117	H5-02-1117	H5-04-1117	H5-05-1117	H5-07-1117	H5-09-1117
Sample Date:			12/05/2017	12/05/2017	12/05/2017	12/05/2017	11/16/2017	11/16/2017	11/16/2017	11/16/2017	11/16/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds (Continued)											
trans-1,2-Dichloroethene	µg/L	100	10	0.79 J	1.0 U	0.66 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0
trans-1,3-Dichloropropene	µg/L	0.44	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	**12**	1.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	10 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	**9.6**	1.2	1.0 U	1.6	1.0 U	1.0 U	1.0 U	1.0 U	0.95 J
Xylenes (total)	µg/L	10000	15 U	2.2 J	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	0.78 J	15
Semi-volatile Organic Compounds											
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	110	9.4 U	1.9 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	2.9 J
2,4-Dimethylphenol	µg/L	730	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	73	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H2M-06	H2M-09	H2U-01	H2U-02	H5-02	H5-04	H5-05	H5-07	H5-09
Sample ID:			H2M-06-1117	H2M-09-1117	H2U-01-1117	H2U-02-1117	H5-02-1117	H5-04-1117	H5-05-1117	H5-07-1117	H5-09-1117
Sample Date:			12/05/2017	12/05/2017	12/05/2017	12/05/2017	11/16/2017	11/16/2017	11/16/2017	11/16/2017	11/16/2017
Parameters	**Units**	**Screening Level**									
Semi-volatile Organic Compounds (Continued)											
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	240	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	4.2 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acid											
2-Chlorobenzoic acid	mg/L	7.3	0.054	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.38	0.030 U	0.030 U	0.012 J	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.076	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chlorendic acid	mg/L	0.05	0.25 U	0.018 J	0.25 U	0.090 J	0.25 U	0.25 U	0.25 U	0.25 U	0.044 J
General Chemistry											
Sulfate	mg/L	NA	1420	1440	146	234	139	929	1150	1710	1460

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			I1-01	I1-02	I1-04	I1-07	J6-02	J6-04	J6-05	J6-07	J6-11
Sample ID:			I1-01-1117	I1-02-1117	I1-04-1117	I1-07-1117	J6-02-1117	J6-04-1117	J6-05-1117	J6-07-1117	J6-11-1117
Sample Date:			12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 J	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.43 J	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.9	1.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**89**
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.0 U	1.0 U	1.0 U	0.52 J	1.0 U	1.0 U	1.0 U	0.32 J	1.6
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	1.0 U	1.0 U	1.8	1.0 U	1.0 U	1.0 U	13	1.0 U
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.6
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.56 J	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.1	1.0 U
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	0.29 J	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.61 J

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			I1-01	I1-02	I1-04	I1-07	J6-02	J6-04	J6-05	J6-07	J6-11
Sample ID:			I1-01-1117	I1-02-1117	I1-04-1117	I1-07-1117	J6-02-1117	J6-04-1117	J6-05-1117	J6-07-1117	J6-11-1117
Sample Date:			12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017
Parameters	**Units**	**Screening Level**									
Volatile Organic Compounds (Continued)											
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	17
Semi-volatile Organic Compounds											
2,4,6-Trichlorophenol	µg/L	6.1	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	110	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	730	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	73	50 U	50 U	47 U	50 U	47 U	47 U	47 U	47 U	47 U
2-Chloronaphthalene	µg/L	490	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	30	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	50	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	50 U	50 U	47 U	50 U	47 U	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	50	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	50	50 U	50 U	47 U	50 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	370	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	310	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	1800	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	0.092	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	10 UJ	10 UJ	9.4 UJ	10 UJ	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	NA	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.2	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	29000	10 UJ	10 UJ	9.4 UJ	10 UJ	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	370000	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	10 UJ	10 UJ	9.4 UJ	10 UJ	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
Fourth Quarter 2017
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			I1-01	I1-02	I1-04	I1-07	J6-02	J6-04	J6-05	J6-07	J6-11
Sample ID:			I1-01-1117	I1-02-1117	I1-04-1117	I1-07-1117	J6-02-1117	J6-04-1117	J6-05-1117	J6-07-1117	J6-11-1117
Sample Date:			12/04/2017	12/04/2017	12/04/2017	12/04/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017
Parameters	**Units**	**Screening Level**									
Semi-volatile Organic Compounds (Continued)											
Fluoranthene	µg/L	1500	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	240	10 UJ	10 UJ	9.4 UJ	10 UJ	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	1	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	0.86	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	4.8	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	70	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	6.5	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Octachlorocyclopentene	µg/L	NA	5.0 U	5.0 U	4.7 U	5.0 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	1	50 U	50 U	47 U	50 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	310	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	11000	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	180	10 U	10 U	9.4 U	10 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acid											
2-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
3-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
4-Chlorobenzoic acid	mg/L	7.3	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chlorendic acid	mg/L	0.05	0.25 U	0.25 U	0.25 U	0.052 J	0.25 U	0.25 U	0.25 U	0.093 J	0.25 U
General Chemistry											
Sulfate	mg/L	NA	269	269	370	1290	151	148	156	1440	1490

