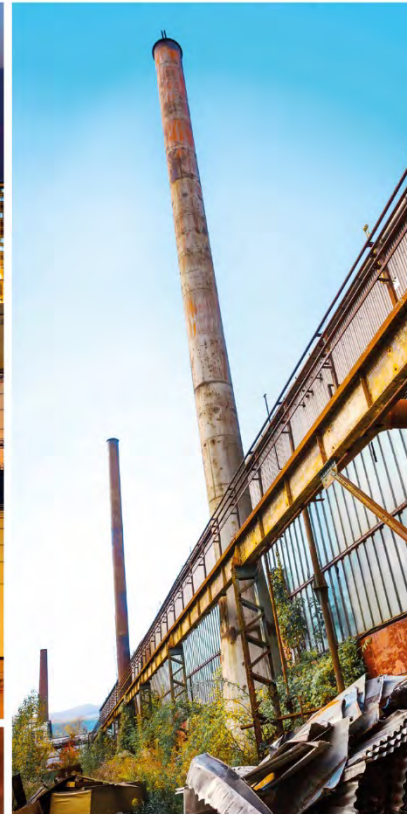




2019 Annual Periodic Review Report

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

Glenn Springs Holdings, Inc.





Executive Summary

The following report describes the Operation, Maintenance, and Monitoring (OM&M) activities for 2019 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, formerly Conestoga-Rovers & Associates (CRA), has performed OM&M and reporting activities for the Site under contract to and direct management of GSH.

During 2019, the remedial system components at the Site performed as designed. The Source Control (SC), Overburden Requisite Remedial Technology (RRT), and Bedrock RRT Systems removed 28.1 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 2019, 21,894 pounds of NAPL were shipped off Site for disposal.

The 2019 data indicate that there has been no significant change in chemical and hydrogeological conditions at the Site.



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1. Introduction

The following Periodic Review Report (PRR) describes the Operation, Maintenance, and Monitoring (OM&M) activities for 2019 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, 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 Site 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 and subsequent NYSDEC-approved changes in monitoring requirements 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
 - o Six SC wells installed within the landfill; only five are currently active
- Overburden RRT System, shown on Figure 1.3
 - o Existing barrier collection system (EBCS) surrounding the original landfill
 - o 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
 - o NAPL containment system (17 purge wells)
 - o 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 2019 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 2019 performance monitoring data for the overburden systems are presented as follows:

SC System Well Locations	Figure 1.2
2019 SC Well Pumping Summary	Table 3.1
Overburden RRT System	Figure 1.3
2019 Overburden Quarterly Groundwater Elevation Summary	Table 3.2
2019 Overburden NAPL Presence Monitoring	Table 3.3
2019 Overburden Collection Systems Monthly Average Flow Summary	Table 3.4

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 first quarter of 2019. The Bloody Run monitoring wells are sampled every 5 years, which occurred in July 2016, with the next event planned for 2021.



The 2019 performance monitoring data for the bedrock systems are presented as follows:

BMP Locations	Figure 1.4
2019 Bedrock Quarterly Water Level Elevation Summary - Piezometers	Table 3.5
2019 Bedrock Purge Well Monthly Flow Rate Summary	Table 3.6
Analytical Results Summary: Quarterly Group B Bedrock Piezometer Sampling	Tables 3.7a-d
Analytical Results Summary: Fifth Quarter Group A Bedrock Piezometer Sampling, First Quarter 2019	Table 3.8
2019 Analytical Results Summary: Annual Bedrock Open Catch Basin	Table 3.9

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 2019 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 2019 Quarterly Operation Reports.

3.3 Community Monitoring Program

The CMP was developed to ensure that the public is not being adversely exposed to Site-related parameters. The CMP includes the Gorge Face Seep Program, the APL Flux Monitoring Program, and the Residential CMP. 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 CMP 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 2019 performance monitoring data for the community monitoring are presented as follows:

APL Flux Well Locations	Figure 3.2
2019 Analytical Results Summary: Annual AFW Composite	Table 3.10
Community Monitoring Locations	Figure 1.7
2019 Quarterly Hydraulic Gradient Summary	Table 3.11
2019 Community Monitoring Well Soil Vapor Monitoring	Table 3.12
2019 Gorge Seep Survey	Appendix B

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 O&M activities are presented in the 2015 O&M Manual.

Analytical results from the treatment system monitoring program have been presented previously in the 2019 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 2019:

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 2019. 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.

A small leak was observed in aboveground steel piping associated with the NAPL decanters and APL storage tanks on March 20, 2019. The leak was contained within the concrete containment dike associated with these tanks. As a result of the small leak, all purge wells were immediately shut down. Removal of insulation and inspection of the piping to determine the location of the leak was performed between March 21 and 23, 2019. The results of the inspection indicated that several sections of aboveground piping (approximately 200 feet in total) were found in deteriorated condition. Due to the extent of deterioration, GSH opted to replace the piping. Demolition, fabrication, and installation of the replacement piping occurred between March 25 and June 30, 2019. During this period, purge wells were placed back on-line when the replacement of associated piping was complete to minimize downtime to the extent possible. Due to the age of the aboveground piping (approximately 30 years old), the remaining aboveground steel piping associated with the decanters and APL storage tanks was inspected. No issues requiring immediate attention were noted; however, additional investigation and pipe replacement/repairs will be completed as warranted.

Beginning on August 2, 2019 all wells were offline due to a significant process control upgrade project. The process control upgrade project was substantially complete by October 6, 2019. As such, all wells were tested and brought back online between October 7 and 20, 2019 with the exception of PW-4M, PW-5UR, and PW-6UR, which remained offline for repairs. Refer to Section 5.2.2 for additional details on these wells. No effluent was discharged from the Site from August 3, 2019 through October 16, 2019.



5. Evaluation and Conclusions

5.1 Overburden Monitoring Program

There were no deviations from the OMP in 2019, 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 1 year. After 1 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. This change was implemented in 2017.

The 2019 SC well NAPL thickness and recovery data are summarized in Table 3.1. The amounts of NAPL recovered in 2019 from SC-2, SC-3, SC-4, SC-5, and SC-6 were 6.5 gallons, 178.3 gallons, 23.8 gallons, 0 gallons, and 0 gallons, respectively.

Manual NAPL recovery will continue to be performed on an approximate monthly basis at SC-3 in 2020. However, based on the low amounts of NAPL recovered each year from SC-5 and SC-6 since 2016, GSH proposes to change the frequency of manual NAPL removal at these wells to semiannual.

The total amount of NAPL recovered in 2019 was 208.6 gallons. The APL/NAPL volumes removed from the SC wells from 2006 through 2019 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
2018	430.3
2019	208.6

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 2019 Quarterly Operations Reports. These potentiometric surface maps indicated hydraulic containment for each quarter of 2019.

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). These four 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 EBSC 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 2019. It should be noted that Wet Wells A, C, and D were down for limited periods during the piping replacement project conducted between March 20, 2019 and June 30, 2019. These wells were also down for the process control upgrade project between August 2, 2019 and October 20, 2019.



5.1.5 Overburden Monitoring Conclusions

Based on the overburden data collected in 2019, as shown in Tables 3.1 through 3.4 and the potentiometric surface maps that were presented in the 2019 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 2019, and monitoring was conducted in accordance with the 2006 PMP. The results of the BMP in 2019 are discussed below and summarized in Tables 3.5 through 3.9.

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 2019 Quarterly Operations Reports. The potentiometric surface maps for each monitored flow zone during each quarter of 2019 indicated containment.

5.2.2 Bedrock RRT System Flow Rates and Setpoints

The 2019 bedrock purge well monthly average flow rate data, presented in Table 3.6, are consistent with historic flow rates. It should be noted that the purge wells were down during the piping replacement project conducted between March 20, 2019 and June 30, 2019. During this period, purge wells were placed back online when the replacement of associated piping was complete to minimize downtime to the extent possible. These wells were also down for the process control upgrade project completed between August 2, 2019 and October 6, 2019. All wells were brought back online individually between October 7 and 20, 2019, with the exception of PW-4M, PW-5UR, and PW-6UR, which remained offline for repairs. PW-5UR and PW-6UR returned online on October 30 and November 6, respectively.

Based on review of water level data during and after well shut downs associated with the treatment system piping replacement in the first and second quarters of 2019 and with the control upgrade in the third and fourth quarters of 2019, the water level in PW-4M is controlled by pumping PW-4U. The water level in PW-4M was drawn down to within set point range by pumping PW-4U alone. As shown in Attachment A of the Second Quarter 2019 Operations Report, the water elevation in PW-4M continues to increase when all purge wells are not pumping. On May 1, 2019, the water elevation immediately decreases to within set point range when pumping resumes at PW-4U. The same can be seen in Attachment A of the Fourth Quarter 2019 Operations Report. On October 17, 2019, the water elevation in PW-4M immediately decreases to within set point range when pumping resumes at PW-4U. As such, pumping from PW-4M is not required and the pumping system will be decommissioned.

Maintenance of operating water level setpoints by each of the purge wells has been discussed in the 2019 Quarterly Operations Reports. These reports indicate that, with the exception of the maintenance issues identified and during the piping replacement and process control upgrade



projects, the water levels were maintained within target setpoint ranges at each of the purge wells throughout 2019.

Due to a compromised overburden casing at the overburden/bedrock interface, purge well PW-1U was not operational from October 2018 through July 23, 2019. An evaluation was conducted to determine if pumping from PW-1U was still required for containment. Based on the results of the evaluation, PW-1U was repaired via insertion of a well riser pump and screen on July 11, 2019. The pump was reinstalled and became operational on July 24, 2019.

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 517.29 feet AMSL throughout 2019, with a maximum elevation observed of 522.75 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 517.46 feet AMSL in 2019. Based on the transducer data, the hand water level measurement of PWM-1M-09 collected for the third quarter of 2019 is suspected to be incorrect and as such is not included on Table 3.5.

Due to a pressure transducer malfunction, the continuously recorded water levels in the FZ-09 piezometer for the quarterly reporting period from January 1, 2019 through March 31, 2019 could not be retrieved. The quarterly groundwater elevation measured manually in this piezometer on March 8, 2019 was 517.85 feet AMSL, indicating that the FZ-09 outcrop along the NYPA access road was unsaturated. A new pressure transducer was installed on May 6, 2019.

5.2.3 Bedrock Analytical Results

In accordance with the 2006 PMP, quarterly groundwater samples were collected from the Group B Bedrock piezometers in 2019. The quarterly groundwater sampling events were performed during February 2019, May 2019, August 2019, and November 2019. The annual (fifth quarter Group A Bedrock piezometer sampling) event, as defined in the PMP, was performed during February 2019.

The 2019 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 (SLs) 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 SLs presented in the PMP have been added to this table and exceedances of these values have been highlighted.

The 2019 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 Organic Indicators (SOIs) that exceeded the SLs, as summarized below:



Site Organic Indicators	Location Exceeding Site-Specific Screening Level
Chlorendic Acid	AGW-1M-09, ABP-7-09, AGW-1U-06, B2L-11, D1M-09, D1U-05, D2M-09, D2U-05, F2U-02, F2U-04, G6-04, H2U-02, H5-09, J6-07
Trichloroethene (TCE)	G6-01, G6-02, G6-04, G6-05, G6-06, H2M-06
Tetrachloroethene (PCE)	G6-01, G6-02, G6-04
Cis-1,2-Dichloroethene (cis-1,2-DCE)	G6-05
1,1,2,2-Tetrachloroethane (1,1,2,2-PCA)	G1U-01, G6-01, G6-02, G6-04, G6-05, G6-06, H2M-06
Bis(2-Ethylhexyl)phthalate	B2L-11, E6-04, H2M-09
Vinyl Chloride	AGW-1U-06, G6-04, G6-05, H2M-06
Benzene	B2L-11, D1L-11, E6-09, E6-11, F2L-11, F6-11, G1L-11, G6-04, G6-05, G6-11, H2M-09, H5-09, J6-11

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 a letter dated July 19, 2018 providing comment on the 2017 PRR for the Site, the NYSDEC indicated that while the primary remedial objective of keeping the flow zones dewatered is being achieved, SOIs continue to exceed SLs in many Group A and Group B bedrock piezometers. The NYSDEC requested that the concentrations of these SOIs (nine parameters per the PMP) be quantified and set to trend to better understand the results of the remedial efforts.

In response to the NYSDEC's request, GSH submitted "Site Organic Indicators Trends Analysis" for the Site, dated July 30, 2019, to the NYSDEC. This letter report presented the results of a two-part analysis of concentrations of organic compounds detected in the Group A and Group B bedrock wells from 2006 through the second quarter of 2019. All of the organic compounds currently included in the Group A and Group B bedrock sampling program were included in the analysis, instead of only the nine SOIs defined for the Site. Based on the analysis conducted, only two organic compounds were identified in wells downgradient of the Site that have been detected at concentrations above the SLs and have exhibited sustained increases in concentration. These organic compounds were benzene in D1L-11 and bis(2-ethylhexyl)phthalate (DEHP) in E6-04. Concentrations of benzene in D1L-11 have been above the SL since 2006, but benzene is naturally occurring in flow zone 11 and as such is not associated with the Site. Concentrations of DEHP have been consistently above the SL since 2015, but have been decreasing since 2016.

NYSDEC provided two comments on the above in a letter dated October 24, 2019. NYSDEC indicated that recent increases in concentrations of SOIs have been noted for piezometer G6-05, suggesting that the groundwater plume had further migrated from the Site towards G6-05. Based on this, NYSDEC requested that a groundwater evaluation be completed in the area of G6-05. In addition, the NYSDEC indicated that wells removed from the initial data analysis due to their positions hydraulically upgradient or cross-gradient of the Site needed to be included in the trend analysis.

In response to the above NYSDEC's comments, GSH submitted "Response to Comments on Site Organic Indicators Trend Analysis Report" for the Site, dated January 24, 2020. Regarding the increasing concentrations of SOIs in G6-05, there was no evidence found to suggest that the groundwater plume would be expanding toward this well. The increasing concentrations are related



to minor changes in the groundwater flow and the resulting redistribution of contaminant mass, and are not considered evidence of an expanding plume. In addition, groundwater flow in the area of G6-05 has consistently been demonstrated to be towards the Site. GSH recommended continued monitoring and provision of updated graphs of the concentrations of the nine SOIs detected in G6-05, as shown on Figures 2 and 3 of the response on an annual basis as an appendix in the PRR. As the July 30, 2019 and January 24, 2020 submittals included these data through the Group A bedrock sampling event conducted in February 2019, this appendix will be included in the PRR starting with reporting year 2020.

To address NYSDEC's second comment, the original trend analysis was updated to include the hydraulically upgradient or cross-gradient wells. Based on the updated analysis performed, two organic compounds were detected in the bedrock wells that have been detected at concentrations above the SLs and have exhibited sustained increases in concentration as follows:

- Benzene in wells D1L-11, E6-11, J6-11, and G6-04. Benzene in flow zone 11 appears to be naturally occurring due to the presence of natural gas. In addition, benzene concentrations in G6-04 appear to be stabilizing based on the 2016 through 2019 data.
- Vinyl chloride in wells H2M-06 and G6-04. Concentrations of vinyl chloride appear to be stabilizing in H2M-06 and have been relatively low in both H2M-06 and G6-04.

Based on the above, concentrations of benzene and vinyl chloride will continue to be monitored as part of the current Group A bedrock sampling program with no modifications in the current sampling or reporting requirements. The next statistical evaluation of chemistry data generated from groundwater quality monitoring efforts performed at the Site will be conducted in 2022 for monitoring results obtained from 2006 through 2021. Any continued increasing trends associated with the identified wells and compounds will be quantified and further evaluated at that time.

The catch basin on the north side of the Greif Brothers' warehouse is sampled annually for NAPL organic acids. The analytical results for 2019 are presented in Table 3.9.

The bedrock groundwater data collected in 2019 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 2019 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

5.3.1 APL Flux Monitoring Program

The APL plume flux composite sampling results are presented in Table 3.10. 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 3.11 presents a summary of groundwater elevations and vertical hydraulic gradients at the paired community monitoring wells for each quarter of 2019. 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 3.12. None of the six locations monitored exhibited any recordable concentrations of VOCs during the September 2019 monitoring event. 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 Gorge Face Seep Survey was conducted on October 11, 2019 and the results are presented in Appendix B. The NYSDEC was in attendance. No remedial actions were recommended as a result of the survey. Photographs taken during the survey were submitted by email to USEPA on November 11, 2019.

In over 25 years of performing the Seep Survey (annually then biennially), no issues have been identified that required further action. Based on preliminary discussions with the NYSDEC and USEPA, it is proposed to change the frequency of the Gorge Face Seep Survey to every five years to coincide with the USEPA Five-Year review of the Site. NYSDEC has indicated that this change is acceptable pending approval from the USEPA, which is pending. If approved, the next Gorge Face Seep Survey will be conducted in 2022.

5.3.5 Community Monitoring Conclusions

The community monitoring data collected in 2019 demonstrate that the community is being properly protected by Site remedial systems.

5.4 Site Operations and Maintenance

There were no deviations in 2019 from the treatment system monitoring specified in the 2006 PMP. Ongoing O&M issues are discussed in the 2019 Quarterly Operations Reports.

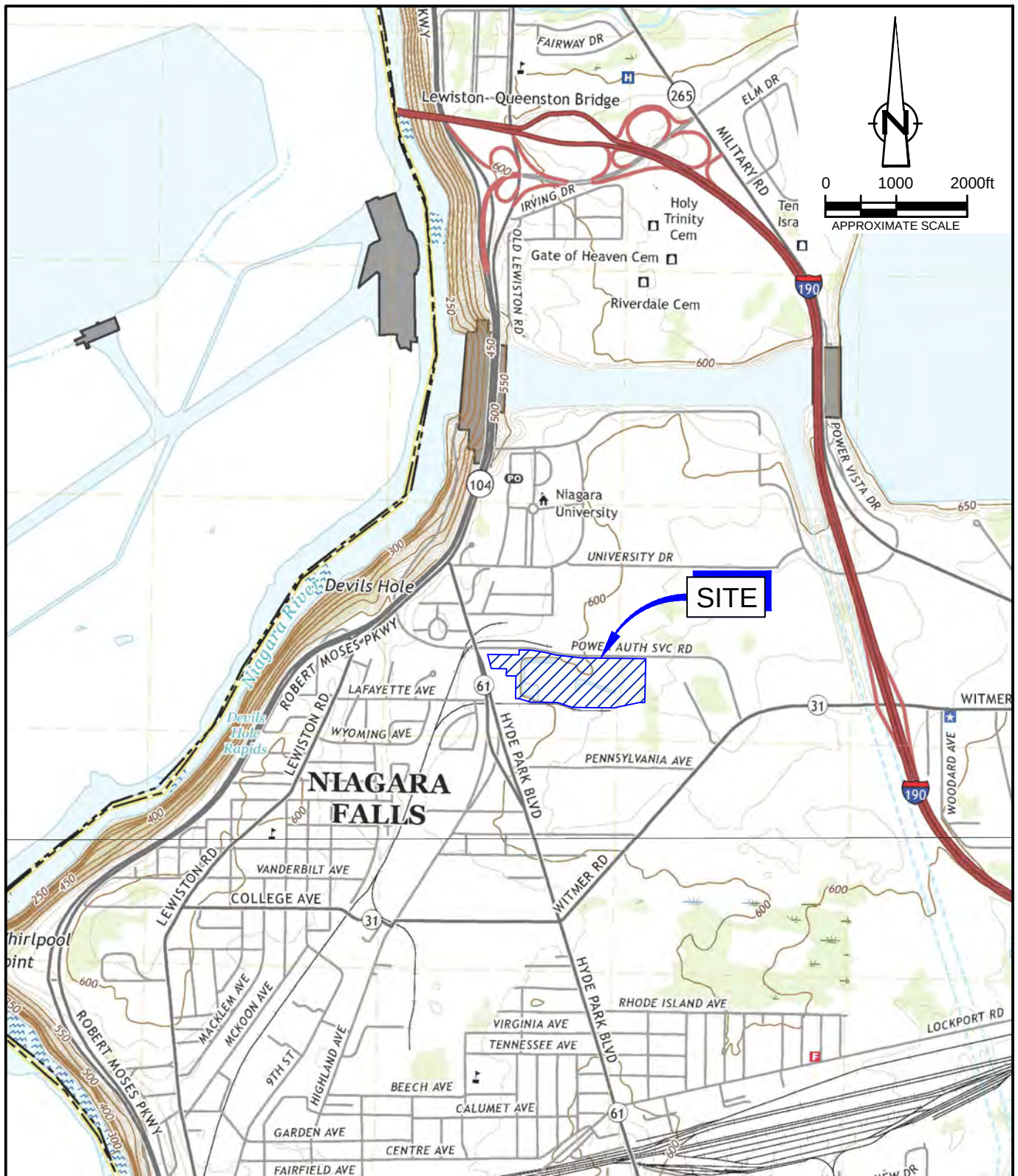
6. Recommendations

Based on the evaluation of data presented within this PRR, the following are recommended:

- Change the frequency of manual NAPL removal at SC-5 and SC-6 to semiannual. Manual NAPL removal will continue to be performed on an approximate monthly basis (temperature-dependent) at SC-3 and quarterly at SC-2 and SC-4. The frequency and continued need for NAPL recovery from the SC wells will be reevaluated in the 2020 Annual PRR.



