2076 Wellington Road
Manassas, VA 20109

March 30, 2021

Amen Omorogbe
Division of Environmental Remediation
New York State Dept. of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7017

Re: Former IBM Kingston Facility (TechCity Site)
Site Number: 356002
Order on Consent Index: D3-10023-6-11
2020 Annual Groundwater Monitoring Report

Dear Mr. Omorogbe:

Enclosed please find the 2020 Annual Groundwater Monitoring Report for the former IBM Kingston Facility (TechCity Site). In July 2011, the Part 373 RCRA for the Site was superseded by a Part 375 Order on Consent (Order). This groundwater monitoring report is being submitted per NYSDEC's request. Future groundwater monitoring reports will be included as part of the Periodic Review Reports once the Interim Site Management Plan is approved.

If you have any questions, please call Stephen Brown at (703) 257-2580.

Sincerely yours,

Brandon Ashby, P.G., R.E.M.
Manager, Environmental Engineering
Corporate Environmental Affairs

Recipient	NYSDEC Albany (electronic copy only)
Justin Stenerson, Esq.	NYSDEC Albany (electronic copy only)
Daniel Lanners	NYSDEC Albany (paper and electronic copy)
Kristin Kulow	NYSDOH Oneonta (electronic copy only)
Alan Ginsberg	TechCity Properties, Inc. (electronic copy only)

Former IBM Kingston Facility (TechCity)
Site Number: 356002
Order on Consent Index: D3-10023-6-11

2020 ANNUAL GROUNDWATER MONITORING REPORT

Prepared for:

IBM Corporate Environmental Affairs
8976 Wellington Road
Manassas, VA 20109

March 30, 2021

Prepared by:
Groundwater Sciences, P.C.
Groundwater Sciences Corporation

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Professional Geologist Certification
Former IBM Kingston Facility (TechCity)
Town of Ulster
Ulster County, New York

2020 Annual Groundwater Monitoring Report
Order on Consent Index # D3-10023-6-11
Site # 356002

March 30, 2021

As the person with primary responsibility for the performance of the geological services and activities associated with the captioned report, I certify that I have reviewed the document titled *"Former IBM Kingston Facility (TechCity), Site Number 356002, Order on Consent Index D3-10023-6-11, 2020 Annual Groundwater Monitoring Report"*. This report is dated March 30, 2021 and was prepared for IBM Corporation by Groundwater Sciences Corporation and Groundwater Sciences, P.C..

As a professional geologist licensed in the State of New York, I certify that the associated geological services and this report have been prepared under my direct supervision. To the best of my knowledge, all such information contained in this report is complete and accurate.

This report bears the seal of a professional geologist. No alterations may be made to the information contained in this report unless made in accordance with Title 8, Article 145, Section 7209 of New York State Education Law.

Signature: _____ Date: 3/30/2021

Name: Dorothy A. Bergmann

License No: 00477

State: New York

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Table A: Summary of Abbreviations Used in this Report	
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675,
GMP	Groundwater Monitoring Plan
GSC	Groundwater Sciences Corporation
GSPC	Groundwater Sciences, P.C.
GTF	Groundwater Treatment Facility
GWCS	Groundwater Collection System
IBM	International Business Machines Corporation
IWSL	Industrial Waste Sludge Lagoon
IWTP	Industrial Waste Treatment Plant
NPLA	North Parking Lot Area
NYSDEC	New York State Department of Environmental Conservation
OU	Operable Unit
QA/QC	Quality Assurance/Quality Control
SPDES	State Pollutant Discharge Elimination System
VOCs	Volatile Organic Compounds
Monitoring Parameters	
111-TCA	1,1,1-Trichlorethane
112-TCA	1,1,2-Trichloroethane
11-DCA	1,1-Dichloroethane
11-DCE	1,1-Dichloroethene
12-DCA	1,2-Dichloroethane
12-DCBZ	1,2-Dichlorobenzene
12-DCE	1,2-Dichloroethene (total)
13-DCBZ	1,3-Dichlorobenzene
14-DCBZ	1,4-Dichlorobenzene
CBZ	Chlorobenzene
CEA	Chloroethane
CIS13-DCPRE	Cis-1,2-Dichloropropene
DCDFM	Dichlorodifluoromethane
DCM	Methylene Chloride (Dicholoromethane)
Freon® 113	1,1,2-Trichloro-1,2,2-Trifluoroethane
Freon® 123a	1,2-Dichloro-1,2,2-Trifluoroethane
PCE	Tetrachloroethene
TCE	Trichloroethene
TCM	Chloroform (Trichloromethane)
VC	Vinyl Chloride

1.0 INTRODUCTION

This Annual Groundwater Monitoring Report, prepared by Groundwater Sciences, P.C. (GSPC) and Groundwater Sciences Corporation (GSC) on behalf of International Business Machines Corporation (IBM), presents the results of the groundwater monitoring and remediation system operation, maintenance, and monitoring activities conducted during the 2020 calendar year at the TechCity (Former IBM Kingston Site (the Site)) located at 300 Enterprise Drive, Kingston, Ulster County, New York (see Figure 1-1).