Notes:

mg/L - Milligrams per liter
µg/L - Micrograms per liter
J - Estimated concentration
NA - Not available
U - Not detected at the associated reporting limit
R - Data Rejected
Value exceeds associated screening level

Table 3.9

2017 Analytical Results Summary
Annual AFW Composite
Hyde Park Landfill Site
Town of Niagara, New York

		Sample Location:	**AFWCOMPOSITE**
		Sample ID:	**AFW-C-1217**
		Sample Date:	**12/13/2017**
Parameters	**Units**	**Reporting Level**	
Polychlorinated Biphenyls (PCBs)			
Pentachlorobiphenyl	µg/L	1	0.0094 U
Tetrachlorobiphenyl	µg/L	1	0.0094 U
Trichlorobiphenyl	µg/L	1	0.0047 U
Pesticides			
alpha-BHC	µg/L	1	0.047
beta-BHC	µg/L	1	0.047 U
delta-BHC	µg/L	1	0.029 J
gamma-Chlordane	µg/L	1	0.039 J
Mirex	µg/L	1	0.047 U
Dioxin Furans			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	500	3.93 J

Notes:

BHC - Benzene Hexachloride
pg/L - Picograms per liter
µg/L - Micrograms per liter
J - Estimated concentration
U - Not detected at the associated reporting limit

Table 3.10

2017 Quarterly Hydraulic Gradient Summary
Community Monitoring Program
Hyde Park Landfill Site
Town of Niagara, New York

Gradient Pairing		3/1/2017			6/7/2017			9/5/2017			12/8/2017		
Overburden	Bedrock	Overburden Elevation (ft. AMSL)	Bedrock Elevation (ft. AMSL)	Gradient (ft./ft.)	Overburden Elevation (ft. AMSL)	Bedrock Elevation (ft. AMSL)	Gradient (ft./ft.)	Overburden Elevation (ft. AMSL)	Bedrock Elevation (ft. AMSL)	Gradient (ft./ft.)	Overburden Elevation (ft. AMSL)	Bedrock Elevation (ft. AMSL)	Gradient (ft./ft.)
CMW-1OB	CMW-1SH	572.64	564.91	0.703	571.49	563.69	0.709	571.28	563.92	0.669	571.28	564.13	0.650
CMW-2OB	CMW-2SH	589.62	573.10	1.155	588.87	571.10	1.243	582.40	571.22	0.782	589.27	572.23	1.192
CMW-3OB	CMW-3SH	569.86	549.12	1.481	575.09	548.44	1.904	573.03	548.41	1.759	572.33	548.44	1.706
CMW-4OB	CMW-4SH	573.93	567.87	0.514	Surcharged	563.61	0.904	574.28	566.54	0.656	Surcharged	566.87	0.628
CMW-5OB	CMW-5SH	Surcharged	576.66	0.428	Surcharged	576.39	0.446	583.43	574.83	0.544	Surcharged	575.85	0.480
CMW-6OB	CMW-6SH	571.71	562.76	0.932	571.71	561.85	1.027	571.68	561.87	1.022	571.68	561.70	1.040
CMW-7OB	CMW-7SH	- (1)	599.27	0.820	- (1)	600.50	0.734	- (1)	598.66	0.863	- (1)	599.23	0.823
CMW-8OB	CMW-8SH	- (2)	609.05	0.679	612.87	610.93	0.187	- (2)	607.01	0.875	- (2)	607.87	0.792
CMW-9OB	CMW-9SH	- (3)	560.68	2.131	- (3)	559.95	2.271	- (3)	559.96	2.269	- (3)	559.96	2.269
CMW-11OB	CMW-11SH	571.18	565.38	0.604	569.42	564.91	0.470	569.06	564.54	0.471	569.95	564.90	0.526
CMW-12OB	CMW-12SH	578.27	571.83	0.343	579.84	570.19	0.513	572.60	570.10	0.133	573.50	571.33	0.115