- Decommission the pumping system at PW-4M since the water level in purge well PW-4M is controlled by pumping PW-4U.
- Submit graphs of the concentrations of nine SOIs detected in bedrock well G6-05 on an annual basis as an appendix in the PRR, starting with the PRR for reporting year 2020.
- Change the frequency of the Gorge Face Seep Survey to every five years to coincide with the USEPA Five-Year review of the Site as previously proposed.



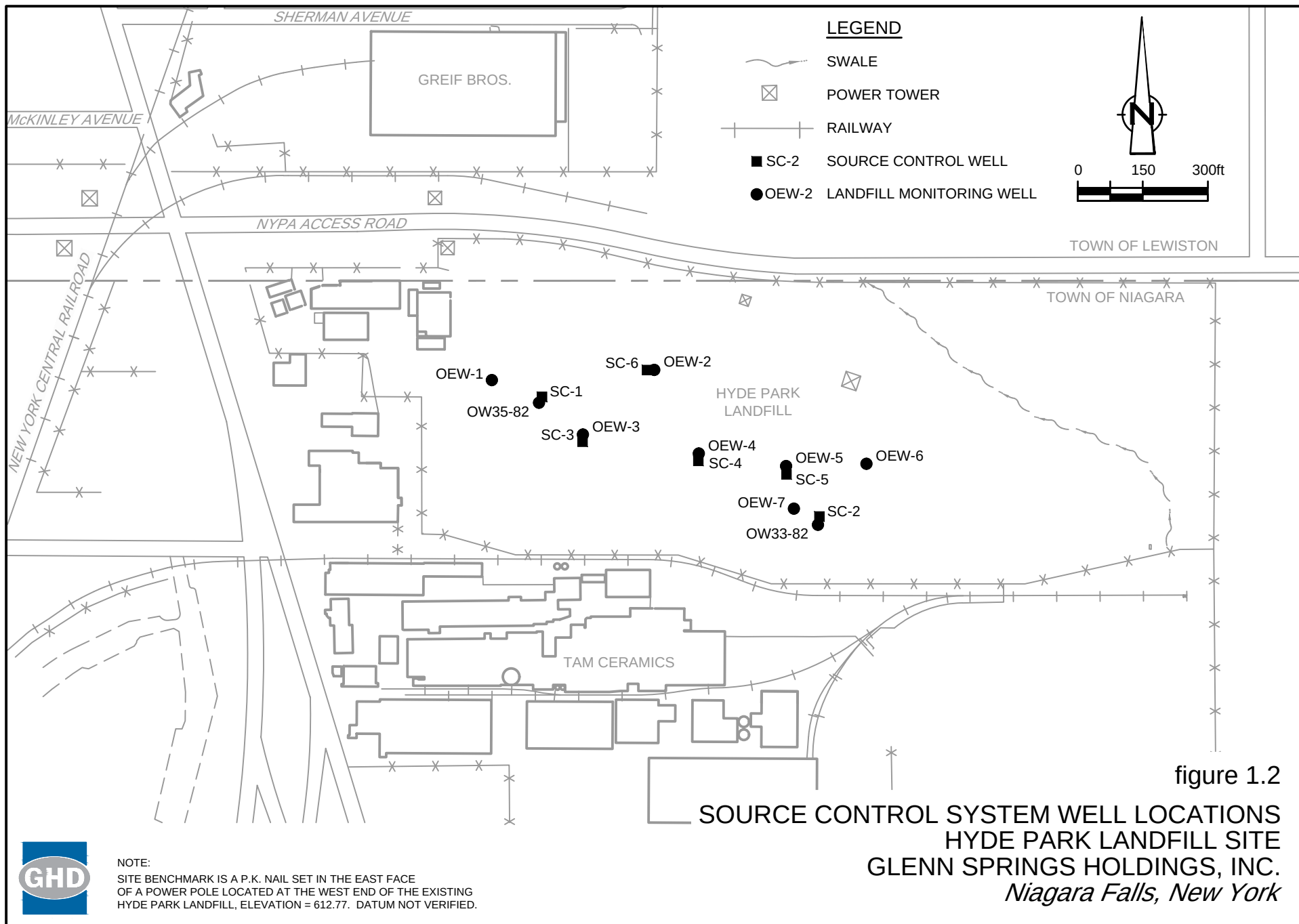
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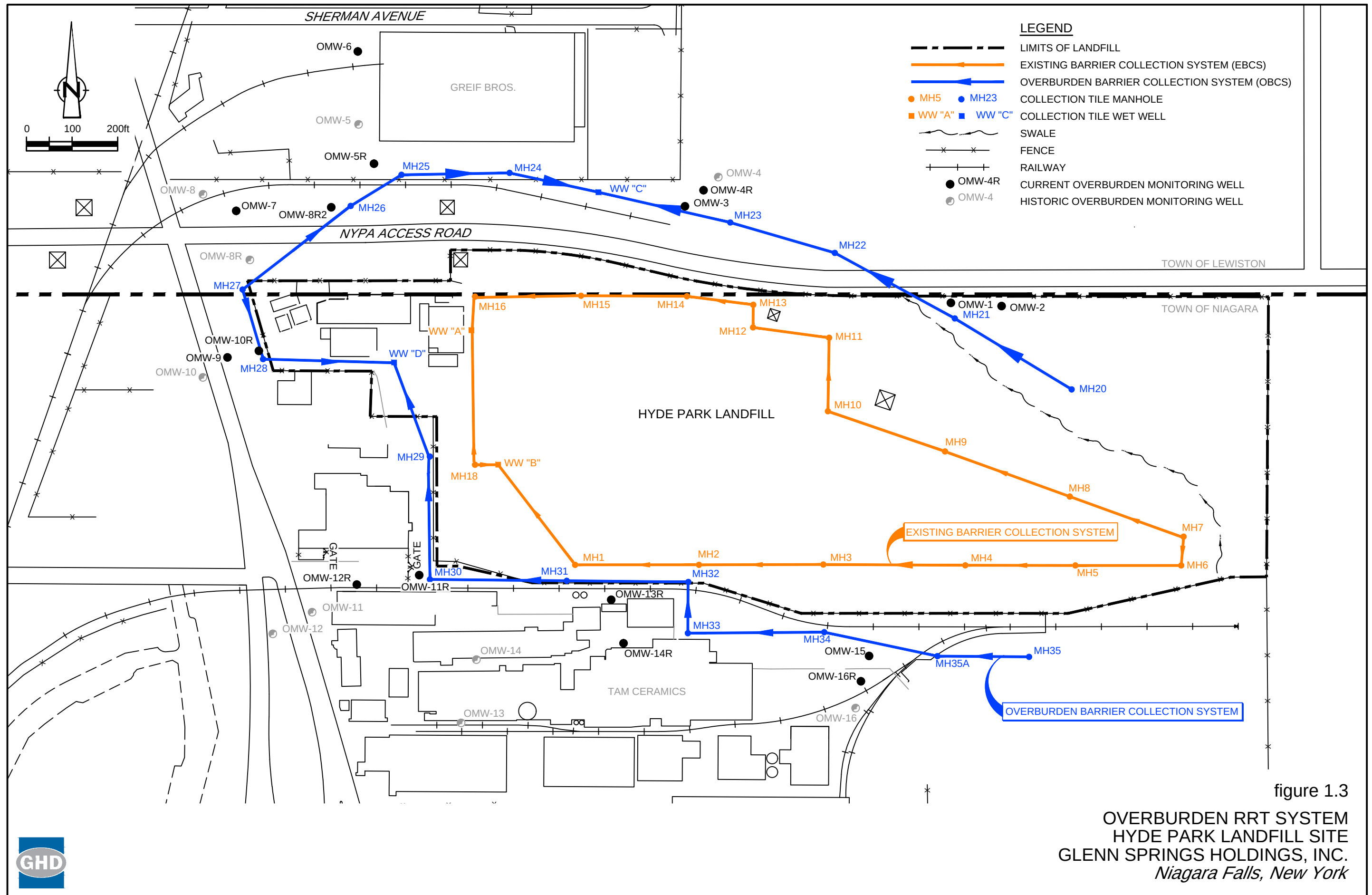
- USGS QUADRANGLE MAP; NIAGARA FALLS, NY, ON, 2019.
- USGS QUADRANGLE MAP; LEWISTON, NY, ON, 2019.

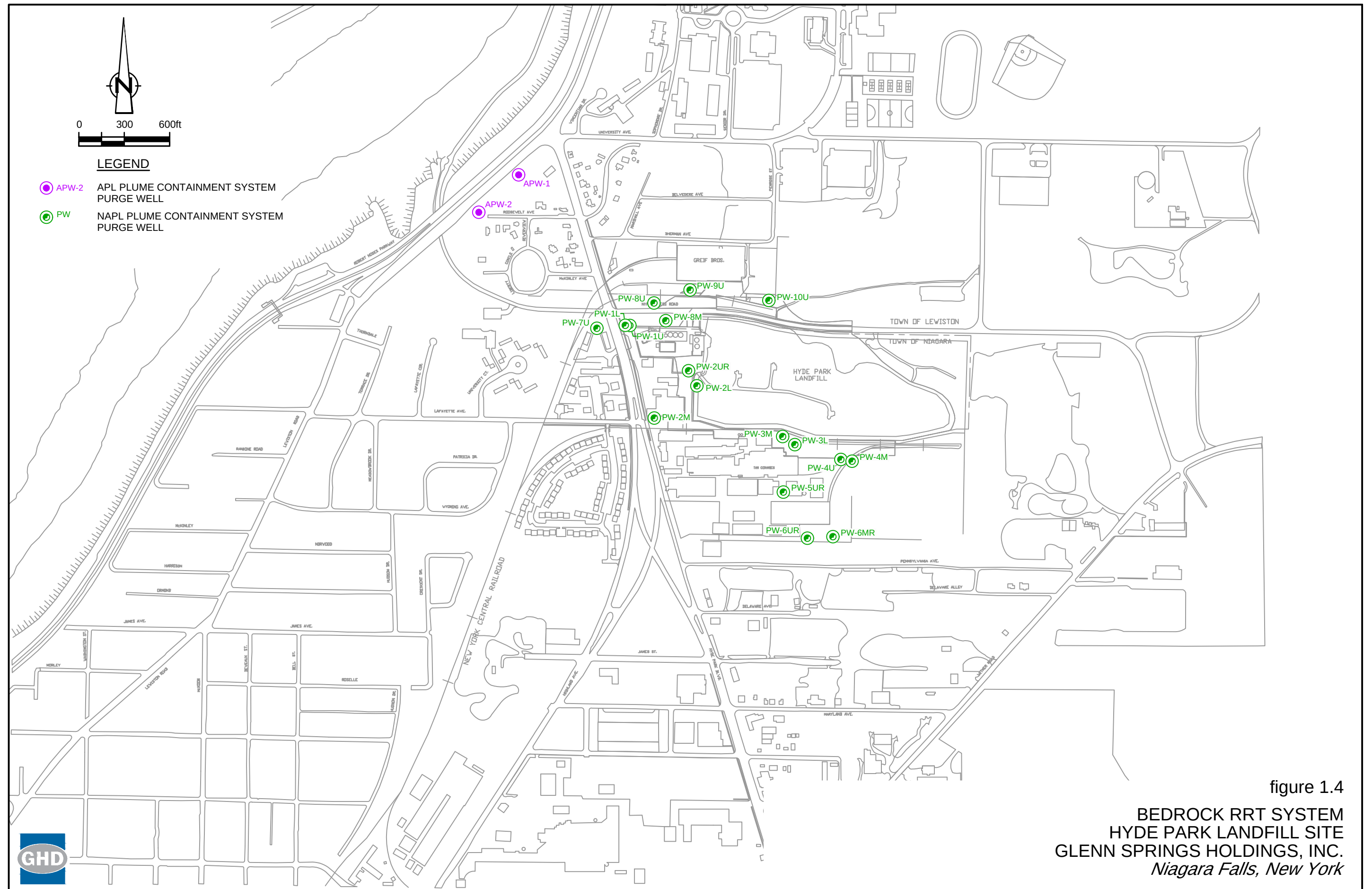


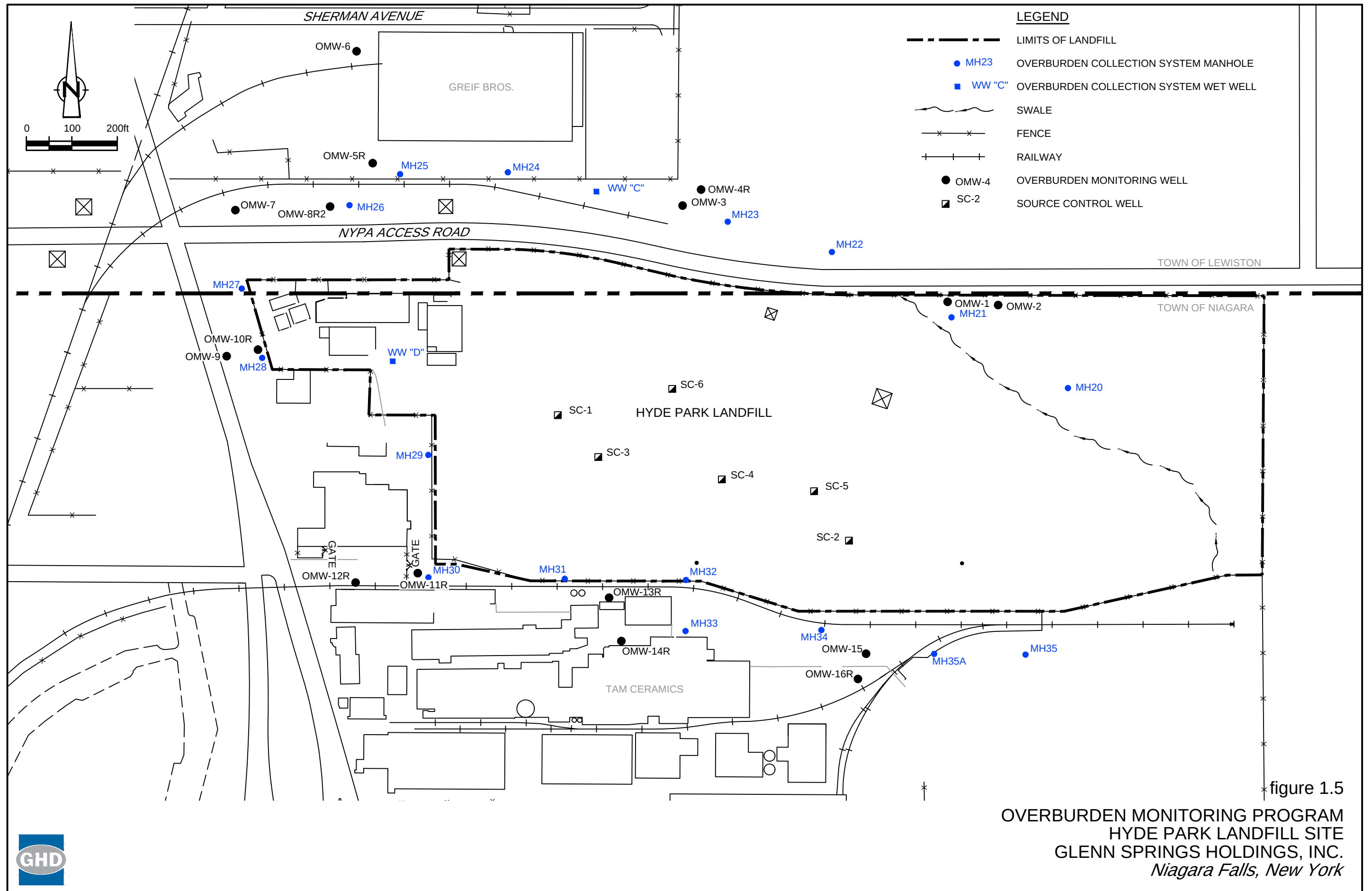
figure 1.1

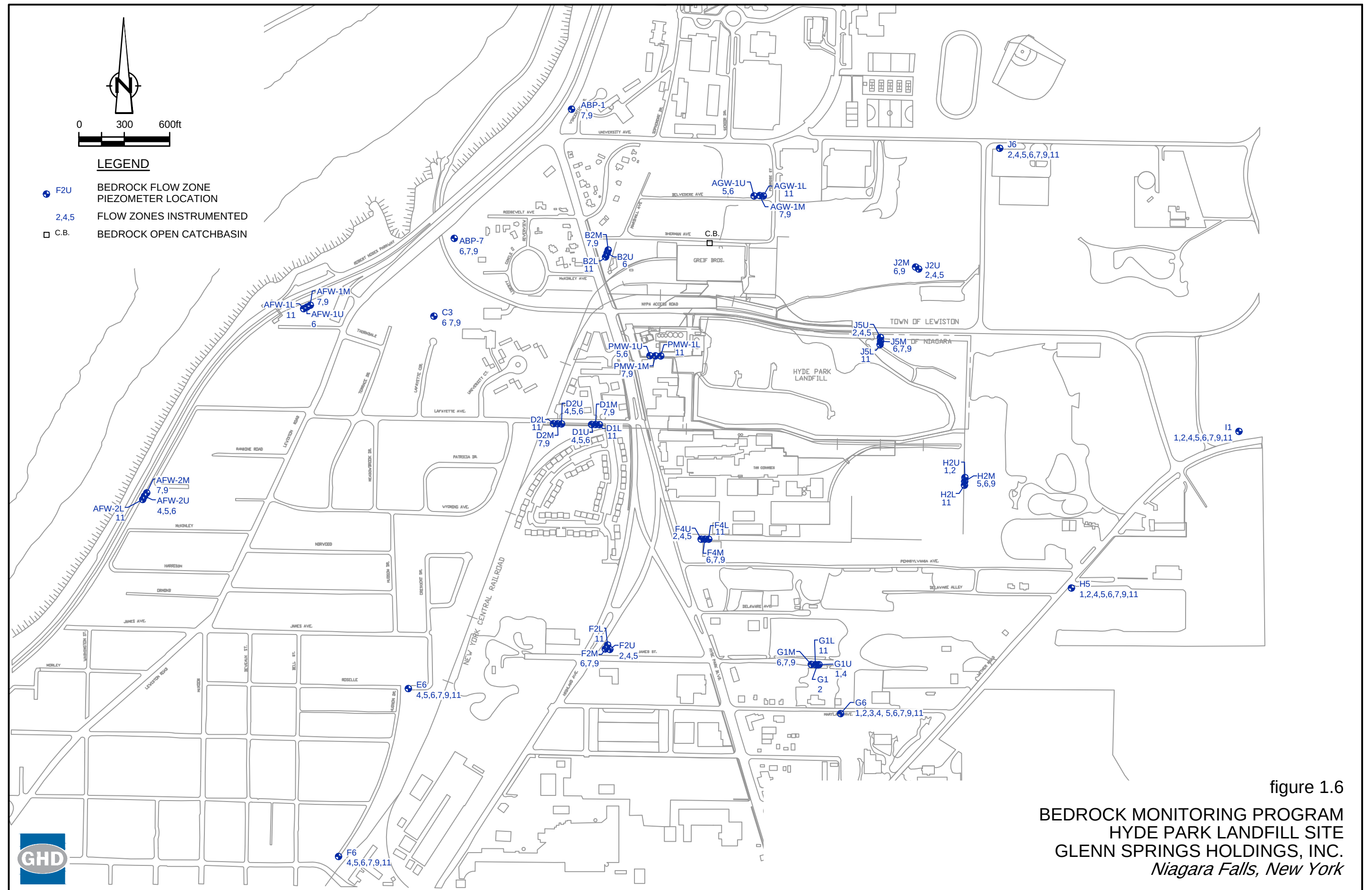
SITE LOCATION
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