The Site is listed as a Class 4 Site (Site # 356002) in the Registry of Inactive Hazardous Waste Disposal Sites in New York State and is managed in compliance with the Order on Consent (Order), Index # D3-10023-6-11, signed with New York State Department of Environmental Conservation (NYSDEC) by IBM and TechCity on July 8, 2011.

Section 2.0 of this report presents a Site overview. Section 3.0 reports the results of the inspections and maintenance of the closed former Industrial Waste Sludge Lagoon (IWSL). Section 4.0 includes a discussion of the analytical data for groundwater samples collected during the previous annual period (January 1, 2020 through December 31, 2020). Section 5.0 presents the results of the groundwater remediation system operations Section 6.0 presents the progress of remediation at the Site and includes a report on the contaminant recovery levels and treatment efficiency data for the previous annual period. Section 7.0 provides a summary listing of reports on other activities completed. Section 8.0 provides reference listing of historical documents used in the preparation of this report.

2.0 SITE OVERVIEW

The following sections provide details on the Site, including current Site conditions and the Site chronology.

2.1 Site Background

The Site is located north of the City of Kingston in the Town of Ulster, Ulster County, New York and is bounded by John M. Clarke Drive and Route 9W to the east, Old Neighborhood Road and Route 209 to the north, Esopus Creek to the west, and Boices Lane to the south (see Figure 2-1).

The approximately 258-acre property was first developed by IBM from farmland during the 1950s. The primary activities at the Site included the manufacturing of electric typewriters and the development, manufacture and testing of computer systems and related components and technologies. IBM ceased operations during the early-1990s and the property was subsequently subdivided into multiple parcels. The portion of the Site located east of Enterprise Drive is referred to as the East Campus and includes the majority of the buildings at the Site, many of which are vacant and some demolished with just the slab remaining. The portion located west of Enterprise Drive is referred to as the West Campus and includes Buildings 201 (B201), Building 202 (B202) and Building 203 (B203); a large parking area south and west of this building complex; and generally undeveloped land further to the southwest and north of this building complex.

In 1996, the Town of Ulster approved IBM's subdivision of the Site into twenty-seven (27) parcels as shown on Figure 2-1. In 1998, IBM sold the Site to AG Properties of Kingston, LLC (Parcels: 2 – 19; 22 – 29 and; 30) and, Ulster Business Complex, LLC (Parcel 1 (Building 201-203 Complex); Parcel 20 (Building 042) and; Parcel 21 (Building 043)). Since that time, multiple property transfers have occurred from AG Properties of Kingston, LLC and Ulster Business Complex LLC to other entities. A summary of the property transfers are included in Table 2-1.

As noted in Table 2-1, on March 13, 2017 three parcels were transferred to Ulster County due to tax foreclosure and include: Building B001 and the 5.84 acres on which it sits (Parcel 1); the 1-acre site where building B002 used to stand (Parcel 12); and; the 0.38-acre site where Building B034 used to stand (Parcel 034). On November 1, 2019, two additional parcels were transferred to Ulster County

due to tax foreclosure and include: Buildings B201, B202 and B203 and associated 24.7 acres of land (Parcel 1) and B070 (Salt Barn) and the 57.5 acres of vacant land to the south and southwest along Boices Lane (Parcel 2).

Lastly as noted in Table 2-1, on October 21, 2020, four parcels were included in a Petition and Notice of Foreclosure and include: B043 and the 1.8 acres on which it sits (Parcel 21); B064 and the 0.39 acres on which it sits (Parcel 22); the 95.5 acres of common area including parking lots, internal roadways and otherwise vacant lands (Parcel 27) and B042 and the 2.3 acres on which it sits (Parcel 20).