Notes:

ft. AMSL - Feet Above Mean Sea Level
ft./ft. - Feet per foot
- Negative number indicates an upward vertical gradient. Positive number indicates a downward vertical gradient.
Surcharged - Well full of water to top of casing
-(1) - Well CMW-7OB was recorded as dry during this event. Bottom of well depth (611.0 ft. AMSL) was used to calculate gradient.
-(2) - Well CMW-8OB was recorded as dry during this event. Bottom of well depth (616.11 ft. AMSL) was used to calculate gradient.
-(3) - Well CMW-9OB was recorded as dry during this event. Bottom of well depth (571.76 ft. AMSL) was used to calculate gradient.

Table 3.11

2017 Community Monitoring Well Soil Vapor Monitoring
Community Monitoring Program
Hyde Park Landfill Site
Town of Niagara, New York

September 27, 2017
Sun, 87°F, Winds WSW 8-12 MPH

Well I.D.	Time Intervals	Sampling Time (hhmm)	VOC Readings (ppmv)
SVP-1	Background	1234	0
	At 1 minute	1235	0
	At 2 minutes	1236	0
	At 3 minutes	1237	0
	At 4 minutes	1238	0
	At 5 minutes	1239	0
	At 6 minutes	1240	0
	At 7 minutes	1241	0
	At 8 minutes	1242	0
	At 9 minutes	1243	0
	At 10 minutes	1244	0
SVP-2	Background	1248	0
	At 1 minute	1249	0
	At 2 minutes	1250	0
	At 3 minutes	1251	0
	At 4 minutes	1252	0
	At 5 minutes	1253	0
	At 6 minutes	1254	0
	At 7 minutes	1255	0
	At 8 minutes	1256	0
	At 9 minutes	1257	0
	At 10 minutes	1258	0
SVP-3	Background	*	*
	At 1 minute	*	*
	At 2 minutes	*	*
	At 3 minutes	*	*
	At 4 minutes	*	*
	At 5 minutes	*	*
	At 6 minutes	*	*
	At 7 minutes	*	*
	At 8 minutes	*	*
	At 9 minutes	*	*
	At 10 minutes	*	*
SVP-4	Background	1302	0
	At 1 minute	1303	0
	At 2 minutes	1304	0
	At 3 minutes	1305	0
	At 4 minutes	1306	0
	At 5 minutes	1307	0
	At 6 minutes	1308	0
	At 7 minutes	1309	0
	At 8 minutes	1310	0
	At 9 minutes	1311	0
	At 10 minutes	1312	0

Table 3.11

2017 Community Monitoring Well Soil Vapor Monitoring
Community Monitoring Program
Hyde Park Landfill Site
Town of Niagara, New York

September 27, 2017
Sun, 87°F, Winds WSW 8-12 MPH

Well I.D.	Time Intervals	Sampling Time (hhmm)	VOC Readings (ppmv)
CMW-7OB	Background	1210	0
	At 1 minute	1211	0
	At 2 minutes	1212	0
	At 3 minutes	1213	0
	At 4 minutes	1214	0
	At 5 minutes	1215	0
	At 6 minutes	1216	0
	At 7 minutes	1217	0
	At 8 minutes	1218	0
	At 9 minutes	1219	0
	At 10 minutes	1220	0
CMW-8OB	Background	1148	0
	At 1 minute	1149	0
	At 2 minutes	1150	0
	At 3 minutes	1151	0
	At 4 minutes	1152	0
	At 5 minutes	1153	0
	At 6 minutes	1154	0
	At 7 minutes	1155	0
	At 8 minutes	1156	0
	At 9 minutes	1157	0
	At 10 minutes	1158	0

Notes:

ppmv - Parts per million by volume
VOC - Volatile Organic Compound
MPH - Miles Per Hour
°F - Degrees Fahrenheit

Table 4.1

2017 NAPL Decanter Volume Monitoring
Hyde Park Landfill Site
Town of Niagara, New York

	Decanter #1	Decanter #2	Decanter #3
First Quarter 2017			
March 1, 2017			
Thickness (feet)	18.65	5.10	5.45
Level (%)	42	32	28
Volume[(1)] (gallons)	4,704.00	3,584.00	3,136.00
Second Quarter 2017			
June 7, 2017			
Thickness (feet)	21.20	5.80	6.45
Level (%)	53	30	32
Volume[(1)] (gallons)	5,936.00	3,360.00	3,584.00
Third Quarter 2017			
September 5, 2017			
Thickness (feet)	22.20	5.80	5.40
Level (%)	55	30	30
Volume[(1)] (gallons)	6,160.00	3,360.00	3,360.00
Fourth Quarter 2017			
December 8, 2017			
Thickness (feet)	23.55	6.00	7.00
Level (%)	62	30	22
Volume[(1)] (gallons)	6,944.00	3,360.00	2,464.00