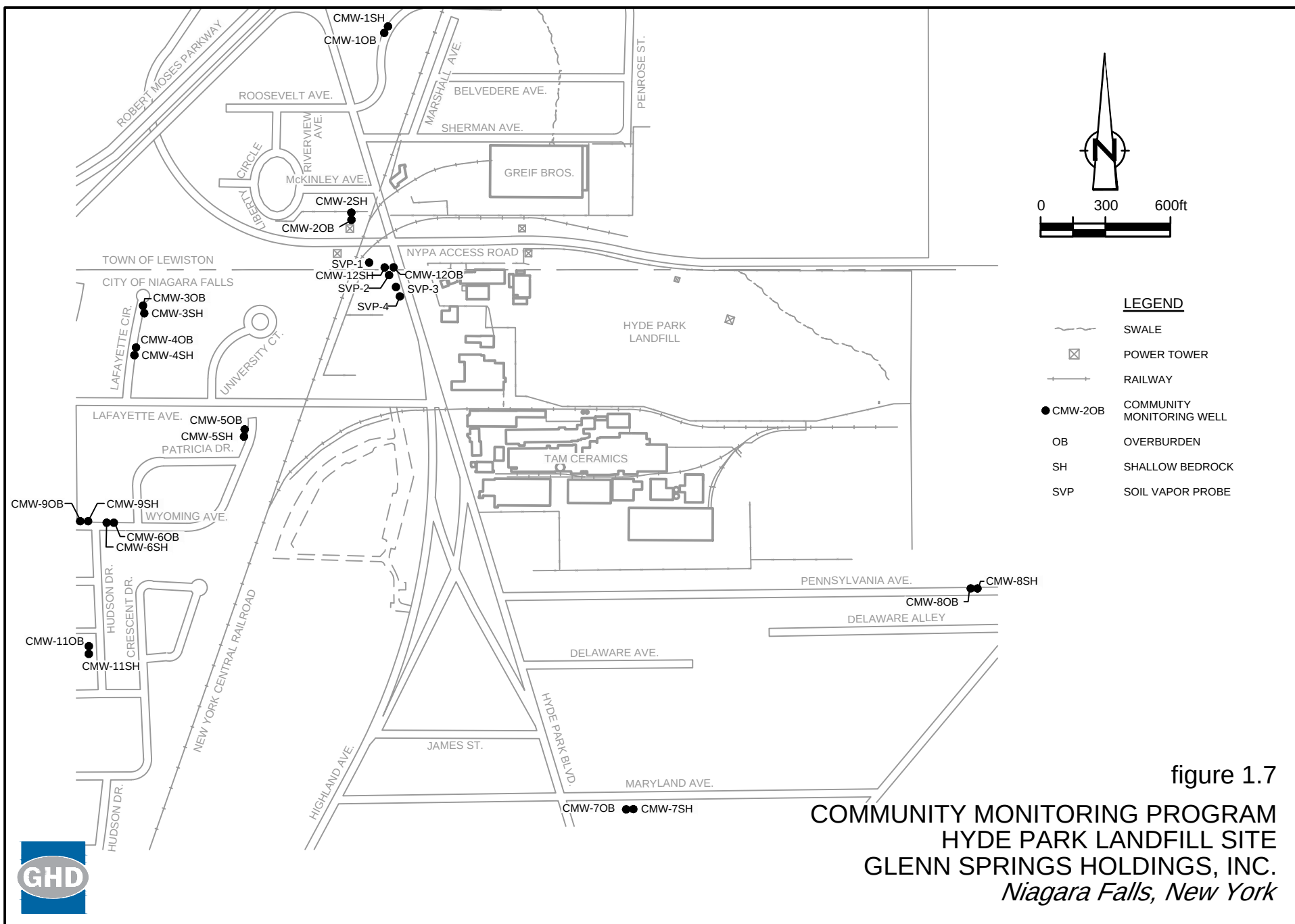


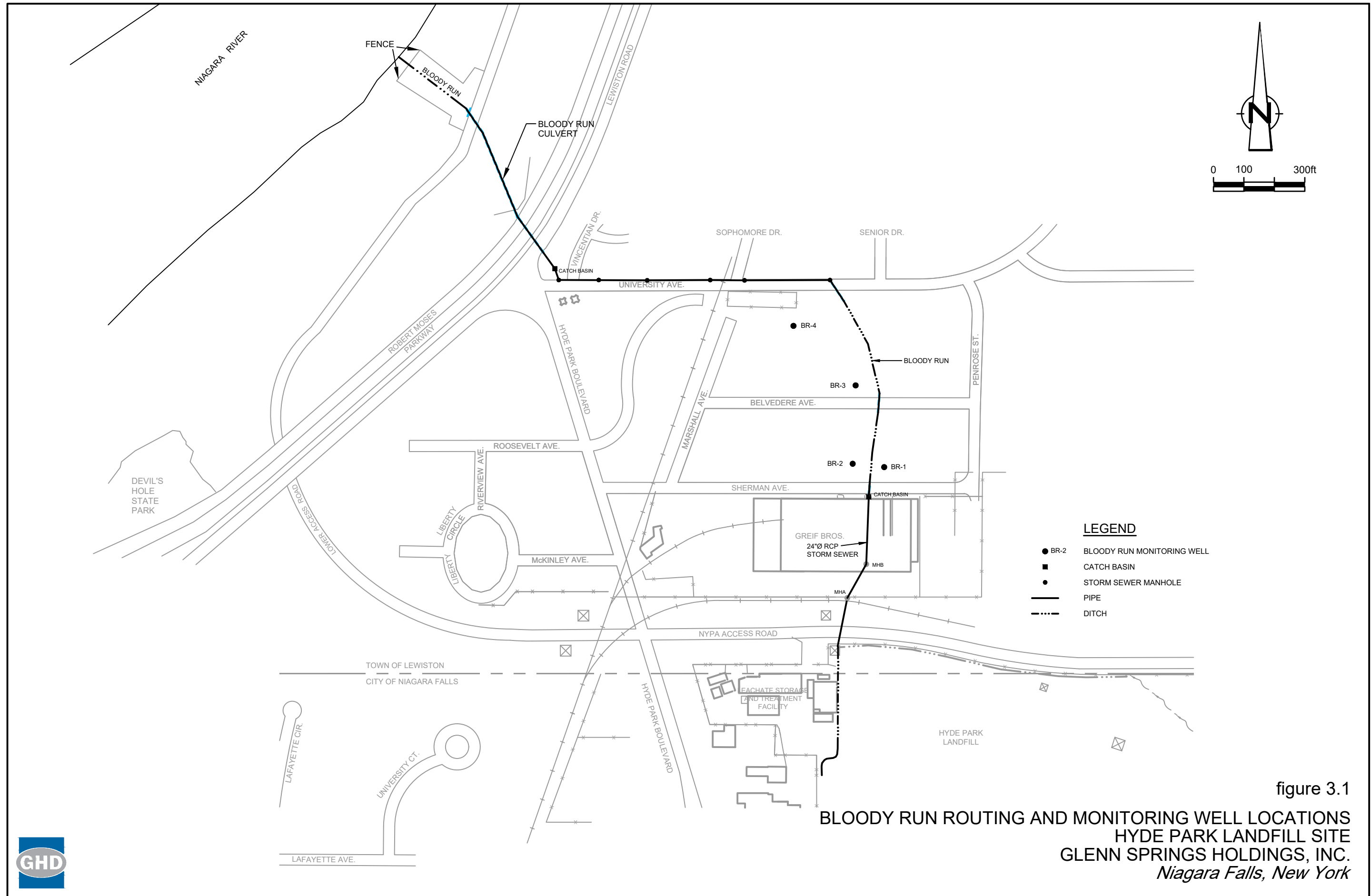












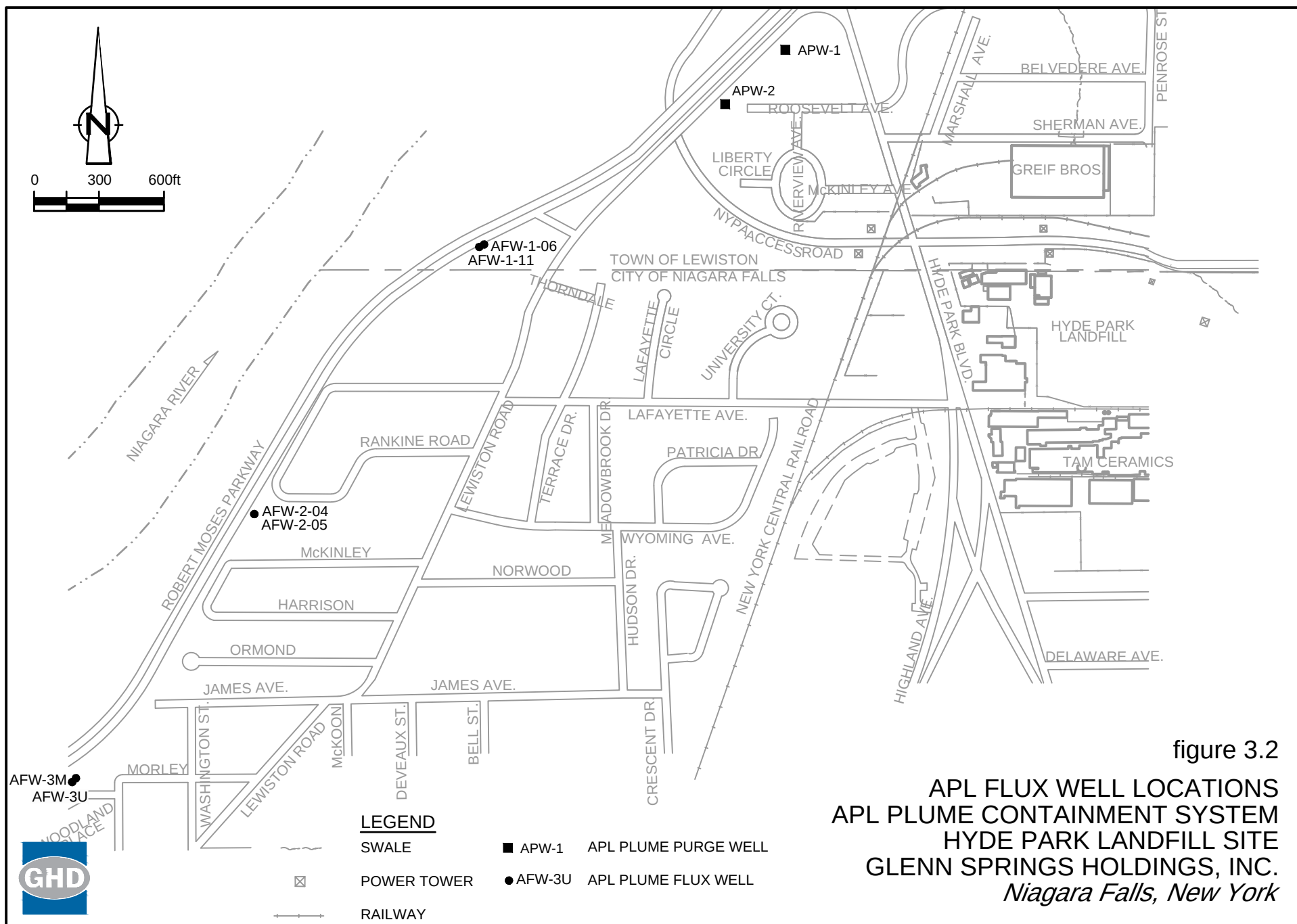


figure 3.2
APL FLUX WELL LOCATIONS
APL PLUME CONTAINMENT SYSTEM
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

Table 1.1

**PMP Monitoring Tasks - 2019
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	Decaners	-	-	Yes	
	Monthly	Purge NAPL	Source Control NAPL Recovery Well SC-3	Table 3.3	Table 3.1	Yes	
		NAPL Thickness	Source Control NAPL Recovery Well SC-3	Table 3.3	-	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	Table 3.1	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	Decaners	-	-	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	-	Completed 1st Quarter 2019
	Annual	APL Sampling	Open Catch Basin	-	Table 3.9	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
Community	Quarterly	Hand Water Level Measurement	Bedrock Monitoring Wells	Table 5.4	Table 3.11	Yes	
		Hand Water Level Measurement	Overburden Monitoring Wells	Table 5.4	Table 3.11	Yes	
	Annual	APL Plume Flux Composite Sample Vapor Monitoring	APL Flux Piezometers and Purge Wells (APWs and AFWs) Overburden Monitoring Wells	Table 5.3/App D Table 5.4	Table 3.10 Table 3.12	Yes Yes	
	Biennial	Gorge Face Seep Inspection	Seeps	Table 5.2	-	Yes	See Appendix B

Table 1.1

**PMP Monitoring Tasks - 2019
Hyde Park Landfill Site
Town of Niagara, New York**

Program	Frequency	Activity	Location/Description	PMP Table Reference	PRR Report Reference	Completed (Yes/No)	Comment
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	See quarterly reports
		APL Sampling	Treated Effluent	Table 6.1	-	Yes	
	Quarterly	NAPL Volumes	Decaners	-	Table 4.1	Yes	
		APL Sampling	Leachate Feed	Table 6.1	Table 4.3	Yes	
		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 2019
	Annual	Report	-	-	-	Yes	Completed in 2019
	Five-Year	Report	-	-	-	Yes	Completed in 2017

Notes:

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

Table 3.1

2019 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 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 Thickness (feet)	Water Level Elevation (ft. AMSL)	NAPL Recovered (gallons)	
January - March	0.67	602.65	0.0	3.18	597.89	60.5	1.98	600.13	5.3	0.27	602.45	0.0	0.53	611.11	0.0	65.8
April - June	0.95	602.73	0.0	2.65	597.76	62.0	1.85	600.06	5.8	0.51	602.50	0.0	0.54	612.57	0.0	67.8
July - September	1.18	602.68	3.5	2.58	597.92	27.8	1.68	600.29	5.8	0.39	602.46	0.0	0.54	612.44	0.0	37.1
October - December	1.33	602.52	3.0	3.24	597.95	28.0	2.18	600.04	7.0	0.33	602.47	0.0	0.40	612.63	0.0	38.0
Totals			6.5			178.3			23.8			0.0			0.0	208.6

Notes:
ft. AMSL - Feet Above Mean Sea Level
NAPL - Non-Aqueous Phase Liquid
NAPL Thickness and Water Level Elevations indicated are quarterly measurements. Monthly NAPL thickness measured at SC-3 is not shown.

**2019 Overburden Quarterly Groundwater Elevation Summary
Hyde Park Landfill Site
Town of Niagara, New York**

Well	Reference Elevation (ft. AMSL)	Water Level Elevation	Water Level Elevation	Water Level Elevation	Water Level Elevation
		Quarter 1 3/8/2019 (ft. AMSL)	Quarter 2 6/6/2019 (ft. AMSL)	Quarter 3 9/23/2019 (ft. AMSL)	Quarter 4 11/20/2019 (ft. AMSL)
OMW-1	605.28	599.11	601.17	597.86	601.22
OMW-2	605.99	602.27	603.27	600.20	603.05
OMW-3	598.63	589.25	594.14	587.91	588.66
OMW-4R	601.17	589.90	590.10	588.71	589.26
OMW-5R	591.31	585.33	586.50	586.89	586.17
OMW-6	587.62	585.36	586.50	585.57	585.71
OMW-7	592.74	584.97	586.24	585.31	586.24
OMW-8R2	594.67	585.25	586.41	586.71	586.31
OMW-9	595.52	587.21	587.78	587.84	587.71
OMW-10R	595.13	585.88	586.30	587.41	586.32
OMW-11R	597.52	591.95	592.52	592.02	592.79
OMW-12R	597.20	592.63	593.45	593.00	592.79
OMW-13R	601.50	591.79	591.77	591.79	591.81
OMW-14R	599.64	594.20	594.34	594.64	594.25
OMW-15	607.48	602.77	603.39	601.26	602.26
OMW-16R	607.62	603.25	603.76	601.46	603.53
SC-2	625.61	602.65	602.73	602.68	602.52
SC-3	638.72	597.89	597.76	597.92	597.95
SC-4	639.35	600.13	600.06	600.29	600.04
SC-5	634.07	602.45	602.50	602.46	602.47
SC-6	631.15	611.11	612.57	612.44	612.63
MH-20	605.87	601.18	601.18	601.18	601.19
MH-21	599.77	593.65	593.67	593.46	593.68
MH-22	593.37	586.38	586.70	Dry	586.61
MH-23	587.05	574.99	574.93	575.92	574.94
MH-24	582.57	575.87	576.85	578.08	575.06
MH-25	583.82	577.53	578.49	579.74	576.70
MH-26	584.48	576.77	577.54	578.85	575.96
MH-27	586.12	575.19	576.00	577.26	575.40
MH-28	585.23	568.60	575.11	576.44	568.72
MH-29	582.90	Dry	592.36	593.63	589.50
MH-30	588.37	589.39	589.49	589.38	589.47
MH-31	590.10	580.47	580.54	580.54	580.54
MH-32	592.01	582.30	582.42	582.35	582.32
MH-33	592.51	583.89	583.83	583.79	583.76
MH-34	597.64	591.10	591.23	591.17	591.13
MH-35	605.69	599.11	599.14	599.15	599.08
MH-35A	605.69	598.53	598.55	598.18	598.46

Notes:

Dry - No water present in well
ft. AMSL - Feet Above Mean Sea Level

Table 3.3

**2019 Overburden NAPL Presence Monitoring
Hyde Park Landfill Site
Town of Niagara, New York**

Well I.D.	March 1 - March 12, 2019 (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

**2019 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	1.0	24.1	23.7	1.0	47.8
February	0.8	23.1	17.4	0.8	40.4
March	0.4	19.4	14.2	0.4	33.5
April	0.0	24.3	27.4	0.0	51.7
May	2.0	27.4	27.4	2.0	54.7
June	0.9	15.3	16.9	0.9	32.2
July	0.2	0.0	3.1	0.2	3.1
August	0.0	0.0	0.0	0.0	0.0
September	0.0	0.0	0.0	0.0	0.0
October	0.1	3.1	2.7	0.1	5.8
November	0.3	14.7	7.9	0.3	22.6
December	1.1	27.0	23.2	1.1	50.2
Annual Average	0.6	14.8	13.7	0.6	28.5

Notes:

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

All wet wells were down for limited periods during the piping replacement project conducted between March 20, 2019 and June 30, 2019. These wells were also down for the process control upgrade project between August 2, 2019 and October 20, 2019.