Table 2-1: Summary of Property Transactions after IBM Sale

Date	Transactional Details	Parcels
11/22/1999	Property Transfer AG Properties of Kingston LLC to TechCity 22, 23 and 24, LLC	Parcel 7 (Building 022) Parcel 8 (Building 023) Parcel 9 (Building 024)
5/2/2000	Property Transfer AG Properties of Kingston LLC to TechCity 52, LLC	Parcel 23 (Building 052)
6/2/2010	Property Transfer Ulster Business Complex, LLC to TechCity 42 and 43, LLC	Parcel 20 (Building 042) Parcel 21 (Building 043)
10/18/2011	Property Transfer AG Properties of Kingston, LLC to TechCity 22, 23 and 24, LLC	Parcel 10 (Building 021)
3/13/2017	Property Transfer (Tax Foreclosure) AG Prop of Kingston, LLC to Ulster County	Parcel 11 (Building 001) Parcel 12 (Building 002) Parcel 13 (Building 034)
2/6/2018	Property Transfer AG Properties of Kingston, LLC to TechCity 33, 51 and 64, LLC	Parcel 18 (Building 051) Parcel 19 (Building 033) Parcel 22 (Building 064)
11/1/2019	Property Transfer (Tax Foreclosure) AG Properties of Kingston, LLC and Ulster Business Complex LLC to Ulster County	Parcel 1 (Building 201, 202 and 203 Complex) Parcel 2 (vacant land)
10/21/2020	Petition and Notice of Tax Foreclosure AG Properties of Kingston, LLC and TechCity 42 & 43 LLC	Parcel 21 (Building 043) Parcel 22 (Building 064) Parcel 27 (Common Ares) Parcel 20 (B042)

The site is listed as a Class 4 Site (Site #356002) in the Registry of Inactive Hazardous Waste Disposal Sites in New York State and was managed in compliance with the October 4, 1996 Hazardous Waste

Management Permit #3-5154-00067/00090 (6 NYCRR Part 373) (RCRA Permit) until the Order on Consent (Order), Index # D3-10023-6-11, for Site #356002, was signed with New York State Department of Environmental Conservation (NYSDEC) by IBM and A.G. Properties of Kingston, LLC and Ulster Business Complex LLC ("TechCity") on July 8, 2011. Corrective Action activities at the Site were conducted with oversight of NYSDEC under the RCRA Permit and from July 2011 to present under the Order.

Prior to and under the RCRA Permit, IBM completed extensive RCRA Facility Assessments (RFAs) and RCRA Facility Investigations (RFIs) and beginning in the early 1990s through 2002 to delineate the occurrence and extent of volatile organic compounds (VOCs) in groundwater, soil and soil vapor beneath the Site. These investigations were conducted at all identified and accessible Solid Waste Management Units (SWMUs). Since 2008, IBM has completed additional investigations of SWMUs as those areas that became accessible as the result of TechCity's redevelopment activities.

Corrective Measures implemented by IBM include the operation and maintenance of a perimeter control system that intercepts the groundwater plume. The perimeter control system consists of two storm water sewer systems, an unsaturated portion of the surficial sand unit that underlies the Site, a utility trench barrier wall, and a groundwater collection system (see Figure 2-1).

The Order, which supersedes and replaces the former RCRA Permit, divided the Site into ten Operable Units (OUs). The locations of the OUs are depicted in Figure 2-2. Table 2-2 presents a list of the OUs, including TechCity's proposed use for each OU based on the TechCity Comprehensive Design Plan and Redevelopment Overlay District, and which OUs remain listed as a Class 4 Inactive Hazardous Waste Disposal Site.

Table 2-2: Listing of Operable Units, Proposed Use and Status		
Operable Unit	**Proposed Use**	**Status**
OU 1	Commercial	
OU 2	Commercial	
OU 3	Commercial	Included as part of the Class 4 Inactive Hazardous Waste Disposal Site # 356002
OU 3a	Commercial	Included as part of the Class 4 Inactive Hazardous Waste Disposal Site # 356002
OU 4	Restricted Residential	
OU 4a	Commercial	
OU 5	Commercial	Included as part of the Class 4 Inactive Hazardous Waste Disposal Site # 356002
OU 6	Commercial	
OU 7	Commercial	
OU 8	Commercial	

NYSDEC's Statement of Basis (February 2013) provides an update on the Corrective Action activities at the Site and describes the closure conditions identified by various Site investigations from the late 1970s to 2012. The Statement of Basis also identifies four SWMUs that will be the subject of a future Statement of Basis: SWMU M, Portions of the IW Sewer Lines; SWMU S, Former Waste TCA Tanks (B001); SWMU T, Former Waste Oil Tank (B003) and; SWMU X, Building 031 Separator Tank. SWMUs S, T and M have been investigated and the results of these investigations have been submitted previously to NYSDEC. The supplemental investigation of a portion of SWMU M was completed in late 2019 and the report was submitted March 31, 2020. SWMU X has been investigated with no indication of any releases; however, it remains in operation as part of the B031 footer drain system.

In February 2009, the Town of Ulster Town Board received a request from TechCity Properties, Inc. for approval of an amendment to the Town Zoning Code and a Comprehensive Development Plan for the redevelopment of the East Campus of TechCity - the area bounded by Boices Lane, Enterprise Drive, Old Neighborhood Road and the CSX Railroad tracks. The TechCity Comprehensive Development Plan called for the demolition of buildings which TechCity deemed to be obsolete

among other activities including the reuse of two existing buildings for interior parking facilities, the continued use of some existing buildings, the allowance for new buildings and parking spaces located throughout the East Campus, both in covered facilities and at-grade parking lots.