Notes:

(1) - Based on level percentage of NAPL in 11,200-gallon decanters
NAPL - Non-Aqueous Phase Liquid

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP1417INT-D (interstage)	HP11117INT-D (interstage)	HP11817INT-D (interstage)	HP12517INT-D (interstage)	HP2117INT-D (interstage)	HP2817INT-D (interstage)
Sample Date:		1/4/2017	1/11/2017	1/18/2017	1/25/2017	2/1/2017	2/8/2017
Parameters	**Units**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	0.46 J	7.8	9.0	9.8	11	13
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP1417INT-D (interstage)	HP11117INT-D (interstage)	HP11817INT-D (interstage)	HP12517INT-D (interstage)	HP2117INT-D (interstage)	HP2817INT-D (interstage)
Sample Date:		1/4/2017	1/11/2017	1/18/2017	1/25/2017	2/1/2017	2/8/2017
Parameters	**Units**						
Volatile Organic Compounds							
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	320	350	300	350	320	350
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP21517INT-D (interstage)	HP22217INT-D (interstage)	HP3117INT-D (interstage)	HP3817INT-D (interstage)	HP31517INT-D (interstage)
Sample Date:		2/15/2017	2/22/2017	3/1/2017	3/8/2017	3/15/2017
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	9.7	0.88 J	0.52 J	0.54 J	8.5
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	0.50 J	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP21517INT-D (interstage)	HP22217INT-D (interstage)	HP3117INT-D (interstage)	HP3817INT-D (interstage)	HP31517INT-D (interstage)
Sample Date:		2/15/2017	2/22/2017	3/1/2017	3/8/2017	3/15/2017
Parameters	**Units**					
Volatile Organic Compounds						
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	330	320	330	300	350
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP32217INT-D (interstage)	HP32917INT-D (interstage)	HP4517INT-D (interstage)	HP41217INT-D (interstage)	HP41917INT-D (interstage)	HP42517INT-D (interstage)
Sample Date:		3/22/2017	3/29/2017	4/5/2017	4/12/2017	4/19/2017	4/25/2017
Parameters	**Units**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	5.2	9.0	2.0 U	4.2	4.7	4.6
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP32217INT-D (interstage)	HP32917INT-D (interstage)	HP4517INT-D (interstage)	HP41217INT-D (interstage)	HP41917INT-D (interstage)	HP42517INT-D (interstage)
Sample Date:		3/22/2017	3/29/2017	4/5/2017	4/12/2017	4/19/2017	4/25/2017
Parameters	**Units**						
Volatile Organic Compounds							
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	360	350	330	250	260	260
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP5317INT-D (interstage)	HP51017INT-D (interstage)	HP51717INT-D (interstage)	HP52417INT-D (interstage)	HP53117INT-D (interstage)
Sample Date:		5/3/2017	5/10/2017	5/17/2017	5/24/2017	5/31/2017
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	4.8	2.0 U	3.8	5.0	2.0 U
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.60 J
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP5317INT-D (interstage)	HP51017INT-D (interstage)	HP51717INT-D (interstage)	HP52417INT-D (interstage)	HP53117INT-D (interstage)
Sample Date:		5/3/2017	5/10/2017	5/17/2017	5/24/2017	5/31/2017
Parameters	**Units**					
Volatile Organic Compounds						
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	300	250	300	280	300
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP6717INT-D (interstage)	HP61417INT-D (interstage)	HP62117INT-D (interstage)	HP62817INT-D (interstage)	HP7517INT-D (interstage)	HP71217INT-D (interstage)
Sample Date:		6/7/2017	6/14/2017	6/21/2017	6/28/2017	07/05/17	07/12/17
Parameters	**Units**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	8.6	0.60 J	5.0	2.0 U	2.0 U	7.5
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	0.54 J	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP6717INT-D (interstage)	HP61417INT-D (interstage)	HP62117INT-D (interstage)	HP62817INT-D (interstage)	HP7517INT-D (interstage)	HP71217INT-D (interstage)
Sample Date:		6/7/2017	6/14/2017	6/21/2017	6/28/2017	07/05/17	07/12/17
Parameters	**Units**						
Volatile Organic Compounds							
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	250	290	260	300	300	290
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP71917INT-D (interstage)	HP72617INT-D (interstage)	HP8217INT-D (interstage)	HP81017INT-D (interstage)	HP81617INT-D (interstage)
Sample Date:		07/19/17	07/26/17	08/02/17	08/10/17	08/16/17
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	5.7	2.0 U	6.8	2.0 U	6.6
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP71917INT-D (interstage)	HP72617INT-D (interstage)	HP8217INT-D (interstage)	HP81017INT-D (interstage)	HP81617INT-D (interstage)
Sample Date:		07/19/17	07/26/17	08/02/17	08/10/17	08/16/17
Parameters	**Units**					
Volatile Organic Compounds						
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	280	250	320	210	270
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP82317INT-D (interstage)	HP83017INT-D (interstage)	HP9617INT-D (interstage)	HP91317INT-D (interstage)	HP92017INT-D (interstage)
Sample Date:		08/23/17	08/30/17	09/06/17	09/13/17	09/20/17
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	8.1	2.0 U	9.0	7.3	2.0
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP82317INT-D (interstage)	HP83017INT-D (interstage)	HP9617INT-D (interstage)	HP91317INT-D (interstage)	HP92017INT-D (interstage)
Sample Date:		08/23/17	08/30/17	09/06/17	09/13/17	09/20/17
Parameters	**Units**					
Volatile Organic Compounds						
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	270	260	270	240	270
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP92717INT-D (interstage)	HP10417INT-D (interstage)	HP101117INT-D (interstage)	HP101817INT-D (interstage)	HP102517INT-D (interstage)
Sample Date:		09/27/17	10/04/17	10/11/17	10/18/17	10/25/17
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	8.4	5.6	6.7	0.99 J	12
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP92717INT-D (interstage)	HP10417INT-D (interstage)	HP101117INT-D (interstage)	HP101817INT-D (interstage)	HP102517INT-D (interstage)
Sample Date:		09/27/17	10/04/17	10/11/17	10/18/17	10/25/17
Parameters	**Units**					
Volatile Organic Compounds						
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.1	2.0 U	2.0 U	2.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vinyl chloride	µg/L	280	240	250	250	220
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP103117INT-D (interstage)	HP11817INT-D (interstage)	HP111517INT-D (interstage)	HP112217INT-D (interstage)	HP112917INT-D (interstage)
Sample Date:		10/31/17	11/08/17	11/15/17	11/22/17	11/29/17
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 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