Table 3.5

2019 Bedrock Quarterly Water Level Elevation Summary - Piezometers
Hyde Park Landfill Site
Town of Niagara, New York

Well	Reference Elevation	Water Level Elevation	Water Level Elevation	Water Level Elevation	Water Level Elevation
		Quarter 1	Quarter 2	Quarter 3	Quarter 4
	(ft. AMSL)	3/8/2019	6/6/2019	9/23/2019	11/20/2019
		(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
Flow Zone 1					
G1U-01	617.08	603.29	607.65	601.11	602.77
G6-01	609.24	603.25	605.34	600.47	601.57
H2U-01	620.92	611.80	613.50	608.33	610.11
H5-01	617.61	595.28	596.22	594.15	593.78
I1-01	625.58	601.07	602.53	598.45	599.12
Flow Zone 2					
F2U-02	599.89	575.58	576.22	575.08	575.66
F4U-02	602.32	585.91	586.82	586.12	586.32
G1-02	616.86	592.77	593.39	591.94	592.44
G6-02	608.65	591.86	592.78	590.80	591.59
H2U-02	620.88	594.86	595.41	592.71	593.76
H5-02	617.47	594.69	595.18	592.37	593.46
I1-02	625.47	590.01	591.50	585.76	586.98
J2U-02	609.66	597.35	599.27	593.22	598.11
J5U-02	606.21	598.19	599.44	594.02	597.87
J6-02	609.23	597.25	601.55	593.36	598.75
Flow Zone 4					
AFW-2U-04	593.48	576.99	578.09	575.66	576.48
D1U-04	593.77	581.77	582.92	580.61	581.51
D2U-04	590.65	579.80	581.60	578.34	579.68
E6-04	578.23	566.48	566.03	564.85	565.40
F2U-04	599.76	578.21	578.99	576.81	577.86
F4U-04	602.19	586.49	587.31	587.20	586.60
F6-04	588.06	570.04	570.48	569.81	570.07
G1U-04	616.96	592.75	593.18	591.79	592.74
G6-04	609.15	592.24	592.88	591.14	591.85
H5-04	617.40	594.52	595.11	592.29	593.42
I1-04	625.30	587.08	586.83	581.91	583.83
J2U-04	609.42	593.53	595.36	590.98	594.14
J5U-04	606.05	587.22	588.37	586.74	587.23
J6-04	609.12	580.08	582.58	579.41	580.67
Flow Zone 5					
AFW-2U-05	593.33	577.00	578.29	575.48	576.29
AGW-1U-05	591.80	586.27	588.82	582.97	586.97
D1U-05	593.51	581.16	581.27	580.42	580.06
D2U-05	590.56	580.83	581.06	580.05	579.78
E6-05	578.04	566.70	566.66	565.14	565.71
F2U-05	599.64	578.50	579.15	577.42	578.34
F4U-05	602.06	584.51	585.64	585.52	585.12
F6-05	587.85	569.93	570.40	569.74	570.01
G6-05	609.13	591.96	592.66	590.92	591.64
H2M-05	621.59	592.29	593.24	591.38	593.48
H5-05	617.31	593.11	593.79	590.66	591.77
I1-05	625.25	552.52	553.09	552.37	552.97
J2U-05	609.30	578.88	580.59	578.74	579.34
J5U-05	605.87	578.89	580.70	578.78	579.39
J6-05	609.02	579.62	582.14	579.06	580.31
PMW-1U-05	598.00	580.44	578.82	581.64	578.07
Flow Zone 6					
ABP-7-06	575.78	Dry	Dry	Dry	Dry
AFW-1U-06	571.83	557.26	557.30	557.05	557.35
AFW-2U-06	593.22	545.18	Dry	545.16	545.11
AGW-1U-06	591.66	552.69	553.88	553.97	552.55
B2U-06	589.29	553.55	554.53	554.31	553.50
C3-06	585.78	Dry	Dry	Dry	Dry

Table 3.5

2019 Bedrock Quarterly Water Level Elevation Summary - Piezometers
Hyde Park Landfill Site
Town of Niagara, New York

Well	Reference Elevation	Water Level Elevation	Water Level Elevation	Water Level Elevation	Water Level Elevation
		Quarter 1	Quarter 2	Quarter 3	Quarter 4
	(ft. AMSL)	3/8/2019	6/6/2019	9/23/2019	11/20/2019
		(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
Flow Zone 6					
Continued					
D1U-06	593.25	548.28	548.68	550.20	548.16
D2U-06	590.38	549.48	549.81	551.09	549.17
E6-06	577.99	573.97	574.37	573.88	573.73
F2M-06	599.06	553.01	552.96	552.91	553.08
F4M-06	602.05	552.56	554.62	555.46	553.25
F6-06	587.84	573.92	574.32	573.86	573.65
G1M-06	616.75	574.04	574.53	574.02	573.82
G6-06	609.09	575.74	577.91	576.77	575.22
H2M-06	621.42	570.83	574.58	576.32	588.09
H5-06	617.17	590.45	591.18	590.07	589.59
I1-06	625.15	546.93	547.30	546.71	546.64
J2M-06	608.94	553.02	554.92	553.52	553.92
J5M-06	606.22	548.00	548.63	550.21	547.94
J6-06	608.93	554.76	555.27	554.24	553.93
PMW-1U-06	597.92	548.54	549.56	549.44	548.94
Flow Zone 7					
ABP-1-07	576.44	547.64	548.08	548.57	547.40
ABP-7-07	575.73	533.88	534.20	533.22	534.32
AFW-1M-07	571.41	Dry	Dry	Dry	Dry
AFW-2M-07	593.44	526.58	526.63	526.60	526.66
AGW-1M-07	592.91	546.19	545.87	542.92	542.87
B2M-07	589.52	Dry	534.61	539.81	Dry
C3-07	585.62	545.06	545.49	546.08	542.69
D1M-07	594.15	532.13	532.13	540.11	532.12
D2M-07	590.77	522.53	525.67	539.86	526.04
E6-07	577.91	554.47	555.09	554.75	554.63
F2M-07	598.91	518.49	518.68	538.79	517.70
F4M-07	601.91	530.73	538.62	547.04	533.83
F6-07	587.68	567.18	567.59	567.40	567.42
G1M-07	616.68	584.61	585.18	582.71	581.44
G6-07	609.06	584.16	584.66	582.45	581.14
H5-07	617.05	553.16	554.46	554.63	554.39
I1-07	625.14	546.72	542.87	542.85	546.30
J5M-07	606.07	547.21	544.28	543.16	542.36
J6-07	608.85	541.93	544.08	542.85	545.59
PMW-1M-07	598.50	529.31	532.77	537.46	529.26
Flow Zone 9					
ABP-1-09	575.49	534.29	534.38	534.72	534.48
ABP-7-09	575.67	533.40	533.56	532.24	533.45
AFW-1M-09	571.12	525.44	527.33	524.61	524.83
AFW-2M-09	593.32	520.98	521.05	521.05	521.09
AGW-1M-09	592.75	546.82	545.82	543.44	543.84
B2M-09	589.34	-	-	539.88	-
C3-09	585.00	542.68	542.68	545.79	541.29
D1M-09	594.02	518.02	517.78	540.21	517.61
D2M-09	590.66	517.96	517.69	540.17	517.04
E6-09	577.82	552.72	553.27	553.34	552.85
F2M-09	598.71	517.71	517.52	539.65	516.67
F4M-09	601.79	517.59	517.50	539.83	516.66
F6-09	587.53	573.25	573.01	571.85	571.34
G1M-09	616.58	581.71	582.86	580.29	579.76
G6-09	608.98	585.25	585.78	583.38	582.04
H2M-09	621.32	551.99	551.34	551.71	552.63
H5-09	616.93	546.94	543.46	542.71	545.06
I1-09	624.91	563.15	563.26	563.24	563.48

2019 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 3/8/2019 (ft. AMSL)	Water Level Elevation Quarter 2 6/6/2019 (ft. AMSL)	Water Level Elevation Quarter 3 9/23/2019 (ft. AMSL)	Water Level Elevation Quarter 4 11/20/2019 (ft. AMSL)
Flow Zone 9					
Continued					
J2M-09	608.77	547.71	544.44	543.36	543.45
J5M-09	605.82	547.58	544.53	543.58	543.24
J6-09	608.76	563.48	565.97	562.53	565.07
PMW-1M-09	598.34	517.85	517.62	*NA	516.91
Flow Zone 11					
AFW-1L-11	572.10	508.58	509.87	506.07	507.93
AFW-2L-11	593.43	496.11	507.25	496.26	496.25
AGW-1L-11	592.71	582.23	582.90	582.93	583.10
B2L-11	589.65	498.09	498.41	536.88	498.99
D1L-11	593.80	503.38	503.11	530.50	503.86
D2L-11	590.21	518.17	523.86	527.95	524.13
E6-11	577.72	534.72	535.11	535.78	533.53
F2L-11	598.94	548.65	554.65	554.29	553.48
F4L-11	602.22	572.09	573.40	573.50	572.80
F6-11	587.40	529.75	530.18	530.21	528.94
G1L-11	616.84	592.11	592.33	589.80	590.23
G6-11	608.89	593.46	593.80	591.35	591.77
H2L-11	620.73	557.54	559.01	559.42	559.55
H5-11	616.81	542.69	543.13	541.98	542.19
I1-11	624.75	545.46	546.04	546.23	546.13
J5L-11	607.20	555.34	555.20	555.41	555.54
J6-11	608.68	585.27	586.36	585.57	585.30
PMW-1L-11	598.84	511.18	516.92	525.88	518.16

Notes:

ft. AMSL - Feet Above Mean Sea Level

*NA - Not Available; manual water level reading suspected to be incorrect based on transducer data.

- - Obstructed

Table 3.6

**2019 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	0.00	5.24	0.65	3.70	0.56	0.68	1.69	0.17	0.00	2.39	0.65	3.86
February	0.00	7.27	0.79	3.51	0.61	0.95	3.92	0.20	0.00	2.51	0.68	4.10
March	0.00	1.87	0.48	5.50	0.20	0.31	2.26	0.12	0.00	1.62	0.41	2.36
April	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
May	4.85	5.88	1.34	16.21	0.63	1.38	2.85	0.23	0.00	3.45	0.84	4.26
June	0.87	3.28	0.70	12.32	0.23	1.58	1.23	0.15	0.00	2.90	0.69	3.77
July	0.00	0.69	0.00	9.72	0.06	3.82	0.51	0.07	0.00	0.00	0.61	5.11
August	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
September	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
October	0.12	3.40	0.68	8.74	0.21	2.68	2.08	0.10	0.00	0.23	0.00	3.19
November	0.10	1.51	1.16	11.46	0.20	5.95	3.24	0.12	0.00	2.82	0.49	4.48
December	0.10	1.34	0.95	10.47	0.49	4.83	2.46	0.19	0.00	2.64	0.68	4.34
Annual Average	0.52	2.54	0.56	6.98	0.27	1.85	1.68	0.11	0.00	1.55	0.42	2.96

Month	PW-7U	PW-8M (1)	PW-8U	PW-9U	PW-10U	APW-1	APW-2
January	0.19	0.00	0.14	0.52	3.13	0.55	0.03
February	0.16	0.00	0.56	0.67	2.51	0.62	0.08
March	0.04	0.00	0.18	0.33	2.06	0.27	0.00
April	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.29	0.44	1.09	1.06	3.59	0.61	0.03
June	0.18	0.00	1.46	0.82	3.79	0.43	0.00
July	0.03	0.00	0.99	0.63	3.24	0.00	0.00
August	0.00	0.00	0.06	0.03	0.19	0.00	0.00
September	0.00	0.00	0.00	0.00	0.00	0.00	0.00
October	0.35	1.19	0.97	0.41	2.29	0.63	0.30
November	0.47	0.00	1.01	0.65	3.25	0.46	0.38
December	0.48	0.00	1.08	0.85	3.54	0.83	0.64
Annual Average	0.18	0.14	0.63	0.50	2.30	0.37	0.12

Notes:

GPM - Gallons per minute

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

Purge wells were down during the piping replacement project conducted between March 20, 2019 and June 30, 2019. During this period, purge wells were placed back online when the replacement of associated piping was complete to minimize downtime to the extent possible. These wells were also down for the process control upgrade project completed between August 2, 2019 and October 6, 2019. The wells were brought back online individually between October 7 and 20, 2019. PW-5UR and PW-6UR returned online on October 20 and November 6, 2019, respectively. PW-4M remained offline.

Table 3.7a

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-7-09	ABP-7-09	AGW-1M-07	AGW-1M-09	AGW-1U-06
Sample ID:			ABP-7-09-02-19	Y7-10-02-19	AGW-1M-07-02-19	AGW-1M-09-02-19	AGW-1U-06-02-19
Sample Date:			2/18/2019	2/18/2019	2/13/2019	2/13/2019	2/15/2019
Parameters	Units	Screening Level	(Duplicate)				
Organic Acids							
2-Chlorobenzoic acid	ug/L	7,300	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	ug/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	ug/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	ug/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	ug/L	50	70 J	62 J	250 U	95 J	120 J

Sample Location:			B2L-11	C3-07	C3-09	D1M-09	D1U-04
Sample ID:			B2L-11-02-19	C3-07-02-19	C3-09-02-19	D1M-09-02-19	D1U-04-02-19
Sample Date:			2/20/2019	2/14/2019	2/14/2019	2/19/2019	2/19/2019
Organic Acids							
2-Chlorobenzoic acid	ug/L	7,300	10 J	20 J	30 U	6 J	30 U
3-Chlorobenzoic acid	ug/L	7,300	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	ug/L	7,300	30 U	30 U	30 U	30 U	30 U
Benzoic acid	ug/L	150,000	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	ug/L	50	91 J	250 U	250 U	160 J	250 U

Sample Location:			D1U-05	F2M-09	F2U-02	F2U-04	G1U-01
Sample ID:			D1U-05-02-19	F2M-09-02-19	F2U-02-02-19	F2U-04-02-19	G1U-01-02-19
Sample Date:			2/19/2019	2/20/2019	2/20/2019	2/20/2019	2/14/2019
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	79 J	250 U	190 J	290	250 U

Table 3.7a

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			G6-01-02-19	G6-04-02-19	G6-06-02-19	H2U-02-02-19	H5-09-02-19
Sample Date:			2/13/2019	2/13/2019	2/13/2019	2/20/2019	2/20/2019
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	2700	30 U	6 J	5 J
3-Chlorobenzoic acid	µg/L	7,300	30 U	540	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	3100	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	80 J	250 U	87 J	51 J

Notes:

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

Table 3.7b

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Second Quarter 2019
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-7-09-0519	AGW-1M-07-0519	W7-10-0519	AGW-1M-09-0519	AGW-1U-06-0519
Sample Date:			5/20/2019	5/17/2019	5/17/2019	5/17/2019	5/17/2019
					(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 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	53 J	250 U	250 U	110 J	39 J

Sample Location:			B2L-11	C3-07	C3-09	D1M-09	D1U-04
Sample ID:			B2L-11-0519	C3-07-0519	C3-09-0519	D1M-09-0519	D1U-04-0519
Sample Date:			5/17/2019	5/20/2019	5/20/2019	5/17/2019	5/17/2019
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	50	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	180 J	250 U	250 U	140 J	250 U

Table 3.7b

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Second Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D1U-05	F2M-09	F2U-02	F2U-04	G1U-01
Sample ID:			D1U-05-0519	F2M-09-0519	F2U-02-0519	F2U-04-0519	G1U-01-0519
Sample Date:			5/17/2019	5/17/2019	5/21/2019	5/17/2019	5/20/2019
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	280	250 U	210 J	320	250 U

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			G6-01-0519	G6-04-0519	G6-06-0519	H2U-02-0519	H5-09-0519
Sample Date:			5/17/2019	5/17/2019	5/17/2019	5/20/2019	5/17/2019
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	1400	30 U	6 J	19 J
3-Chlorobenzoic acid	µg/L	7,300	30 U	270	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	1700	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	68 J	250 U	89 J	110 J

Notes:

µg/L - Micrograms per liter

J - Estimated concentration

U - Not detected at the associated reporting limit

280 - Concentration exceeds Screening Level

Table 3.7c

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Third Quarter 2019
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-7-09-0819	AGW-1M-07-0819	W7-10-0819	AGW-1M-09-0819	AGW-1U-06-0819
Sample Date:			8/21/2019	8/20/2019	8/20/2019	8/20/2019	8/20/2019
Parameters	Units	Screening Level			(Duplicate)		
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	65 J	250 U	250 U	140 J	78 J
Sample Location:							
Sample ID:			B2L-11	C3-07	C3-09	D1M-09	D1U-04
Sample Date:			B2L-11-0819	C3-07-0819	C3-09-0819	D1M-09-0819	D1U-04-0819
			8/21/2019	8/20/2019	8/20/2019	8/20/2019	8/20/2019
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	270	30 U	30 U	4 J	30 U
3-Chlorobenzoic acid	µg/L	7,300	26 J	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	20 J	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150,000	37 J	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	130 J	250 U	250 U	110 J	250 U

Table 3.7c

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Third Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D1U-05	F2M-09	F2U-02	F2U-04	G1U-01
Sample ID:			D1U-05-0819	F2M-09-0819	F2U-02-0819	F2U-04-0819	G1U-01-0819
Sample Date:			8/20/2019	8/20/2019	8/20/2019	8/20/2019	8/21/2019
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	160 J	250 U	190 J	340	250 U

Sample Location:			G6-01	G6-04	G6-06	H2U-02	H5-09
Sample ID:			G6-01-0819	G6-04-0819	G6-06-0819	H2U-02-0819	H5-09-0819
Sample Date:			8/20/2019	8/20/2019	8/20/2019	8/21/2019	8/21/2019
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	3100	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7,300	30 U	680	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	30 U	3700	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	150 J	250 U	140 J	64 J

Notes:

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

Table 3.7d

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Fourth Quarter 2019
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-7-09-1119	AGW-1M-07-1119	AGW-1M-09-1119	AGW-1U-06-1119	B2L-11-1119
Sample Date:			11/13/2019	11/13/2019	11/13/2019	11/13/2019	11/13/2019
Parameters	Units	Screening Level					
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	430
3-Chlorobenzoic acid	µg/L	7,300	30 U	30 U	30 U	30 U	35
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	62 J	250 U	130 J	110 J	160 J
Sample Location:							
Sample ID:			C3-07	C3-09	D1M-09	D1U-04	D1U-05
Sample Date:			C3-07-1119	C3-09-1119	D1M-09-1119	D1U-04-1119	D1U-05-1119
			11/13/2019	11/13/2019	11/13/2019	11/13/2019	11/13/2019
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	250 U	150 J	37 J	260

Table 3.7d

Analytical Results Summary
Quarterly Group B Bedrock Piezometer Sampling
Fourth Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2M-09	F2U-02	F2U-04	G1U-01	G6-01
Sample ID:			F2M-09-1119	F2U-02-1119	F2U-04-1119	G1U-01-1119	G6-01-1119
Sample Date:			11/13/2019	11/13/2019	11/13/2019	11/15/2019	11/13/2019
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	180 J	340	250 U	250 U

Sample Location:			G6-04	G6-04	G6-06	H2U-02	H5-09
Sample ID:			G6-04-1119	W7-10-1119	G6-06-1119	H2U-02-1119	H5-09-1119
Sample Date:			11/13/2019	11/13/2019 (Duplicate)	11/13/2019	11/13/2019	11/13/2019
Organic Acids							
2-Chlorobenzoic acid	µg/L	7,300	3000	3000	30 U	7.4 J	30 U
3-Chlorobenzoic acid	µg/L	7,300	660	620	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7,300	4100	3900	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	120 J	120 J	250 U	130 J	250 U

Notes:

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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-1-09	ABP-7-09	ABP-7-09	AFW-1L-11	AFW-2U-04	AFW-2U-05	AGW-1M-07
Sample ID:			ABP-1-09-02-19	ABP-7-09-02-19	Y7-10-02-19	AFW-1L-11-02-19	AFW-2U-04-02-19	AFW-2U-05-02-19	AGW-1M-07-02-19
Sample Date:			2/26/2019	2/18/2019	2/18/2019	2/20/2019	2/20/2019	2/20/2019	2/13/2019
			(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
1,1,2,2-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
1,1,2-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
1,1-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
1,1-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
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.40 J
1,2-Dichlorobenzene	µg/L	600	1.0 U	0.32 J	0.34 J	1.0 U	1.0 U	1.0 U	0.56 J
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
1,2-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
1,3-Dichlorobenzene	µg/L	180	1.0 U	0.97 J	0.92 J	1.0 U	1.0 U	1.0 U	1.0
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.1	1.0	1.0 U	1.0 U	1.0 U	0.87 J
2-Chlorotoluene	µg/L	120	1.0 U	4.5	4.3	1.0 U	1.0 U	1.0 U	2.1
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
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
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
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
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
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
Carbon disulfide	µg/L	1000	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.31 J
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
Chlorobenzene	µg/L	100	1.0 U	12	12	1.0 U	1.0 U	1.0 U	6.7
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
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
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
cis-1,2-Dichloroethene	µg/L	70	0.28 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.27 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
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
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
m&p-Xylenes	µg/L		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 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
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	0.20 J	1.0 U	1.0 U	1.0 U	1.0 U	0.86 J
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.38 J	0.31 J	1.0 U	1.0 U	1.0 U	1.1
o-Xylene	µg/L		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	1.2	1.1	1.0 U	1.0 U	1.0 U	2.4
Styrene	µg/L		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3.8

**Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York**

Sample Location:			ABP-1-09	ABP-7-09	ABP-7-09	AFW-1L-11	AFW-2U-04	AFW-2U-05	AGW-1M-07
Sample ID:			ABP-1-09-02-19	ABP-7-09-02-19	Y7-10-02-19	AFW-1L-11-02-19	AFW-2U-04-02-19	AFW-2U-05-02-19	AGW-1M-07-02-19
Sample Date:			2/26/2019	2/18/2019	2/18/2019 (Duplicate)	2/20/2019	2/20/2019	2/20/2019	2/13/2019
Parameters	Units	Screening Level							
Volatile Organic Compounds (Continued)									
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
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
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
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
Trichlorofluoromethane (CFC-11)	µg/L		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		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	0.21 J	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
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
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
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
2,4-Dinitrophenol	µg/L	73	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
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
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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
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
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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
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
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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			ABP-1-09	ABP-7-09	ABP-7-09	AFW-1L-11	AFW-2U-04	AFW-2U-05	AGW-1M-07
Sample ID:			ABP-1-09-02-19	ABP-7-09-02-19	Y7-10-02-19	AFW-1L-11-02-19	AFW-2U-04-02-19	AFW-2U-05-02-19	AGW-1M-07-02-19
Sample Date:			2/26/2019	2/18/2019	2/18/2019	2/20/2019	2/20/2019	2/20/2019	2/13/2019
			(Duplicate)						
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
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
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
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
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
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
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
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
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
Octachlorocyclopentene	µg/L		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
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
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
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
Organic Acids									
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	70 J	62 J	250 U	250 U	250 U	250 U
General Chemistry									
Sulfate	µg/L		1470000	237000	206000	156000	90700	180000	1290000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			AGW-1M-09	AGW-1U-05	AGW-1U-06	B2L-11	C3-07	C3-09	D1L-11
Sample ID:			AGW-1M-09-02-19	AGW-1U-05-02-19	AGW-1U-06-02-19	B2L-11-02-19	C3-07-02-19	C3-09-02-19	D1L-11-02-19
Sample Date:			2/13/2019	2/13/2019	2/15/2019	2/20/2019	2/14/2019	2/14/2019	2/19/2019
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
1,1,2,2-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
1,1,2-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
1,1-Dichloroethane	µg/L	800	0.36 J	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
1,2,4-Trichlorobenzene	µg/L	70	1.4	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	3.3	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
1,2-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
1,3-Dichlorobenzene	µg/L	180	5.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	4.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	35	0.31 J	1.0 U	1.6	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
4-Chlorotoluene	µg/L	120	0.38 J	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	40	1.0 U	1.0 U	100
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
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
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
Carbon disulfide	µg/L	1000	4.9	0.32 J	1.2	3.1	1.0 U	1.0 U	280
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
Chlorobenzene	µg/L	100	41	0.27 J	1.0 U	6.5	0.30 J	0.28 J	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
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
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
cis-1,2-Dichloroethene	µg/L	70	0.66 J	0.37 J	1.3	0.76 J	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
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
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.6
m&p-Xylenes	µg/L		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	26
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
m-Monochlorobenzotrifluoride	µg/L	5	4.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	8.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L		1.3	1.0 U	1.0 U	0.20 J	1.0 U	1.0 U	0.57 J
p-Monochlorobenzotrifluoride	µg/L	50	12	1.0 U	1.0 U	0.30 J	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	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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			AGW-1M-09	AGW-1U-05	AGW-1U-06	B2L-11	C3-07	C3-09	D1L-11
Sample ID:			AGW-1M-09-02-19	AGW-1U-05-02-19	AGW-1U-06-02-19	B2L-11-02-19	C3-07-02-19	C3-09-02-19	D1L-11-02-19
Sample Date:			2/13/2019	2/13/2019	2/15/2019	2/20/2019	2/14/2019	2/14/2019	2/19/2019
Parameters	Units	Screening Level							
Volatile Organic Compounds (Continued)									
Toluene	µg/L	1000	0.49 J	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U	2.2
trans-1,2-Dichloroethene	µg/L	100	0.30 J	1.0 U	1.0 U	0.26 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
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	0.64 J	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	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	2.0 U	2.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	2.3	0.59 J	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	10000	1.3 J	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	27
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
2,4-Dichlorophenol	µg/L	110	1.6 J	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	1.4 J
2,4-Dinitrophenol	µg/L	73	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
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
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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
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
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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	10	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
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
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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			AGW-1M-09	AGW-1U-05	AGW-1U-06	B2L-11	C3-07	C3-09	D1L-11
Sample ID:			AGW-1M-09-02-19	AGW-1U-05-02-19	AGW-1U-06-02-19	B2L-11-02-19	C3-07-02-19	C3-09-02-19	D1L-11-02-19
Sample Date:			2/13/2019	2/13/2019	2/15/2019	2/20/2019	2/14/2019	2/14/2019	2/19/2019
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
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
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
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
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
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
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
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
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
Octachlorocyclopentene	µg/L		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
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
Phenol	µg/L	11000	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	8.4 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
Organic Acids									
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	10 J	20 J	30 U	7 J
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	95 J	250 U	120 J	91 J	250 U	250 U	250 U
General Chemistry									
Sulfate	µg/L		1490000	242000	461000	1570000	177000	203000	1310000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D1M-09	D1U-04	D1U-05	D2M-09	D2U-04	D2U-05
Sample ID:			D1M-09-02-19	D1U-04-02-19	D1U-05-02-19	D2M-09-02-19	D2U-04-02-19	D2U-05-02-19
Sample Date:			2/19/2019	2/19/2019	2/19/2019	2/15/2019	2/15/2019	2/15/2019
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
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	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
1,2,4-Trichlorobenzene	µg/L	70	0.47 J	1.0 U	1.0 U	0.28 J	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	0.60 J	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
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	4.6	1.0 U	1.0 U	0.36 J	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.5	1.0 U	1.0 U	0.28 J	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	7.4	1.0 U	1.0 U	1.5	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
4-Chlorotoluene	µg/L	120	0.36 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	3.7	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
Bromoform	µg/L	80	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
Carbon disulfide	µg/L	1000	4.9 U	1.8 U	1.4 U	0.98 J	1.0 U	0.49 J
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	21	1.0 U	1.1	7.1	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
Chloroform (Trichloromethane)	µg/L	80	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
cis-1,2-Dichloroethene	µg/L	70	0.59 J	1.0 U	1.0 U	1.0	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
Dichlorodifluoromethane (CFC-12)	µg/L	350	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
m&p-Xylenes	µg/L		0.37 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	0.56 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	0.56 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.6	1.0 U	1.0 U	0.30 J	1.0 U	1.0 U
Styrene	µg/L		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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D1M-09	D1U-04	D1U-05	D2M-09	D2U-04	D2U-05
Sample ID:			D1M-09-02-19	D1U-04-02-19	D1U-05-02-19	D2M-09-02-19	D2U-04-02-19	D2U-05-02-19
Sample Date:			2/19/2019	2/19/2019	2/19/2019	2/15/2019	2/15/2019	2/15/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	0.28 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	0.67 J	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
Trichloroethene	µg/L	5	1.0 U	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	1.0 U
Vinyl acetate	µg/L		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
Xylenes (total)	µg/L	10000	0.37 J	3.0 U	3.0 U	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
2,4-Dichlorophenol	µg/L	110	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
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			D1M-09	D1U-04	D1U-05	D2M-09	D2U-04	D2U-05
Sample ID:			D1M-09-02-19	D1U-04-02-19	D1U-05-02-19	D2M-09-02-19	D2U-04-02-19	D2U-05-02-19
Sample Date:			2/19/2019	2/19/2019	2/19/2019	2/15/2019	2/15/2019	2/15/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	6 J	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	160 J	250 U	79 J	91 J	12 J	79 J
General Chemistry								
Sulfate	µg/L		1400000	96500	186000	883000	143000	350000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			E6-04	E6-05	E6-06	E6-09	E6-11	F2L-11
Sample ID:			E6-04-02-19	E6-05-02-19	E6-06-02-19	E6-09-02-19	E6-11-02-19	F2L-11-02-19
Sample Date:			2/18/2019	2/18/2019	2/18/2019	2/18/2019	2/18/2019	2/20/2019
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
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	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
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	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
1,2-Dichloropropane	µg/L	5	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
1,4-Dichlorobenzene	µg/L	75	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
3-Chlorotoluene	µg/L	120	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
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	100	78	34
Bromodichloromethane	µg/L	80	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
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
Carbon disulfide	µg/L	1000	3.8 U	2.5 U	2.3 U	440	96	15
Carbon tetrachloride	µg/L	5	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	0.22 J	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
Chloroform (Trichloromethane)	µg/L	80	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
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	3.0	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
Dichlorodifluoromethane (CFC-12)	µg/L	350	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	2.5	2.9	1.4
m&p-Xylenes	µg/L		2.0 U	2.0 U	2.0 U	56	34	16
Methylene chloride	µg/L	30	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
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L		1.0 U	1.0 U	1.0 U	7.3	7.3	3.3
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	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	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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			E6-04	E6-05	E6-06	E6-09	E6-11	F2L-11
Sample ID:			E6-04-02-19	E6-05-02-19	E6-06-02-19	E6-09-02-19	E6-11-02-19	F2L-11-02-19
Sample Date:			2/18/2019	2/18/2019	2/18/2019	2/18/2019	2/18/2019	2/20/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	52	25	7.8
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	0.66 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
Trichloroethene	µg/L	5	1.0 U	1.0 U	0.56 J	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	1.0 U
Vinyl acetate	µg/L		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
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	64	42	19
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
2,4-Dichlorophenol	µg/L	110	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	2.3 J	1.1 J	9.4 U
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	82	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			E6-04	E6-05	E6-06	E6-09	E6-11	F2L-11
Sample ID:			E6-04-02-19	E6-05-02-19	E6-06-02-19	E6-09-02-19	E6-11-02-19	F2L-11-02-19
Sample Date:			2/18/2019	2/18/2019	2/18/2019	2/18/2019	2/18/2019	2/20/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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	1.2 J	9.4 U	9.4 U
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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 J	1.8 J	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
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	250 U	250 U	250 U
General Chemistry								
Sulfate	µg/L		1320000	1520000	1560000	1080000	1510000	1080000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2M-09	F2U-02	F2U-04	F6-04	F6-06	F6-11
Sample ID:			F2M-09-02-19	F2U-02-02-19	F2U-04-02-19	F6-04-02-19	F6-06-02-19	F6-11-02-19
Sample Date:			2/20/2019	2/20/2019	2/20/2019	2/14/2019	2/14/2019	2/14/2019
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
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	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
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	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
1,2-Dichloropropane	µg/L	5	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
1,4-Dichlorobenzene	µg/L	75	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
3-Chlorotoluene	µg/L	120	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
Benzene	µg/L	5	0.81 J	1.0 U	1.0 U	1.0 U	1.0 U	31
Bromodichloromethane	µg/L	80	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
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
Carbon disulfide	µg/L	1000	6.2	1.0 U	1.0 U	2.7	2.8	5.8
Carbon tetrachloride	µg/L	5	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
Chloroethane	µg/L	3.6	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
Chloromethane (Methyl chloride)	µg/L	190	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	0.79 J	0.38 J	0.39 J	1.0 U	1.9	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
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L		0.74 J	2.0 U	2.0 U	2.0 U	0.94 J	2.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	0.43 J	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
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L		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
Styrene	µg/L		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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2M-09	F2U-02	F2U-04	F6-04	F6-06	F6-11
Sample ID:			F2M-09-02-19	F2U-02-02-19	F2U-04-02-19	F6-04-02-19	F6-06-02-19	F6-11-02-19
Sample Date:			2/20/2019	2/20/2019	2/20/2019	2/14/2019	2/14/2019	2/14/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.7	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
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	0.50 J	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L		1.0 U	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	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
Xylenes (total)	µg/L	10000	0.74 J	3.0 U	3.0 U	3.0 U	0.94 J	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
2,4-Dichlorophenol	µg/L	110	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
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			F2M-09	F2U-02	F2U-04	F6-04	F6-06	F6-11
Sample ID:			F2M-09-02-19	F2U-02-02-19	F2U-04-02-19	F6-04-02-19	F6-06-02-19	F6-11-02-19
Sample Date:			2/20/2019	2/20/2019	2/20/2019	2/14/2019	2/14/2019	2/14/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	190 J	290	250 U	250 U	250 U
General Chemistry								
Sulfate	µg/L		1440000	116000	149000	462000	1420000	1840000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G1L-11	G1M-06	G1M-06	G1U-01	G6-01	G6-02
Sample ID:			G1L-11-02-19	G1M-06-02-19	X7-10-02-19	G1U-01-02-19	G6-01-02-19	G6-02-02-19
Sample Date:			2/14/2019	2/14/2019	2/14/2019	2/14/2019	2/13/2019	2/13/2019
					(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
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	0.21 J	2.5	2.3
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	0.36 J	0.29 J
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	0.53 J	0.61 J
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
1,2-Dichlorobenzene	µg/L	600	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
1,2-Dichloropropane	µg/L	5	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
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	0.28 J
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	0.44 J	0.40 J
3-Chlorotoluene	µg/L	120	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
Benzene	µg/L	5	42	0.22 J	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
Bromoform	µg/L	80	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
Carbon disulfide	µg/L	1000	3.0	1.5	1.9	1.0 U	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
Chlorobenzene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	0.72 J	0.91 J
Chloroethane	µg/L	3.6	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
Chloromethane (Methyl chloride)	µg/L	190	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	9.3	32	43
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
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	0.60 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L		3.4	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.3	1.5
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.9	1.9
o-Xylene	µg/L		0.28 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.33 J	0.36 J	1.0 U	7.2	7.6
Styrene	µg/L		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	0.28 J	0.43 J	13	13

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location: Sample ID: Sample Date:			G1L-11 G1L-11-02-19 2/14/2019	G1M-06 G1M-06-02-19 2/14/2019	G1M-06 X7-10-02-19 2/14/2019 (Duplicate)	G1U-01 G1U-01-02-19 2/14/2019	G6-01 G6-01-02-19 2/13/2019	G6-02 G6-02-02-19 2/13/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	0.61 J	2.3	3.2
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
Trichloroethene	µg/L	5	1.0 U	0.46 J	0.44 J	5.0	42	49
Trichlorofluoromethane (CFC-11)	µg/L		1.0 U	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	2.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	0.46 J	0.32 J	0.81 J
Xylenes (total)	µg/L	10000	3.7	3.0 U	3.0 U	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
2,4-Dichlorophenol	µg/L	110	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
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location: Sample ID: Sample Date:			G1L-11 G1L-11-02-19 2/14/2019	G1M-06 G1M-06-02-19 2/14/2019	G1M-06 X7-10-02-19 2/14/2019 (Duplicate)	G1U-01 G1U-01-02-19 2/14/2019	G6-01 G6-01-02-19 2/13/2019	G6-02 G6-02-02-19 2/13/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	250 U	250 U	250 U
General Chemistry								
Sulfate	µg/L		1530000	1050000	1090000	106000	84500	78700

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G6-04	G6-05	G6-06	G6-07	G6-11	H2M-06
Sample ID:			G6-04-02-19	G6-05-02-19	G6-06-02-19	G6-07-02-19	G6-11-02-19	H2M-06-02-19
Sample Date:			2/13/2019	2/13/2019	2/13/2019	2/13/2019	2/13/2019	2/20/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	200	1.0 U	2.8 J	1.0 U	1.0 U	1.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	5.5	100	0.23 J	1.0 U	1.0 U	1.2 J
1,1,2-Trichloroethane	µg/L	5	0.98 J	14	1.0 U	1.0 U	1.0 U	5.0 U
1,1-Dichloroethane	µg/L	800	1.4	6.6	1.0 U	1.0 U	1.0 U	5.0 U
1,1-Dichloroethene	µg/L	7	0.52 J	3.5 J	1.0 U	1.0 U	1.0 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,4-Dichlorobenzene	µg/L	75	0.28 J	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
2-Chlorotoluene	µg/L	120	0.40 J	5.0 U	1.0 U	1.0 U	1.0 U	1.0 J
3-Chlorotoluene	µg/L	120	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
4-Chlorotoluene	µg/L	120	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Benzene	µg/L	5	33	280	1.0 U	1.0 U	110	3.3 J
Bromodichloromethane	µg/L	80	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromoform	µg/L	80	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Carbon disulfide	µg/L	1000	10	110	0.29 J	1.0 U	44	87
Carbon tetrachloride	µg/L	5	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chlorobenzene	µg/L	100	1.7	20	1.0 U	1.0 U	1.0 U	2.3 J
Chloroethane	µg/L	3.6	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	80	23	600	1.0 U	1.0 U	1.0 U	48
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	70	38	150	4.2	0.49 J	3.5	13
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Ethylbenzene	µg/L	700	1.0 U	1.4 J	1.0 U	1.0 U	7.3	5.0 U
m&p-Xylenes	µg/L		0.20 J	4.1 J	2.0 U	2.0 U	43	1.4 J
Methylene chloride	µg/L	30	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	4.4 J
m-Monochlorobenzotrifluoride	µg/L	5	1.1	5.0 U	0.23 J	1.0 U	1.0 U	5.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.8	5.0 U	0.22 J	1.0 U	1.0 U	1.0 J
o-Xylene	µg/L		1.0 U	3.1 J	1.0 U	1.0 U	7.1	1.1 J
p-Monochlorobenzotrifluoride	µg/L	50	6.8	5.0 U	0.87 J	0.34 J	0.58 J	1.4 J
Styrene	µg/L		1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Tetrachloroethene	µg/L	5	7.5	4.3 J	0.99 J	0.50 J	1.0 U	5.0 U