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP103117INT-D (interstage)	HP11817INT-D (interstage)	HP111517INT-D (interstage)	HP112217INT-D (interstage)	HP112917INT-D (interstage)
Sample Date:		10/31/17	11/08/17	11/15/17	11/22/17	11/29/17
Parameters	**Units**					
Volatile Organic Compounds						
m-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	2.4	1.7	1.6
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP12617INT-D (interstage)	HP121317INT-D (interstage)	HP122017INT-D (interstage)	HP122917INT-D (interstage)
Sample Date:		12/06/17	12/13/17	12/20/17	12/29/17
Parameters	**Units**				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	1.0 U	1.0 U	1.6
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	0.22 J	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	0.43 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 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

Table 4.2

2017 Weekly Carbon Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01	HP-INTER-D-01
Sample ID:		HP12617INT-D (interstage)	HP121317INT-D (interstage)	HP122017INT-D (interstage)	HP122917INT-D (interstage)
Sample Date:		12/06/17	12/13/17	12/20/17	12/29/17
Parameters	**Units**				
Volatile Organic Compounds					
m-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	1.0 U	3.1	1.0 U	0.83 J
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U	3.0 U

Notes:

APL - Aqueous Phase Liquid
J - Estimated concentration
U - Not detected at the associated reporting limit
µg/L - Micrograms per liter
UJ - Not detected; associated reporting limit is estimated