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G6-04	G6-05	G6-06	G6-07	G6-11	H2M-06
Sample ID:			G6-04-02-19	G6-05-02-19	G6-06-02-19	G6-07-02-19	G6-11-02-19	H2M-06-02-19
Sample Date:			2/13/2019	2/13/2019	2/13/2019	2/13/2019	2/13/2019	2/20/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	0.74 J	10	1.0 U	1.0 U	2.6	2.7 J
trans-1,2-Dichloroethene	µg/L	100	9.7	41	0.39 J	1.0 U	1.0 U	9.5
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Trichloroethene	µg/L	5	39	350	5.4	0.65 J	2.2	15
Trichlorofluoromethane (CFC-11)	µg/L		1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Vinyl acetate	µg/L		2.0 U	10 U	2.0 U	2.0 U	2.0 U	10 U
Vinyl chloride	µg/L	2	25	110	1.0 U	1.0 U	1.0 U	11
Xylenes (total)	µg/L	10000	3.0 U	7.2 J	3.0 U	3.0 U	50	2.5 J
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
2,4-Dichlorophenol	µg/L	110	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	1.8 J	9.4 U
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			G6-04	G6-05	G6-06	G6-07	G6-11	H2M-06
Sample ID:			G6-04-02-19	G6-05-02-19	G6-06-02-19	G6-07-02-19	G6-11-02-19	H2M-06-02-19
Sample Date:			2/13/2019	2/13/2019	2/13/2019	2/13/2019	2/13/2019	2/20/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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	3.0 J
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	2700	9300	30 U	30 U	30 U	400
3-Chlorobenzoic acid	µg/L	7300	540	2400	30 U	30 U	30 U	57
4-Chlorobenzoic acid	µg/L	7300	3100	23000	30 U	30 U	30 U	22 J
Benzoic acid	µg/L	150000	100 U	2000 U	100 U	100 U	100 U	160
Chlorendic acid	µg/L	50	80 J	260 J	250 U	250 U	250 U	250 U
General Chemistry								
Sulfate	µg/L		177000	1040000	322000	409000	1570000	1540000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H2M-09	H2M-09	H2U-01	H2U-02	H5-02	H5-04
Sample ID:			H2M-09-02-19	Z7-10-02-19	H2U-01-02-19	H2U-02-02-19	H5-02-02-19	H5-04-02-19
Sample Date:			2/21/2019	2/21/2019	2/20/2019	2/20/2019	2/20/2019	2/20/2019
			(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
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	2.3	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
1,2,4-Trichlorobenzene	µg/L	70	2.7	2.6	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.3	1.2	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
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	0.69 J	0.67 J	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	0.95 J	0.93 J	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	13	13	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
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	14	14	1.0 U	4.1	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
Bromoform	µg/L	80	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
Carbon disulfide	µg/L	1000	2.5 J	5.0 J	1.0 U	2.0	2.0	1.8
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	5.4	5.4	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
Chloroform (Trichloromethane)	µg/L	80	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
cis-1,2-Dichloroethene	µg/L	70	1.7	1.7	1.0 U	0.41 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
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	0.29 J	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	2.4	2.2	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	6.3	6.0	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L		1.9	1.8	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	9.7	9.5	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	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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location: Sample ID: Sample Date:			H2M-09 H2M-09-02-19 2/21/2019	H2M-09 Z7-10-02-19 2/21/2019 (Duplicate)	H2U-01 H2U-01-02-19 2/20/2019	H2U-02 H2U-02-02-19 2/20/2019	H5-02 H5-02-02-19 2/20/2019	H5-04 H5-04-02-19 2/20/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	0.23 J	0.24 J	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	0.52 J	0.67 J	1.0 U	0.79 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
Trichloroethene	µg/L	5	0.31 J	0.34 J	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	1.0 U
Vinyl acetate	µg/L		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	1.6	1.0 U	1.0 U
Xylenes (total)	µg/L	10000	1.9 J	1.8 J	3.0 U	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
2,4-Dichlorophenol	µg/L	110	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
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 UJ	21 J	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H2M-09	H2M-09	H2U-01	H2U-02	H5-02	H5-04
Sample ID:			H2M-09-02-19	Z7-10-02-19	H2U-01-02-19	H2U-02-02-19	H5-02-02-19	H5-04-02-19
Sample Date:			2/21/2019	2/21/2019	2/20/2019	2/20/2019	2/20/2019	2/20/2019
			(Duplicate)					
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	4 J	30 U	30 U	6 J	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	87 J	250 U	250 U
General Chemistry								
Sulfate	µg/L		1480000	1540000	162000	252000	172000	1000000

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H5-05	H5-07	H5-09	I1-01	I1-02	I1-04
Sample ID:			H5-05-02-19	H5-07-02-19	H5-09-02-19	I1-01-02-19	I1-02-02-19	I1-04-02-19
Sample Date:			2/19/2019	2/19/2019	2/20/2019	2/26/2019	2/22/2019	2/22/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	0.31 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	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
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	0.25 J	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
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	2.1	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	2.4	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
1,2-Dichloropropane	µg/L	5	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	7.0	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	3.0	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	29	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
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	0.27 J	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	0.71 J	24	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
Bromoform	µg/L	80	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
Carbon disulfide	µg/L	1000	2.4 U	6.2 U	20	1.0 U	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
Chlorobenzene	µg/L	100	1.0 U	1.0 U	24	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
Chloroform (Trichloromethane)	µg/L	80	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
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	0.95 J	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
Dichlorodifluoromethane (CFC-12)	µg/L	350	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	0.92 J	1.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L		2.0 U	0.47 J	3.9	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	4.1	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	9.8	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L		1.0 U	0.30 J	2.9	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	14	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	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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H5-05	H5-07	H5-09	I1-01	I1-02	I1-04
Sample ID:			H5-05-02-19	H5-07-02-19	H5-09-02-19	I1-01-02-19	I1-02-02-19	I1-04-02-19
Sample Date:			2/19/2019	2/19/2019	2/20/2019	2/26/2019	2/22/2019	2/22/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	1.0 U	1.0 U	6.1	1.0 U	1.0 U	1.0 U
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
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
Trichloroethene	µg/L	5	1.0 U	1.0 U	0.25 J	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	1.0 U
Vinyl acetate	µg/L		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
Xylenes (total)	µg/L	10000	3.0 U	0.77 J	6.9	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
2,4-Dichlorophenol	µg/L	110	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
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			H5-05	H5-07	H5-09	I1-01	I1-02	I1-04
Sample ID:			H5-05-02-19	H5-07-02-19	H5-09-02-19	I1-01-02-19	I1-02-02-19	I1-04-02-19
Sample Date:			2/19/2019	2/19/2019	2/20/2019	2/26/2019	2/22/2019	2/22/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	5 J	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	51 J	250 U	250 U	250 U
General Chemistry								
Sulfate	µg/L		1170000	1740000	1450000	318000	297000	424000

Table 3.8

**Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York**

Sample Location:			I1-07	J6-02	J6-04	J6-05	J6-07	J6-11
Sample ID:			I1-07-02-19	J6-02-02-19	J6-04-02-19	J6-05-02-19	J6-07-02-19	J6-11-02-19
Sample Date:			2/22/2019	2/15/2019	2/15/2019	2/15/2019	2/15/2019	2/15/2019
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
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	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
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	0.39 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
1,2-Dichloropropane	µg/L	5	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
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.0 U	1.0 U	0.54 J	1.0 U
2-Chlorotoluene	µg/L	120	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
4-Chlorotoluene	µg/L	120	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	89
Bromodichloromethane	µg/L	80	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
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
Carbon disulfide	µg/L	1000	1.2	1.0 U	1.0 U	1.0 U	1.3	15
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	2.6	1.0 U	1.0 U	1.0 U	11	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
Chloroform (Trichloromethane)	µg/L	80	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
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	0.66 J	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
Dichlorodifluoromethane (CFC-12)	µg/L	350	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	3.0
m&p-Xylenes	µg/L		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	8.8
Methylene chloride	µg/L	30	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	0.54 J	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	0.90 J	1.0 U
o-Xylene	µg/L		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	6.6
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U	1.9	1.0 U
Styrene	µg/L		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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			I1-07	J6-02	J6-04	J6-05	J6-07	J6-11
Sample ID:			I1-07-02-19	J6-02-02-19	J6-04-02-19	J6-05-02-19	J6-07-02-19	J6-11-02-19
Sample Date:			2/22/2019	2/15/2019	2/15/2019	2/15/2019	2/15/2019	2/15/2019
Parameters	Units	Screening Level						
Volatile Organic Compounds (Continued)								
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
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
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
Trichloroethene	µg/L	5	1.0 U	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	1.0 U
Vinyl acetate	µg/L		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
Xylenes (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	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
2,4-Dichlorophenol	µg/L	110	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
2,4-Dinitrophenol	µg/L	73	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
2-Chlorophenol	µg/L	30	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
4,6-Dinitro-2-methylphenol	µg/L	3.7	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
4-Nitrophenol	µg/L	50	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
Acenaphthylene	µg/L	310	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
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
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
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
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
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
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L		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
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
Diethyl phthalate	µg/L	29000	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
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
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

Table 3.8

Analytical Results Summary
Fifth Quarter Group A Bedrock Piezometer Sampling
First Quarter 2019
Hyde Park Landfill Site
Town of Niagara, New York

Sample Location:			I1-07	J6-02	J6-04	J6-05	J6-07	J6-11
Sample ID:			I1-07-02-19	J6-02-02-19	J6-04-02-19	J6-05-02-19	J6-07-02-19	J6-11-02-19
Sample Date:			2/22/2019	2/15/2019	2/15/2019	2/15/2019	2/15/2019	2/15/2019
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
Fluorene	µg/L	240	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
Hexachlorobutadiene	µg/L	0.86	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
Hexachloroethane	µg/L	4.8	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
Isophorone	µg/L	70	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
Octachlorocyclopentene	µg/L		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
Phenanthrene	µg/L	310	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
Pyrene	µg/L	180	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Organic Acids								
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	4 J	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	250 U	100 J	250 U
General Chemistry								
Sulfate	µg/L		1410000	189000	189000	162000	1460000	1610000

Notes:

µg/L - Micrograms per liter

J - Estimated concentration

U - Not detected at the associated reporting limit

UJ - Not detected; associated reporting limit is estimated

70J - Value exceeds associated screening level

**2019 Analytical Results Summary
Annual Bedrock Open Catch Basin
Hyde Park Landfill Site
Town of Niagara, New York**

Sample Location:	BR-OpenCatchBasin
Sample ID:	HPOPENCB-1019
Sample Date:	10/14/2019

Parameters	Units	
Organic Acids		
2-Chlorobenzoic acid	µg/L	30 U
3-Chlorobenzoic acid	µg/L	30 U
4-Chlorobenzoic acid	µg/L	30 U
Benzoic acid	µg/L	100 U
Chlorendic acid	µg/L	75 J

Notes:

- J - Estimated concentration
U - Not detected at the associated reporting limit

**2019 Analytical Results Summary
Annual AFW Composite
Hyde Park Landfill Site
Town of Niagara, New York**

		Sample Location:	AFWCOMPOSITE
		Sample ID:	AFW-C-1119
		Sample Date:	11/15/2019
Parameters	Units	Reporting Level	
Polychlorinated Biphenyls (PCBs)			
Pentachlorobiphenyl	µg/L	1	0.0093 U
Tetrachlorobiphenyl	µg/L	1	0.0093 U
Trichlorobiphenyl	µg/L	1	0.0046 U
Pesticides			
alpha-BHC	µg/L	1	0.037 J
beta-BHC	µg/L	1	0.046 U
delta-BHC	µg/L	1	0.023 J
gamma-Chlordane	µg/L	1	0.023 J
Mirex	µg/L	1	0.046 U
Dioxin Furans			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	500	4.76 U

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 3.11

**2019 Quarterly Hydraulic Gradient Summary
Community Monitoring Program
Hyde Park Landfill Site
Town of Niagara, New York**

		3/8/2019			6/6/2019			9/23/2019			11/20/2019		
		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.)
Gradient Pairing													
Overburden Bedrock													
CMW-1OB	CMW-1SH	571.40	564.19	0.655	572.07	564.58	0.681	571.13	564.21	0.629	571.51	564.00	0.683
CMW-2OB	CMW-2SH	589.45	574.57	1.041	589.88	572.69	1.202	583.82	573.79	0.701	589.45	571.70	1.241
CMW-3OB	CMW-3SH	575.30	549.24	1.861	576.31	551.25	1.790	572.73	549.45	1.663	572.68	553.48	1.371
CMW-4OB	CMW-4SH	574.28	566.99	0.618	574.28	563.64	0.902	572.74	566.88	0.497	572.10	567.14	0.420
CMW-5OB	CMW-5SH	583.43	576.17	0.459	583.43	576.96	0.409	580.93	574.58	0.402	580.28	575.93	0.275
CMW-6OB	CMW-6SH	571.73	562.05	1.008	571.78	562.05	1.014	571.71	561.81	1.031	571.71	561.63	1.050
CMW-7OB	CMW-7SH	- ⁽¹⁾	599.48	0.462	- ⁽⁴⁾	- ⁽⁴⁾	NA	- ⁽¹⁾	597.78	0.597	607.37	598.16	0.644
CMW-8OB	CMW-8SH	- ⁽²⁾	609.77	0.292	612.87	611.89	0.094	- ⁽²⁾	606.11	0.646	- ⁽²⁾	607.27	0.531
CMW-9OB	CMW-9SH	- ⁽³⁾	560.02	1.748	- ⁽³⁾	560.39	1.754	- ⁽³⁾	559.86	1.796	- ⁽³⁾	560.20	1.723
CMW-11OB	CMW-11SH	569.37	564.84	0.472	570.85	565.13	0.596	568.95	563.11	0.608	570.22	565.27	0.516
CMW-12OB	CMW-12SH	590.05	574.11	0.848	590.53	572.50	0.959	578.96	574.44	0.240	576.81	571.14	0.302

Notes:

ft. AMSL - Feet Above Mean Sea Level

ft./ft. - Feet per foot

NA - Not applicable

- Negative number indicates an upward vertical gradient. Positive number indicates a downward vertical gradient.

* - Well full of water to top of casing (surcharged). Overburden groundwater elevation indicated is the well reference elevation.

- ⁽¹⁾ - Well CMW-7OB was recorded as dry during this event. Bottom of well depth (sounded during monitoring event) was used to calculate gradient.- ⁽²⁾ - Well CMW-8OB was recorded as dry during this event. Bottom of well depth (sounded during monitoring event) was used to calculate gradient.- ⁽³⁾ - Well CMW-9OB was recorded as dry during this event. Bottom of well depth (sounded during monitoring event) was used to calculate gradient.- ⁽⁴⁾ - Wells CMW-7OB and CMW-7SH were inaccessible during the hydraulic monitoring event. As such, groundwater elevations could not be determined.

Table 3.12

**2019 Community Monitoring Well Soil Vapor Monitoring
Community Monitoring Program
Hyde Park Landfill Site
Town of Niagara, New York**

**September 9, 2019
52°F, Winds ENE 5 MPH**

Well I.D.	Time Intervals	Sampling Time (hhmm)	VOC Readings (ppmv)
SVP-1	Background	0854	0
	At 1 minute	0855	0
	At 2 minutes	0856	0
	At 3 minutes	0857	0
	At 4 minutes	0858	0
	At 5 minutes	0859	0
	At 6 minutes	0900	0
	At 7 minutes	0901	0
	At 8 minutes	0902	0
	At 9 minutes	0903	0
	At 10 minutes	0904	0
SVP-2	Background	0904	0
	At 1 minute	0905	0
	At 2 minutes	0906	0
	At 3 minutes	0907	0
	At 4 minutes	0908	0
	At 5 minutes	0909	0
	At 6 minutes	0910	0
	At 7 minutes	0911	0
	At 8 minutes	0912	0
	At 9 minutes	0913	0
	At 10 minutes	0914	0
SVP-3	Background	0914	0
	At 1 minute	0915	0
	At 2 minutes	0916	0
	At 3 minutes	0917	0
	At 4 minutes	0918	0
	At 5 minutes	0919	0
	At 6 minutes	0920	0
	At 7 minutes	0921	0
	At 8 minutes	0922	0
	At 9 minutes	0923	0
	At 10 minutes	0924	0
SVP-4	Background	0924	0
	At 1 minute	0925	0
	At 2 minutes	0926	0
	At 3 minutes	0927	0
	At 4 minutes	0928	0
	At 5 minutes	0929	0
	At 6 minutes	0930	0
	At 7 minutes	0931	0
	At 8 minutes	0932	0
	At 9 minutes	0933	0
	At 10 minutes	0934	0

**2019 Community Monitoring Well Soil Vapor Monitoring
Community Monitoring Program
Hyde Park Landfill Site
Town of Niagara, New York**

**September 9, 2019
52°F, Winds ENE 5 MPH**

Well I.D.	Time Intervals	Sampling Time (hhmm)	VOC Readings (ppmv)
CMW-7OB	Background	0835	0
	At 1 minute	0836	0
	At 2 minutes	0837	0
	At 3 minutes	0838	0
	At 4 minutes	0839	0
	At 5 minutes	0840	0
	At 6 minutes	0841	0
	At 7 minutes	0842	0
	At 8 minutes	0843	0
	At 9 minutes	0844	0
	At 10 minutes	0845	0
CMW-8OB	Background	0817	0
	At 1 minute	0818	0
	At 2 minutes	0819	0
	At 3 minutes	0820	0
	At 4 minutes	0821	0
	At 5 minutes	0822	0
	At 6 minutes	0823	0
	At 7 minutes	0824	0
	At 8 minutes	0825	0
	At 9 minutes	0826	0
	At 10 minutes	0827	0

Notes:

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

**2019 NAPL Decanter Volume Monitoring
Hyde Park Landfill Site
Town of Niagara, New York**

	Decanter #1	Decanter #2	Decanter #3
First Quarter 2019			
March 8, 2019			
Thickness (feet)	14.10	5.55	6.10
Level (%)	36	30	33
Volume ⁽¹⁾ (gallons)	4,032.00	3,360.00	3,696.00
Second Quarter 2019			
June 6, 2019			
Thickness (feet)	15.00	6.20	6.00
Level (%)	23	33	34
Volume ⁽¹⁾ (gallons)	2,576.00	3,696.00	3,808.00
Third Quarter 2019			
September 4, 2019			
Thickness (feet)	14.85	6.40	6.60
Level (%)	38	18	25
Volume ⁽¹⁾ (gallons)	4,256.00	2,016.00	2,800.00
Fourth Quarter 2019			
November 22, 2019			
Thickness (feet)	15.10	5.60	5.45
Level (%)	26	25	28
Volume ⁽¹⁾ (gallons)	2,912.00	2,800.00	3,136.00

Notes:

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

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 1219 INT-D	HP 1919 INT-D	HP 11619 INT-D	HP 12319 INT-D	HP 13019 INT-D	HP 2619 INT-D	HP 21319 INT-D
Sample Date:		1/2/2019	1/9/2019	1/16/2019	1/23/2019	1/30/2019	2/6/2019	2/13/2019
Parameters	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	0.63 J	0.63 J	0.55 J	0.81 J	0.71 J	0.56 J	0.85 J
1,1,2,2-Tetrachloroethane	µg/L	10	10	8.3	11	11	14	13
1,1,2-Trichloroethane	µg/L	0.59 J	0.69 J	0.69 J	0.89 J	0.77 J	0.92 J	0.79 J
1,1-Dichloroethane	µg/L	3.0	3.0	2.8	3.3	3.0	2.7	3.1
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.45 J	2.0 U	0.47 J
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
1,2-Dichloroethane	µg/L	13	12	12	14	14	13	15
1,2-Dichloropropane	µg/L	0.63 J	0.49 J	0.48 J	0.63 J	0.58 J	0.54 J	0.67 J
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	0.48 J	0.60 J	0.72 J	1.0
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Benzene	µg/L	33	32	30	42	38	43	49
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Carbon disulfide	µg/L	17	14	6.0	8.9	7.8	7.3	4.6
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Chlorobenzene	µg/L	1.9 J	2.2	2.1	2.8	3.3	4.2	5.2
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	2.4	2.6	2.6	5.0	3.7	3.3	2.2
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	36	37	37	42	44	44	52
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Ethylbenzene	µg/L	0.62 J	0.61 J	0.67 J	0.88 J	0.99 J	1.3 J	1.6
m&p-Xylenes	µg/L	0.93 J	1.1 J	1.0 J	1.1 J	1.6 J	1.9 J	2.5
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.54 J	2.0 U	1.0 U

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 1219 INT-D	HP 1919 INT-D	HP 11619 INT-D	HP 12319 INT-D	HP 13019 INT-D	HP 2619 INT-D	HP 21319 INT-D
Sample Date:		1/2/2019	1/9/2019	1/16/2019	1/23/2019	1/30/2019	2/6/2019	2/13/2019
Parameters	Units							
Volatile Organic Compounds (Continued)								
m-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	0.33 J
o-Monochlorobenzotrifluoride	µg/L	0.58 J	0.47 J	2.0 U	0.45 J	0.62 J	0.84 J	1.1
o-Xylene	µg/L	0.90 J	1.2 J	1.2 J	1.3 J	1.8	2.1	2.9
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.46 J	2.0 U	0.65 J
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	0.59 J	0.66 J	1.0 J
Toluene	µg/L	5.4	5.3	5.0	6.8	7.8	9.1	11
trans-1,2-Dichloroethene	µg/L	2.3	2.5	2.3	2.7	2.7	2.8	3.7
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Trichloroethene	µg/L	3.8	3.1	3.5	4.5	5.1	6.0	7.7
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	2.0 U	4.0 U	2.0 U
Vinyl chloride	µg/L	180	180	180	180	160	130	170
Xylenes (total)	µg/L	1.8 J	2.3 J	2.2 J	2.4 J	3.4	4.0 J	5.4