Table 4.3

2017 Quarterly Leachate Feed APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET
Sample ID:		HP32217 INF	HP INF 62117	HP 92817 INF	HP 122017 INF
Sample Date:		03/22/2017	06/21/2017	09/28/2017	12/20/2017
Parameters	**Units**				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	2.7 J	4.0 J	4.6 J	3.1 J
1,1,2,2-Tetrachloroethane	µg/L	80	86	110	90
1,1,2-Trichloroethane	µg/L	5.9	8.9	11	7.3
1,1-Dichloroethane	µg/L	5.0 U	1.5 J	1.8 J	1.1 J
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	350	490	610	440
1,2-Dichlorobenzene	µg/L	51	77	96	63
1,2-Dichloroethane	µg/L	18	17	16	18
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	1.5 J	5.0 U
1,3-Dichlorobenzene	µg/L	17	25	31	22
1,4-Dichlorobenzene	µg/L	66	93	120	76
2-Chlorotoluene	µg/L	620	810	980	620
3-Chlorotoluene	µg/L	5.8	9.5	11	5.0 U
4-Chlorotoluene	µg/L	410	580	700	430
Benzene	µg/L	180	190	240	140
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	6.1	8.2	7.7	4.4 J
Carbon tetrachloride	µg/L	17	24	20	23
Chlorobenzene	µg/L	430	530	670	430
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	230	340	450	240
Chloromethane (Methyl chloride)	µg/L	2.5 J	1.3 J	1.8 J	1.5 J
cis-1,2-Dichloroethene	µg/L	260	430	530	300
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	130	190	220	130
Methylene chloride	µg/L	21	33	39	25
m-Monochlorobenzotrifluoride	µg/L	59	84	80	56
o-Monochlorobenzotrifluoride	µg/L	160	220	230	170
p-Monochlorobenzotrifluoride	µg/L	220	320	290	210
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	270	120	230	190
Toluene	µg/L	590	760	970	570
trans-1,2-Dichloroethene	µg/L	9.4	7.9	8.4	6.5
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	250	440	400	270
Trichlorofluoromethane (CFC-11)	µg/L	2.6 J	2.5 J	2.3 J	2.1 J

Table 4.3

2017 Quarterly Leachate Feed APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET
Sample ID:		HP32217 INF	HP INF 62117	HP 92817 INF	HP 122017 INF
Sample Date:		03/22/2017	06/21/2017	09/28/2017	12/20/2017
Parameters	**Units**				
Volatile Organic Compounds (Continued)					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	57	96	95	53
Xylenes (total)	µg/L	740	1000	1200	730
Semi-volatile Organic Compounds					
2,4,6-Trichlorophenol	µg/L	47 U	28 U	47 U	2.4 J
2,4-Dichlorophenol	µg/L	13 J	120	24 J	140
2,4-Dimethylphenol	µg/L	47 U	28 U	47 U	3.3 J
2,4-Dinitrophenol	µg/L	240 U	140 U	240 U	47 U
2-Chlorobenzoic acid	µg/L	0.72	7100	1600	0.97
2-Chloronaphthalene	µg/L	47 U	28 U	47 U	9.4 U
2-Chlorophenol	µg/L	6.1 J	7.5 J	8.4 J	9.7
2-Nitrophenol	µg/L	47 U	28 U	47 U	9.4 U
3-Chlorobenzoic acid	µg/L	2.0	3700	3500	2.4
4,6-Dinitro-2-methylphenol	µg/L	240 U	140 U	240 U	47 U
4-Chloro-3-methylphenol	µg/L	47 U	28 U	47 U	3.7 J
4-Chlorobenzoic acid	µg/L	1.4	1200	3500	1.9
4-Nitrophenol	µg/L	240 U	140 U	240 U	47 U
Acenaphthene	µg/L	47 U	28 U	47 U	9.4 U
Acenaphthylene	µg/L	47 U	28 U	47 U	9.4 U
Anthracene	µg/L	47 U	28 U	47 U	9.4 U
Benzo(a)anthracene	µg/L	47 U	28 U	47 U	9.4 U
Benzo(a)pyrene	µg/L	47 U	28 U	47 U	9.4 U
Benzo(b)fluoranthene	µg/L	47 U	28 U	47 U	9.4 U
Benzo(g,h,i)perylene	µg/L	47 U	28 U	47 U	9.4 U
Benzoic acid	µg/L	2.4	2900	9600	3.8
bis(2-Chloroethoxy)methane	µg/L	47 U	28 U	47 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	47 U	28 U	47 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	47 U	28 U	47 U	9.4 U
Chlorendic acid	µg/L	1.8	2600	3600	2.7
Chrysene	µg/L	47 U	28 U	47 U	9.4 U
Dibenz(a,h)anthracene	µg/L	47 U	28 U	47 U	9.4 U
Diethyl phthalate	µg/L	47 U	28 U	47 U	9.4 U
Dimethyl phthalate	µg/L	47 U	28 U	47 UJ	9.4 U
Di-n-butylphthalate (DBP)	µg/L	47 U	28 U	47 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	47 U	28 U	47 U	9.4 U
Fluoranthene	µg/L	47 U	28 U	47 U	9.4 U
Fluorene	µg/L	47 U	28 U	47 U	9.4 U
Hexachlorobenzene	µg/L	22 J	5.7 J	47 U	6.3 J

Table 4.3

2017 Quarterly Leachate Feed APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		**PMPTKOUTLET**	**PMPTKOUTLET**	**PMPTKOUTLET**	**PMPTKOUTLET**
Sample ID:		**HP32217 INF**	**HP INF 62117**	**HP 92817 INF**	**HP 122017 INF**
Sample Date:		**03/22/2017**	**06/21/2017**	**09/28/2017**	**12/20/2017**
Parameters	**Units**				
Semi-volatile Organic Compounds (Continued)					
Hexachlorobutadiene	µg/L	22 J	19 J	17 J	18
Hexachlorocyclopentadiene	µg/L	47 U	28 U	47 U	9.4 U
Hexachloroethane	µg/L	6.3 J	9.4 J	47 U	7.9 J
Indeno(1,2,3-cd)pyrene	µg/L	47 U	28 U	47 U	9.4 U
Isophorone	µg/L	47 U	28 U	47 U	9.4 U
Naphthalene	µg/L	47 U	28 U	47 U	9.4 U
Octachlorocyclopentene	µg/L	24 U	14 U	24 U	4.7 U
Pentachlorophenol	µg/L	240 U	140 U	240 U	47 U
Phenanthrene	µg/L	47 U	28 U	47 U	9.4 U
Phenol	µg/L	5.6 J	320	580	3.6 J
Pyrene	µg/L	47 U	28 U	47 U	9.4 U

Notes:

APL - Aqueous Phase Liquid
J - Estimated concentration
U - Not detected at the associated reporting limit
UJ - Not detected; associated reporting limit is estimated
µg/L - Micrograms per liter

Table 4.4

2017 Quarterly Sac Bed Interstage APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:		SAC INTERSTAGE	SAC INTERSTAGE	SAC INTERSTAGE	SAC INTERSTAGE
Sample ID:		H SAC 32217	HP SAC 62117	HP 92817 SAC	HP 122017 SAC
Sample Date:		03/22/2017	06/21/2017	09/28/2017	12/20/2017
Parameters	**Units**				
Polychlorinated Biphenyls					
Pentachlorobiphenyl	µg/L	0.11	0.15	0.25 J	0.19
Tetrachlorobiphenyl	µg/L	0.13	0.25	0.33 J	0.31
Trichlorobiphenyl	µg/L	0.017 J	0.091	0.10 J	0.093
Total PCBs	µg/L	0.257J	0.491	0.68 J	0.593
Dioxin Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	306 J	736	831	1530

Notes:

APL - Aqueous Phase Liquid
pg/L - Picograms per liter
µg/L - Micrograms per liter
* - Lab issue, PCB analysis not reported
J - Estimated concentration
U - Not detected at the associated reporting limit

Appendices

Appendix A
Institutional and Engineering Controls Certification Form

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-7020
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

2/14/2018

Joseph Branch
Project Manager
OXY-Glenn Springs Holdings, Inc.
7601 Old Channel Trail
Montague, MI 49437

Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal
Site Name: Hooker-Hyde Park Landfill
Site No.: 932021
Site Address: 4825 Hyde Park Boulevard
Town Of Niagara, NY 14305

Dear Joseph Branch:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at http://www.dec.ny.gov/regulations/67386.html) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **April 30, 2018**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Professional Engineer (PE). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.

All site-related documents and data, including the PRR, are to be submitted in electronic format to the Department of Environmental Conservation. The Department will not approve the PRR unless all documents and data generated in support of that report have been submitted in accordance with the electronic submissions protocol. In addition, the certification forms are required to be submitted in both paper and electronic formats.

Information on the format of the data submissions can be found at:
http://www.dec.ny.gov/regulations/2586.html

The signed certification forms should be sent to Brian Sadowski, Project Manager, at the following address:

New York State Department of Environmental Conservation
270 Michigan Ave
Buffalo, NY 14203-2915

Phone number: 716-851-7220. E-mail: brian.sadowski@dec.ny.gov

The contact information above is also provided so that you may notify the project manager about upcoming inspections, or for any other questions or concerns that may arise in regard to the site.