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:	HP 22019 INT-D	HP 22719 INT-D	HP 3619 INT-D	HP 31319 INT-D	HP 32019 INT-D	HP 32719 INT-D	HP 4319 INT-D
Sample Date:	2/20/2019	2/27/2019	3/6/2019	3/13/2019	3/20/2019	3/27/2019	4/3/2019

Parameters	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	0.91 J	0.80 J	1.7	0.62 J	1.4	0.62 J	0.67 J
1,1,2,2-Tetrachloroethane	µg/L	15	12	28	9.8	31	8.4	15
1,1,2-Trichloroethane	µg/L	0.84 J	0.90 J	1.6	0.89 J	1.6	0.68 J	0.93 J
1,1-Dichloroethane	µg/L	2.5	2.8	3.3	3.7	2.7	2.9	2.5
1,1-Dichloroethene	µg/L	0.50 J	2.0 U	0.71 J	0.31 J	0.68 J	0.32 J	0.41 J
1,2,4-Trichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	0.21 J	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	16	14	18	16	17	13	13
1,2-Dichloropropane	µg/L	0.63 J	0.66 J	0.94 J	0.72 J	0.79 J	0.64 J	0.61 J
1,3-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.7	1.3 J	2.6	0.69 J	5.6	0.58 J	1.7
3-Chlorotoluene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	0.30 J	2.0 U	0.48 J	0.21 J	0.90 J	1.0 U	0.29 J
Benzene	µg/L	57	49	87	42	90	39	68
Bromodichloromethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	4.3	6.5	16	4.3	5.4	12	3.1
Carbon tetrachloride	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	7.8	5.9	14	3.4	22	3.4	8.9
Chloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	2.2	2.1	17	2.4	7.6	1.1	2.6
Chloromethane (Methyl chloride)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.87 J
cis-1,2-Dichloroethene	µg/L	53	49	73	34	83	33	42
cis-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	2.4	2.0	4.5	1.0	8.0	1.0 J	2.8
m&p-Xylenes	µg/L	4.0	2.7 J	6.6	1.6 J	13	1.3 J	3.7
Methylene chloride	µg/L	1.0 U	2.0 U	11	1.0 U	0.64 J	1.0 U	1.0 U

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:	HP 22019 INT-D	HP 22719 INT-D	HP 3619 INT-D	HP 31319 INT-D	HP 32019 INT-D	HP 32719 INT-D	HP 4319 INT-D
Sample Date:	2/20/2019	2/27/2019	3/6/2019	3/13/2019	3/20/2019	3/27/2019	4/3/2019

Parameters	Units							
Volatile Organic Compounds (Continued)								
m-Monochlorobenzotrifluoride	µg/L	0.53 J	0.44 J	0.90 J	0.26 J	1.6	0.27 J	0.50 J
o-Monochlorobenzotrifluoride	µg/L	1.8	1.4 J	2.6	0.69 J	5.2	0.76 J	1.7
o-Xylene	µg/L	4.4	3.0	7.4	1.7	14	1.7	4.4
p-Monochlorobenzotrifluoride	µg/L	1.1	1.1 J	1.7	0.49 J	3.6	0.45 J	1.1
Styrene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.2	0.72 J	1.3	0.43 J	1.3	0.45 J	0.71 J
Toluene	µg/L	15	11	28	7.5	39	7.0	15
trans-1,2-Dichloroethene	µg/L	4.0	4.1	5.9	2.9	6.8	3.4	5.4
trans-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	10	8.4	14	5.3	15	5.7	8.4
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	2.0 U	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	130	140	190	120	170	91	100
Xylenes (total)	µg/L	8.5	5.7 J	14	3.4	27	3.0 J	8.1

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 41019 INT-D	HP 41719 INT-D	HP 42419 INT-D	HP 5119 INT-D	HP 5819 INT-D	HP 51519 INT-D	HP 52219 INT-D
Sample Date:		4/10/2019	4/17/2019	4/24/2019	5/1/2019	5/8/2019	5/15/2019	5/22/2019
Parameters	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	0.71 J	0.56 J	0.47 J	0.43 J	0.82 J	0.80 J	1.2
1,1,2,2-Tetrachloroethane	µg/L	8.9	18	10	8.9	24	18	31
1,1,2-Trichloroethane	µg/L	0.81 J	1.0	0.97 J	0.91 J	2.0	1.3	1.7
1,1-Dichloroethane	µg/L	3.4	1.9	2.5	2.2	1.9	2.8	2.4
1,1-Dichloroethene	µg/L	0.30 J	0.42 J	0.35 J	0.31 J	0.40 J	0.43 J	0.85 J
1,2,4-Trichlorobenzene	µg/L	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	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42 J
1,2-Dichloroethane	µg/L	15	11	12	9.8	13	19	14
1,2-Dichloropropane	µg/L	1.0 U	0.54 J	0.49 J	0.53 J	0.74 J	0.76 J	0.83 J
1,3-Dichlorobenzene	µg/L	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	0.38 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	0.97 J	2.5	0.89 J	0.86 J	3.2	2.7	10
3-Chlorotoluene	µg/L	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	1.0 U	0.35 J	1.0 U	1.0 U	0.39 J	0.39 J	1.7
Benzene	µg/L	43	64	44	41	78	71	97
Bromodichloromethane	µg/L	1.0 U	1.0 U	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	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	1.0 U	1.0 U
Carbon disulfide	µg/L	6.1	1.5	5.3	4.8	4.2	7.4	19
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	4.7	12	4.9	4.6	14	10	31
Chloroethane	µg/L	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	1.3	3.6	2.0	2.0	39	7.3	6.8
Chloromethane (Methyl chloride)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.41 J	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	31	39	29	29	46	44	68
cis-1,3-Dichloropropene	µg/L	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	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0	4.0	1.3	1.4	4.4	3.3	10
m&p-Xylenes	µg/L	1.2 J	5.7	2.0 U	1.8 J	6.2	4.8	18
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	8.6	0.82 J	1.8

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 41019 INT-D	HP 41719 INT-D	HP 42419 INT-D	HP 5119 INT-D	HP 5819 INT-D	HP 51519 INT-D	HP 52219 INT-D
Sample Date:		4/10/2019	4/17/2019	4/24/2019	5/1/2019	5/8/2019	5/15/2019	5/22/2019
Parameters	Units							
Volatile Organic Compounds (Continued)								
m-Monochlorobenzotrifluoride	µg/L	0.26 J	0.71 J	0.28 J	0.28 J	0.88 J	0.72 J	2.5
o-Monochlorobenzotrifluoride	µg/L	0.59 J	2.2	0.98 J	0.92 J	3.0	2.4	8.7
o-Xylene	µg/L	1.6	6.3	2.4	2.3	7.8	6.2	20
p-Monochlorobenzotrifluoride	µg/L	0.50 J	1.5	0.56 J	0.52 J	1.8	1.4	5.4
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	0.63 J	0.92 J	0.47 J	0.46 J	1.8	1.1	2.1
Toluene	µg/L	7.0	19	7.9	7.0	19	15	37
trans-1,2-Dichloroethene	µg/L	3.5	4.5	3.6	3.4	5.4	6.4	9.0
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	4.9	8.5	5.4	5.3	12	12	26
Trichlorofluoromethane (CFC-11)	µg/L	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	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	92	80	71	71	94	110	120
Xylenes (total)	µg/L	2.8 J	12	4.3	4.1	14	11	37

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 52919 INT-D	HP 6519 INT-D	HP 61219 INT-D	HP 61919 INT-D	HP 62619 INT-D	HP 7219 INT-D	HP 71019 INT-D
Sample Date:		5/29/2019	6/5/2019	6/12/2019	6/19/2019	6/26/2019	7/2/2019	7/10/2019
Parameters	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	1.1	0.92 J	0.90 J	0.74 J	0.93 J	0.88 J	0.70 J
1,1,2,2-Tetrachloroethane	µg/L	27	18	25	16	27	20	14
1,1,2-Trichloroethane	µg/L	1.3	1.0	1.5	1.1	1.7	1.4	1.2
1,1-Dichloroethane	µg/L	2.5	3.3	2.1	2.7	2.1	3.0	3.8
1,1-Dichloroethene	µg/L	0.72 J	0.56 J	0.74 J	0.32 J	0.61 J	0.46 J	0.39 J
1,2,4-Trichlorobenzene	µg/L	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	0.30 J	1.0 U	0.35 J	1.0 U	0.33 J	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	14	19	13	16	13	15	19
1,2-Dichloropropane	µg/L	0.88 J	0.83 J	0.93 J	0.76 J	0.79 J	0.78 J	0.87 J
1,3-Dichlorobenzene	µg/L	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	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	6.9	4.6	8.4	3.0	6.7	3.2	1.9
3-Chlorotoluene	µg/L	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	1.0	0.76 J	1.5	0.52 J	1.3	0.43 J	0.25 J
Benzene	µg/L	96	90	94	74	89	91	82
Bromodichloromethane	µg/L	1.0 U	1.0 U	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	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	1.0 U	1.0 U
Carbon disulfide	µg/L	23	12	19	17	15	5.7	7.4
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	25	16	29	13	26	13	8.6
Chloroethane	µg/L	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	5.4	3.2	5.3	2.5	9.1	7.9	3.7
Chloromethane (Methyl chloride)	µg/L	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	58	55	65	40	69	56	49
cis-1,3-Dichloropropene	µg/L	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	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	8.1	4.9	9.7	3.7	8.2	3.9	2.5
m&p-Xylenes	µg/L	13	8.1	15	6.0	13	5.4	3.2
Methylene chloride	µg/L	0.73 J	1.0 U	0.55 J	1.0 U	1.5	1.0 U	1.0 U

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 52919 INT-D	HP 6519 INT-D	HP 61219 INT-D	HP 61919 INT-D	HP 62619 INT-D	HP 7219 INT-D	HP 71019 INT-D
Sample Date:		5/29/2019	6/5/2019	6/12/2019	6/19/2019	6/26/2019	7/2/2019	7/10/2019
Units								
Volatile Organic Compounds (Continued)								
m-Monochlorobenzotrifluoride	µg/L	1.9	1.1	2.0	0.79 J	1.9	0.63 J	0.40 J
o-Monochlorobenzotrifluoride	µg/L	6.6	3.7	7.2	3.2	6.3	2.5	1.5
o-Xylene	µg/L	15	8.9	18	7.0	15	6.5	4.1
p-Monochlorobenzotrifluoride	µg/L	4.3	2.5	4.9	1.8	4.1	1.6	0.86 J
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.3	0.93 J	0.90 J	0.61 J	1.0	0.49 J	1.0 U
Toluene	µg/L	29	20	28	14	22	14	10
trans-1,2-Dichloroethene	µg/L	8.9	9.9	9.3	8.2	9.2	9.2	9.7
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	20	16	18	11	16	12	9.4
Trichlorofluoromethane (CFC-11)	µg/L	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	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	130	130	110	93	120	120	130
Xylenes (total)	µg/L	28	17	33	13	28	12	7.3

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:		HP 72019 INT-D	HP 072419 INT-D	HP 73119 INT-D	HP 102419 INT-D	HP103119 INT-D	HP11719 INT-D	HP 111419 INT-D
Sample Date:		7/20/2019	7/24/2019	7/31/2019	10/24/2019	10/31/2019	11/7/2019	11/14/2019
Parameters	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	0.71 J	0.74 J	0.58 J	1.0 U	0.46 J	0.90 J	0.65 J
1,1,2,2-Tetrachloroethane	µg/L	17	14	13	1.8	2.0	6.7	3.7
1,1,2-Trichloroethane	µg/L	1.4	1.6	1.5	1.1	1.1	2.6	2.2
1,1-Dichloroethane	µg/L	4.1	3.5	3.7	3.9	3.8	2.6	3.6
1,1-Dichloroethene	µg/L	0.40 J	0.36 J	0.42 J	1.0 U	1.0 U	0.38 J	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	19	17	18	15	13	15	17
1,2-Dichloropropane	µg/L	1.1	0.92 J	1.0	0.74 J	0.94 J	1.0	1.1
1,3-Dichlorobenzene	µg/L	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	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	1.6	1.4	1.2	0.40 J	0.53 J	2.0	0.77 J
3-Chlorotoluene	µg/L	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	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J	1.0 U
Benzene	µg/L	94	78	78	61	70	120	96
Bromodichloromethane	µg/L	1.0 U	1.0 U	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	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	1.0 U	1.0 U
Carbon disulfide	µg/L	15	9.0	16	0.99 J	51	0.92 J	22
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	8.0	7.4	6.4	2.7	3.3	12	5.5
Chloroethane	µg/L	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	8.7	7.6	4.9	20	35	88	58
Chloromethane (Methyl chloride)	µg/L	1.2 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	53	44	45	13	11	19	11
cis-1,3-Dichloropropene	µg/L	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	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	2.2	1.9	1.7	0.68 J	0.68 J	3.8	1.6
m&p-Xylenes	µg/L	2.8	2.8	2.2	0.75 J	1.0 J	4.2	1.7 J
Methylene chloride	µg/L	0.48 J	0.47 J	1.0 U	2.8	5.8	14	11

Table 4.2

**2019 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	HP-INTER-D-01
Sample ID:	HP 72019 INT-D	HP 072419 INT-D	HP 73119 INT-D	HP 102419 INT-D	HP103119 INT-D	HP11719 INT-D	HP 111419 INT-D
Sample Date:	7/20/2019	7/24/2019	7/31/2019	10/24/2019	10/31/2019	11/7/2019	11/14/2019

Parameters**Units****Volatile Organic Compounds (Continued)**

m-Monochlorobenzotrifluoride	µg/L	0.38 J	0.33 J	0.31 J	1.0 U	1.0 U	0.52 J	0.22 J
o-Monochlorobenzotrifluoride	µg/L	1.3	1.2	1.1	0.43 J	0.64 J	2.2	0.88 J
o-Xylene	µg/L	3.6	3.4	2.7	0.92 J	1.2	6.0	2.2
p-Monochlorobenzotrifluoride	µg/L	0.77 J	0.75 J	0.53 J	0.24 J	0.37 J	1.2	0.62 J
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J	1.0 U
Tetrachloroethene	µg/L	0.42 J	0.28 J	0.31 J	1.0 U	1.0 U	0.33 J	0.31 J
Toluene	µg/L	11	9.1	8.5	4.6	5.9	18	8.6
trans-1,2-Dichloroethene	µg/L	10	9.1	9.0	8.5	8.0	12	11
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	9.6	8.7	8.5	3.2	3.8	13	7.1
Trichlorofluoromethane (CFC-11)	µg/L	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	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	160	120	130	53	56	100	63
Xylenes (total)	µg/L	6.4	6.2	4.9	1.7 J	2.2 J	10	3.8

Table 4.2

**2019 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:	HP 112019 INT-D	HP 112619 INT-D	HP 12519 INT-D	HP 121219 INT-D	HP 121819 INT-D	HP122319 INT-D
Sample Date:	11/20/2019	11/26/2019	12/5/2019	12/12/2019	12/18/2019	12/23/2019

Parameters	Units						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	0.44 J	0.84 J	1.2	0.88 J	1.1	0.65 J
1,1,2,2-Tetrachloroethane	µg/L	4.5	6.9	16	8.1	14	8.6
1,1,2-Trichloroethane	µg/L	2.0	2.3	3.3	1.7	2.0	1.2
1,1-Dichloroethane	µg/L	3.6	2.9	2.6	2.7	2.2	2.5
1,1-Dichloroethene	µg/L	1.0 U	0.39 J	0.68 J	0.43 J	0.73 J	0.53 J
1,2,4-Trichlorobenzene	µg/L	0.26 J	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	0.32 J	0.23 J	0.68 J	0.39 J
1,2-Dichloroethane	µg/L	17	15	16	15	16	10
1,2-Dichloropropane	µg/L	0.77 J	1.0	1.2	1.0 U	0.84 J	0.91 J
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U
2-Chlorotoluene	µg/L	1.2	2.1	7.0	6.0	15	9.2
3-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	1.0 U	0.30 J	1.1	1.1	2.9	1.9
Benzene	µg/L	100	120	140	110	140	120
Bromodichloromethane	µg/L	1.0 U	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	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
Carbon disulfide	µg/L	21	24	13	9.2	11	34
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.0 U
Chlorobenzene	µg/L	6.7	14	31	21	46	31
Chloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	47	47	42	9.7	12	4.3
Chloromethane (Methyl chloride)	µg/L	1.0 U	0.66 J	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	12	16	26	19	33	30
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.7	3.7	11	6.4	15	9.5
m&p-Xylenes	µg/L	2.0	4.5	15	10	26	15
Methylene chloride	µg/L	6.7	8.3	12	0.42 J	1.5	0.41 J

Table 4.2

**2019 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:	HP 112019 INT-D	HP 112619 INT-D	HP 12519 INT-D	HP 121219 INT-D	HP 121819 INT-D	HP122319 INT-D
Sample Date:	11/20/2019	11/26/2019	12/5/2019	12/12/2019	12/18/2019	12/23/2019

Parameters	Units						
Volatile Organic Compounds (Continued)							
m-Monochlorobenzotrifluoride	µg/L	0.38 J	0.68 J	2.2	1.3	4.3	2.2
o-Monochlorobenzotrifluoride	µg/L	1.1	2.4	7.9	5.7	13	8.1
o-Xylene	µg/L	2.8	6.2	17	11	27	17
p-Monochlorobenzotrifluoride	µg/L	0.71 J	1.4	5.1	3.5	9.6	5.9
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.41 J	1.2	0.79 J	1.6	0.86 J
Toluene	µg/L	9.7	16	36	19	32	17
trans-1,2-Dichloroethene	µg/L	11	12	14	13	15	14
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	8.7	16	38	25	48	28
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	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	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	61	82	91	67	82	92
Xylenes (total)	µg/L	4.9	11	32	21	53	32

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

µg/L - Micrograms per liter

Table 4.3

**2019 Quarterly Leachate Feed APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York**

Sample Location:		PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET
Sample ID:		HP 32719 INF	HP 62419 INF	HP 1119 INF	HP 121919 INF
Sample Date:		3/27/2019	6/24/2019	11/19/2019	12/17/2019
Parameters	Units				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	1.1 J	1.8 J	3.5	1.8 J
1,1,2,2-Tetrachloroethane	µg/L	39	72	55	45
1,1,2-Trichloroethane	µg/L	2.7	4.4	6.8	4.1 J
1,1-Dichloroethane	µg/L	0.49 J	0.81 J	1.1 J	5.0 U
1,1-Dichloroethene	µg/L	2.0 U	0.90 J	1.6 J	5.0 U
1,2,4-Trichlorobenzene	µg/L	170	250	390	270
1,2-Dichlorobenzene	µg/L	20	37	60	38
1,2-Dichloroethane	µg/L	6.5	6.3	18	10
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	0.90 J	5.0 U
1,3-Dichlorobenzene	µg/L	7.3	16	22	13
1,4-Dichlorobenzene	µg/L	25	46	76	48
2-Chlorotoluene	µg/L	240	370	660	400
3-Chlorotoluene	µg/L	1.1 J	2.9	4.6	4.5 J
4-Chlorotoluene	µg/L	150	270	450	280
Benzene	µg/L	16	60	170	82
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Carbon disulfide	µg/L	0.59 J	3.2	8.7	3.0 J
Carbon tetrachloride	µg/L	6.1	14	24	16
Chlorobenzene	µg/L	100	210	440	260
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	80	160	280	140
Chloromethane (Methyl chloride)	µg/L	0.64 J	2.0 U	2.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	97	200	250	140
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Ethylbenzene	µg/L	27	86	160	97
m&p-Xylenes	µg/L	82	220	420	340
Methylene chloride	µg/L	7.1	16	28	16
m-Monochlorobenzotrifluoride	µg/L	27	50	65	50
o-Monochlorobenzotrifluoride	µg/L	74	150	190	150
o-Xylene	µg/L	84	170	270	180
p-Monochlorobenzotrifluoride	µg/L	100	190	250	200
Styrene	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Tetrachloroethene	µg/L	56	97	180	220
Toluene	µg/L	61	190	680	380
trans-1,2-Dichloroethene	µg/L	3.8	6.4	6.1	4.1 J
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	5.0 U
Trichloroethene	µg/L	92	170	380	210
Trichlorofluoromethane (CFC-11)	µg/L	0.73 J	0.68 J	2.5	1.5 J
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	10 U
Vinyl chloride	µg/L	14	57	86	41
Xylenes (total)	µg/L	170	390	690	520
Semi-volatile Organic Compounds					
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	1.9 J	1.3 J
2,4-Dichlorophenol	µg/L	24	22	100	7.8 J
2,4-Dimethylphenol	µg/L	1.5 J	9.4 U	2.5 J	1.5 J