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

ec: w/ enclosures
Brian Sadowski, Project Manager
Chad Staniszewski, Hazardous Waste Remediation Engineer, Region 9

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.
- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932021

Site Name Hooker-Hyde Park Landfill

Site Address: 4825 Hyde Park Boulevard Zip Code: 14305
City/Town: Town Of Niagara
County: Niagara
Site Acreage: ~~22.8~~ 30

Reporting Period: March 31, 2017 to March 31, 2018

	YES	NO
1. Is the information above correct?		✓
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		✓
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		✓
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		✓
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?		✓

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Closed Landfill	✓	
7. Are all ICs/ECs in place and functioning as designed?	✓	

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 932021 Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
130.11-1-3	Occidental Chemical Corporation	Ground Water Use Restriction Landuse Restriction Monitoring Plan O&M Plan
		Surface Water Use Restriction

Same as parcel with SBL number 130.11-4.1

130.11-1-4.1	Occidental Chemical Corporation	Ground Water Use Restriction Landuse Restriction Building Use Restriction Surface Water Use Restriction Monitoring Plan O&M Plan

Occidental, the United States and State of New York:

Stipulation and Judgement Approving Settlement Agreement,January 19, 1981
Stipulation on Requisite Remedial Technology, November 1, 1985
Enforcement Decision Document for Requisite Remedial Technology; November 11, 1985
Performance Monitoring Plan, July 31, 2006
Declaration of Restrictive Covenants and Environmental Easement, August 11, 2010

Legacy Restriction: "3. Restrictions on Use: The following restrictions apply to the use of the Property, run with the land, and are binding on the Grantor: the Property shall not be used in any manner that would interfere with or adversely affect the implementation, integrity, or effectiveness of the Response Action performed at the Site, including, but not limited to, a) the extraction of on-site groundwater, b) any digging, excavation, extraction of materials, construction, or other activity outside the requirements of the Response Action that would disturb the cap placed upon the Landfill at the Site, or c) other activity that would disturb or interfere with any portion of the Response Action for the Site enumerated in the RRT Stipulation."

130.11-1-5.1	Niagara Mohawk Power Corp	Monitoring Plan O&M Plan

7.2acre portion only

Occidental, the United States and State of New York:

Stipulation and Judgment Approving Settlement Agreement, January 19, 1981
Stipulation on Requisite Remedial Technology; November 1, 1985
Enforcement Decision Document for Requisite Remedial Technology, November 11, 1985
Performance Monitoring Plan, July 31, 2006

Box 4

Description of Engineering Controls

Parcel	Engineering Control
130.11-1-3	Point-of-Entry Water Treatment Groundwater Treatment System Groundwater Containment Fencing/Access Control

Granular activated carbon treatment facility that handles aqueous phase leachate (APL) and non-aqueous phase leachate (NAPL) generated from the landfill and offsite sources.

130.11-1-4.1	Cover System Groundwater Containment Leachate Collection Fencing/Access Control Groundwater Treatment System

The below engineering controls are from the Declaration of Restrictive Covenants and Environmental Easement August 11, 2010 and other documentation that are the most applicable to the parcel and community wide remediation.

Landfill cap. Landfill cap source control wells. Landfill perimeter capping. Collection and containment of aqueous phase liquids (APL) and non-aqueous phase liquids (NAPL) in the overburden. Collection and containment of APL and NAPL in the bedrock. Industrial protection program by sealing of sumps and manholes. Bloody run excavation with new culvert installation, cleaned of existing and/or slip lined. Niagara Gorge face soil and visibly contaminated rock excavated and disposed of in the landfill. Niagara Gorge face seeps remediation by APL plume pumping wells through groundwater flow zones.

130.11-1-5.1 7.2 acre portion only	Groundwater Treatment System Cover System Groundwater Containment Leachate Collection Fencing/Access Control

The below engineering controls are from documentation that are the most applicable to the parcel and community wide remediation.

Landfill cap. Landfill cap source control wells. Landfill perimeter capping Collection and containment of aqueous phase liquids (APL) and non-aqueous phase liquids (NAPL) in the overburden. Collection and containment of APL and NAPL in the bedrock Industrial protection program by sealing of sumps and manholes.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 932021

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I, Joseph A Brandt (print name) at 7601 Old Channel Trail (print business address) 49437

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

1/26/2018
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Richard J. Snyder (print name) at 2055 Niagara Falls Blvd, Niagara Falls NY 14 (print business address)

am certifying as a Professional Engineer for the Remedial Party (Owner or Remedial Party)

STATE OF NEW YORK
RICHARD J. SNYDER
No. 066242
LICENSED PROFESSIONAL ENGINEER

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

Apr. 27, 2018
Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.