**2019 Quarterly Leachate Feed APL Sampling
Hyde Park Landfill Site
Town of Niagara, New York**

Sample Location:		PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET	PMPTKOUTLET
Sample ID:		HP 32719 INF	HP 62419 INF	HP 1119 INF	HP 121919 INF
Sample Date:		3/27/2019	6/24/2019	11/19/2019	12/17/2019
Parameters	Units				
Semi-volatile Organic Compounds (Continued)					
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2-Chlorobenzoic acid	µg/L	730	1700	3000	1600
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
2-Chlorophenol	µg/L	1.4 J	2.7 J	6.0 J	5.6 J
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
3-Chlorobenzoic acid	µg/L	170	370	1100	550
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Chloro-3-methylphenol	µg/L	9.4 U	1.7 J	2.0 J	2.2 J
4-Chlorobenzoic acid	µg/L	180	1700	2300	1300
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Benzoic acid	µg/L	100 U	100 U	2700	540
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.7 U	9.7 U	9.7 U	9.7 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Chlorendic acid	µg/L	1000	1700	3400	1600
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Hexachlorobenzene	µg/L	3.0 J	3.0 J	2.5 J	3.6 J
Hexachlorobutadiene	µg/L	8.6 J	6.2 J	11	12
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Hexachloroethane	µg/L	1.9 J	2.1 J	8.0 J	8.3 J
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Octachlorocyclopentene	µg/L	4.7 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U
Phenol	µg/L	9.4 U	9.4 U	210	9.3 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.3 U

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

µg/L - Micrograms per liter

Table 4.4

**2019 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:		HP 32719 SAC	HP 62419 SAC	HP 1119 SAC	HP 121919 SAC
Sample Date:		3/27/2019	6/24/2019	11/19/2019	12/19/2019
Parameters	Units				
Polychlorinated Biphenyls (PCB)					
Pentachlorobiphenyl	µg/L	0.14 J	0.50	0.042 J	0.031 J
Tetrachlorobiphenyl	µg/L	0.36 J	0.79	0.11 J	0.071 J
Trichlorobiphenyl	µg/L	0.10 J	0.21	0.057 J	0.039 J
Total PCBs	µg/L	0.60 J	1.5	0.209 J	0.141 J
Dioxin Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	1250	47900 J	417	213

Notes:

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

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

2/20/2020

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, 2020**. 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.



Department of
Environmental
Conservation

All site-related documents and data, including the PRR, must be submitted in electronic format to the Department of Environmental Conservation. The required format for documents is an Adobe PDF file with optical character recognition and no password protection. Data must be submitted as an electronic data deliverable (EDD) according to the instructions on the following webpage:

<https://www.dec.ny.gov/chemical/62440.html>

Documents may be submitted to the project manager either through electronic mail or by using the Department's file transfer service at the following webpage:

<https://fts.dec.state.ny.us/fts/>

The Department will not approve the PRR unless all documents and data generated in support of the PRR have been submitted using the required formats and protocols.

You may contact Brian Sadowski, the Project Manager, at 716-851-7220 or brian.sadowski@dec.ny.gov with any questions or concerns about the site. Please notify the project manager before conducting inspections or field work. You may also write to the project manager at the following address:

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

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

cc: w/ enclosures

Brian Sadowski, Project Manager

Stanley Radon, Hazardous Waste Remediation Supervisor, Region 9
Glenn May

GHD - John Pentilchuk - jpentilchuk@ghd.com

GHD - Dennis Hoyt - dennis.hoyt@ghd.com

GHD - Margaret Popek - margaret.popek@ghd.com

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: 22.800 **30**

Reporting Period: March 31, 2019 to March 31, 2020

YES NO

1. Is the information above correct?

☐ YES ☒ NO

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?

☐ YES ☒ NO

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?

☐ YES ☒ NO

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?

☐ YES ☒ NO

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?

☐ YES ☒ NO

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below?
Closed Landfill

☒ YES ☐ NO

7. Are all ICs/ECs in place and functioning as designed?

☒ YES ☐ NO

**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

Description of Institutional Controls

ParcelOwnerInstitutional 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

7.2 acre portion only

Monitoring Plan
 O&M Plan

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

Description of Engineering Controls

Parcel

Engineering Control

130.11-1-3

Point-of-Entry Water Treatment
Groundwater Treatment System
Groundwater Containment
Fencing/Access Control
Monitoring Wells

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

Groundwater Treatment System
Monitoring Wells
Cover System
Groundwater Containment
Leachate Collection
Fencing/Access Control

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
Monitoring Wells

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.

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 complete.

YES NO



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



**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 5

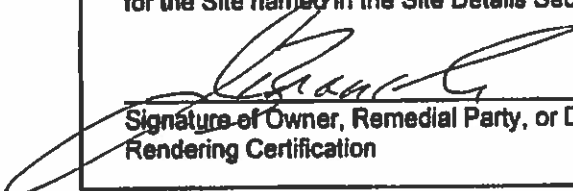
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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. Branch at 7601 Old Channel Trail, Montague, Michigan
print name print business address

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

4-29-2020
Date

IC/EC CERTIFICATIONS

Box 7

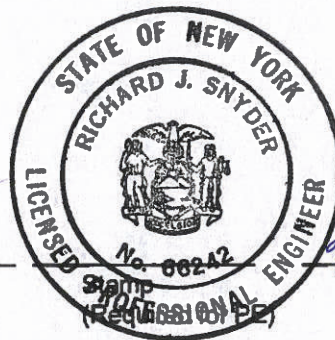
Professional Engineer Signature

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 at 2055 Niagara Falls Blvd
Niagara Falls NY 14304
print name print business address

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

Richard J. Snyder
Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification



Apr. 29, 2020
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 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.

Appendix B

2019 Gorge Face Seep Survey Results

Appendix B

B. Gorge Face Seep Survey

The 2019 Biennial Gorge Face Seep Survey of seeps and culverts located along accessible pathways along the Niagara Gorge between the New York Power Authority (NYPA) fence on the Lower Access Road and the Garfield Avenue Outfall Sewer was conducted by GHD Services Inc. (GHD), along with a representative from the New York State Department of Environmental Conservation (NYSDEC). The purpose of the survey is to monitor the status of previously identified seeps/wet areas and to identify new flowing seeps/wet areas. This was the fifth biennial survey conducted since August 2006. The team of survey members who participated on October 11, 2019 consisted of:

- Maggie Popek – GHD
- John Pentilchuk – GHD
- Brian Sadowski – NYSDEC

The weather was warm (~70°F) with sunny skies. There was no rainfall during the survey.

B.1 Seep Survey Results

During the survey, all of the accessible seep/wet areas identified during previous surveys were reexamined, and a reevaluation of the proposed remedial action was conducted. The seep locations are presented on Figure B.1. It should be noted that NYPA added slope stability fence fabric along portions of the gorge face in the spring of 2000 to protect the access road.

A total of 24 seep locations and 8 culverts, as well as the Garfield Street Outfall Sewer and the Bloody Run outlet, were visited and inspected for variations in flow and exposed wet areas. Descriptions of the observations from each remaining seep are listed in the following summary of survey results.

As observed during previous surveys, since vegetation and rock are covering large portions of Seep 7, this seep is no longer composed of nine distinct parts (labeled a through i). Therefore, the summary has combined areas of this seep together under common descriptions.

It should be noted that during this inspection, it was decided that odor would only be mentioned if it was present at the time of inspection. However, the inspection found no chemical odors present at any seeps or culverts.

Appendix B

	SEEP SURVEY RESULTS	
Seep No.	Description	Notes
1	Dry, normal vegetation, seep basin is clear and dry. No flow.	Same conditions as noted in 2015.
2 (Culv. 6)	Very light flow, minor green algae and grass on face of Rochester Shale, several wet and dripping areas.	Same conditions as noted in 2015 but no damp area 0 to 30 feet north of seep from Lockport/Rochester contact.
2 (Ditch line)	No odor, green moss, heavy vegetation. Heavy talus in ditch.	Same conditions as noted in 2015
3 (Top)	Heavy phragmites, reeds, and other vegetation on north and south sides of Bloody Run concrete box culvert. Area too heavily vegetated to safely approach seep. Seep not visible from roadway.	Area fenced. Same conditions as in 2015.
3 (Bottom)	Heavy vegetation, mostly phragmites. Rocks are moist but no standing water in basin (deepest portion) at Bloody Run Culvert.	Remediated. Same conditions as in 2015 except rocks are moist.
4	Seep not visible. Rocks are dry.. Very heavy vegetation.	Steady flow heard in 2015.
5	Slightly moist rock face. No flow.	Remediated. Same as 2015 but slightly moist.
6	Dry rock face. No flow.	Remediated. Same as 2015.
7 a,b	Covered with local rock. Vegetation. Dry to moist.	Remediated. Same as 2015.
7 c	Dry to moist. Sparse vegetation.	Remediated. Same as 2015.
7 d	Wet and flowing (10 to 15 GPM) over top of Irondequoit (waterfall). Algae on face of rock.	Remediated. Same as 2015.
7 e,f,g,h,i	No audible flowing water beneath rocks. Some vegetation. No flow observed.	No action required. Same as 2015.
8	Standing water, no flow observed. Some vegetation.	No action required. Same as 2015.
11a	Inlet area at water's edge covered with local rock. Sediment infilling. Dry.	Remediated. Same as 2015 except no flow observed.

Appendix B

	SEEP SURVEY RESULTS	
Seep No.	Description	Notes
11b	Dry. (south of Bloody Run fence).	Same as 2015 except no flow observed.
12	Steady flow out of Culvert from NYPA south tunnel. Flow approximately 30 GPM. Heavy vegetation.	Same conditions as 2015.
14	Approximately 80 feet to 100 feet south of the south fence line of Seep 3. Some localized moist areas and light dripping observed. Heavy phragmites.	No action required. Same conditions as 2015.
16	Not located.	No action required.
17a	North – area approximately 150 feet north of the north wall of Seep 2. Dry. Sparse vegetation.	No action required. Same conditions as 2015 but dry.
17b	South – dry. Sparse vegetation.	No action required. Same conditions as 2015.
18	Seep is 0 to 75 feet north of the north wall of Seep 3. Seep not visible. Vegetation on dry rock face (Upper Grimsby). Heavily vegetated.	No action required. Same conditions as 2015.
19	Not observed due to presence of drums.	No action required.
20	Light flow audible (not visible due to heavy vegetation). Rocks are moist. Heavily vegetated.	Not accessible in 2013. No action required.
21	Area 375 feet south of Seep 7 (Devil's Hole Stairs) by the river. Dry.	Same as 2015.
Bloody Run	Fenced-in area by the river shoreline. No visible flow, no flow heard, no odor, heavy talus and vegetation. Fence is in place and in good condition.	Same as 2015.

During the seep survey, the following culverts were also inspected and the observed conditions were as follows:

Appendix B

CULVERT SURVEY RESULTS		
<i>Culvert No.</i>	<i>Description</i>	<i>Notes</i>
1	Picks up ditch flow to Drop Inlet at bottom of NYPA access road. Dry, no flow. Heavy vegetation.	No action required.
2	Steady flow observed at outlet (~1 GPM). Outlet reconstructed by NYPA, significant vegetation.	No action required.
3	Inlet is dry. Cannot find outlet due to heavy vegetation.	No action required.
4	Cannot access inlet due to rock slide. Cannot find outlet.	No action required.
5	Inlet is dry. Outlet is not accessible due to a fence. Heavy vegetation.	No action required.
6	Moist.	No action required.
7	Dry.	No action required.
8	Inlet and outlet dry. Well vegetated.	No action required.
Garfield Avenue Sewer	No access due to rock fall. No moisture observed in ceiling as viewed from outside the archway. Trickling water heard. Strong sewer odor.	No action required.

Figure B.1 shows the general locations of all the seep/wet areas and culverts discussed in this report. Specific details of Seeps 5 and 6 are shown on Figure B.2, and details of Seeps 7 and 8 are outlined on Figure B.3.

B.2 Seep Sampling

Due to the number of non-detect samples at all seeps, it has been decided to suspend sampling at this time. Further sampling will be evaluated at a later date.

B.3 Recommendations

Based upon the results of the 2019 Biennial Gorge Face Seep Survey, no remedial actions are recommended at this time. The next inspection will be scheduled for fall 2021, unless a change in the frequency of the survey is approved.



LEGEND

- SEEP-02 SEEP LOCATION
- CULVERT 8 CULVERT LOCATION

SOURCE:
2006 AERIAL IMAGE FOR NIAGARA COUNTY, NEW YORK; STATE PLANE
NEW YORK WEST, NAD83. IMAGE PROVIDED BY THE UNITED
STATES DEPARTMENT OF AGRICULTURE (USDA) AS PART
OF THE NORTH AMERICAN IMAGE PROGRAM (NAIP).



figure B.1

SEEP LOCATIONS - OVERVIEW
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

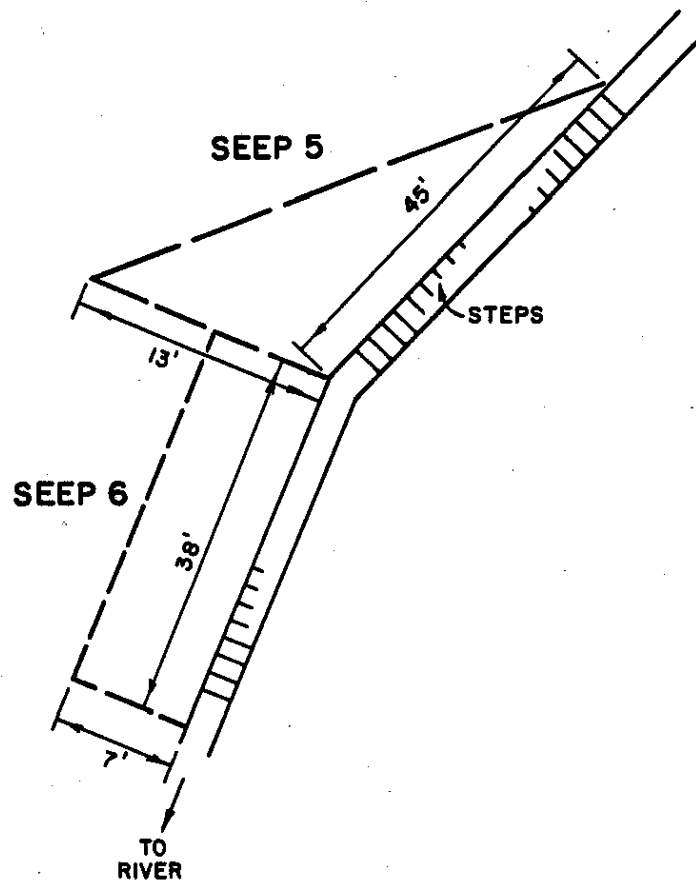


figure B.2

SEEP LOCATIONS - UPPER DEVIL'S HOLE
 HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York



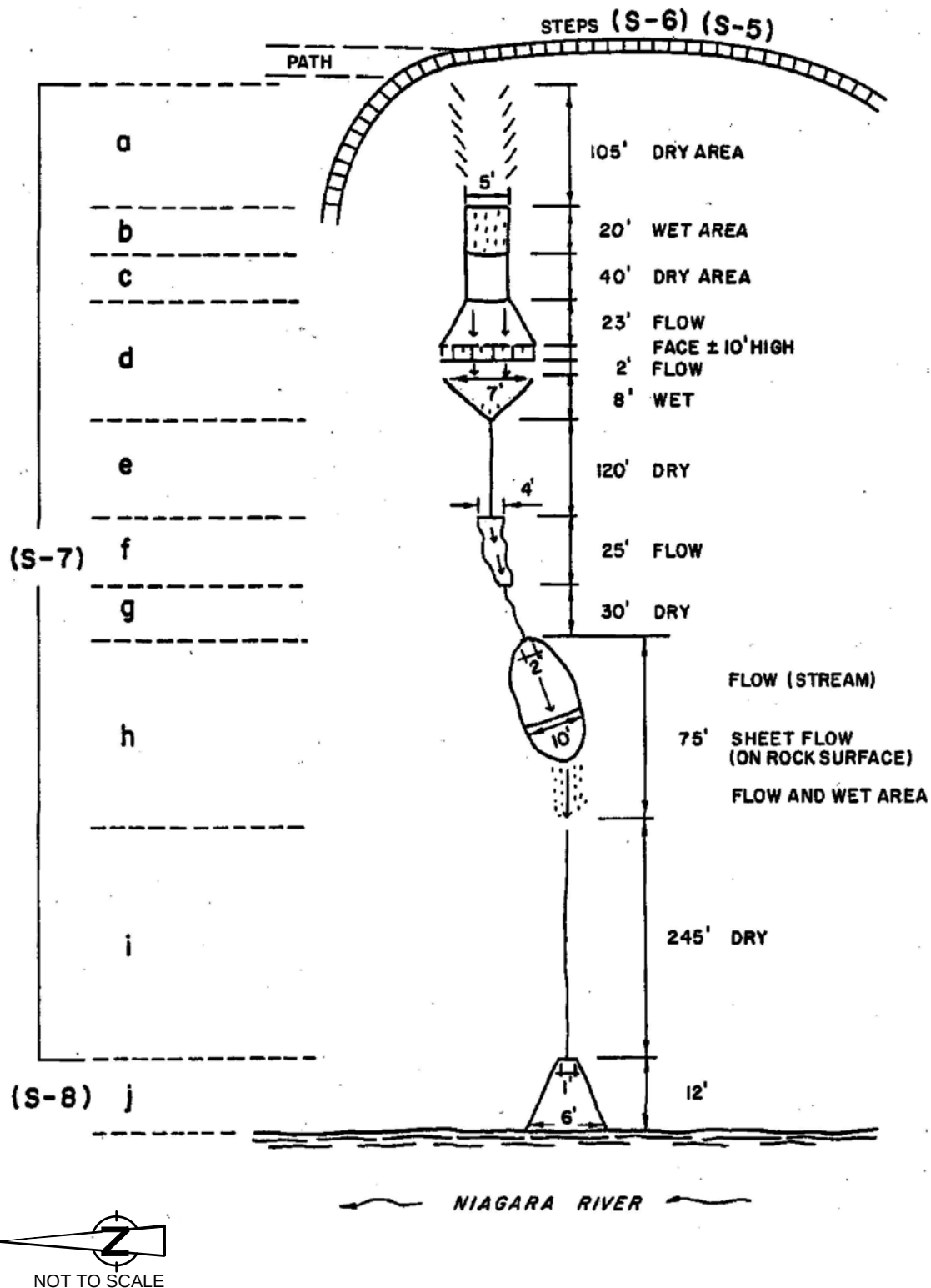


figure B.3

SEEP LOCATIONS - LOWER DEVIL'S HOLE
HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York





about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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