In late 2015, asbestos abatement ensued in select buildings by A2 Environmental Solutions, LLC, an asbestos abatement contractor retained by TechCity. In early 2016, demolition of buildings B001, B002, B003, B004, B025, and B034 and B035 commenced (B001 and B035 have not been demolished to date). Debris piles from the demolition activities were stored on the building slabs and are still present.

The following summary is derived from information presented in the EPA's Notice of Potential Liability and Request to Perform Response Action Under Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675[1], ("CERCLA", also known as the Superfund Law)**.** In May 2017, the United States Environmental Protection Agency (USEPA) was contacted by Ulster County officials requesting assistance in addressing potential public health threats associated with friable asbestos at three buildings at the Site (B001, B002 and former B034). Starting in May 2017, EPA encouraged TechCity to address asbestos concerns associated with B001, B002 and B034 but not the three debris piles associated with the demolition of B025 which at that time, reportedly contained non-friable asbestos-containing material (ACM) in the form of vinyl flooring. In April 2018, the New York State Department of Labor recategorized the three B025 debris piles as friable regulated asbestos-containing materials (RACM).

On December 11, 2019, USEPA provided notice to the Site Owner (Alan L. Ginsberg), TechCity Properties Inc. and AG Properties of Kingston, LLC) together with A2 Environmental Solutions, LLC and the A2 Environmental Solutions, LLC owner, Ms. Stephanie Laskin, of potential liability and request to perform a Response Action under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675, ("CERCLA", also known as the Superfund Law). The notice relates to the release or threatened release of asbestos, a CERCLA

[1] United States Environmental Protection Agency, December 11, 2019, *Notice of Potential Liability and Request to Perform Response Action Under Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675, TechCity Superfund Site, Town of Ulster, Ulster County, New York.*

hazardous substance, into the environment at the TechCity Superfund Site located at 300 Enterprise Drive, Town of Ulster, Ulster County, New York. The Site Owner was required to respond to the notice on or before December 30, 2019 and purportedly did so.

2.2 Generalized Geology

The Site is located within the Hudson-Mohawk Lowland Physiographic Province. The bedrock underlying the western portion of the Site consists of siltstone and shale of the Middle Devonian Age Lower Hamilton Group. The eastern portion of the Site is underlain by both the Lower Hamilton Group and the Lower Devonian Age Onondaga Limestone. The exact location and nature of the contact between these units is not known. The Lower Hamilton Group forms a north-northwest trending bedrock high approximately coincident with Enterprise Drive, and is described as a calcareous shale in boring logs completed during previous Site investigations.

Literature on regional geologic conditions indicate that a glacially-derived sand and gravel unit directly overlies the bedrock west of Enterprise Drive and a glacial till unit overlies the bedrock east of Enterprise Drive. These unconsolidated units are overlain by a varved silt and clay unit that is interpreted to be of lacustrine origin, with a thickness of zero feet in an area where it is absent proximate to the bedrock high, to over 180-feet in the central portion of East Campus as determined by previous Site borings. The clay portion of the varved silt and clay unit serves as an aquitard throughout most the Site, except in the localized area in the vicinity of the bedrock high where it is absent.

A well sorted, fine to coarse-grained sand of lacustrine origin, with intermittent, thin, silty-clay zones, overlies the varved silt and clay (or bedrock where the varved silt and clay is absent in the vicinity of the bedrock high). This surficial sand unit ranges in thickness across the Site from approximately 6-feet in the area of the bedrock ridge to greater than 30-feet in the central portion of the East Campus. A discontinuous transition zone of relatively fine-grained materials is present at the base of the surficial sand unit in some areas of the Site (GSC, 1997).

Generalized descriptions of the near-surface lithologic units encountered at the Site are as follows:

- **Surficial SAND Unit:** Consists of a light brown, fine to medium grained sand containing variable amounts of finer-grained silt and clay. This unit is typically saturated below a depth of approximately 6 to 7-feet below ground surface (ft bgs).
- **SILTY-SAND and CLAY Transition Unit:** Consists of variable amounts of reddish-brown to gray silt, sand, and clay. Typical appearance in a soil core is a silty-sand matrix containing thin lenses of silt and sandy clay. This unit, if present, is generally encountered between 15 to 20-ft bgs in the vicinity of B001.
- **Varved CLAY Unit:** Consists of red-brown and gray, plastic, cohesive, wet clay with intermittent silt zones. Typical appearance in a soil core is clay with laminae of silt and sometimes very fine-grained sand. This unit is typically encountered at approximately 20 to 25-ft bgs in the B001 area, with greater or lesser depths of first occurrence in localized areas.

The thickness of the sand unit increases and the thickness of the transition unit decreases coinciding with a shallowing of the depth to top-of-clay along the western edge of a clay unit "valley" identified in the *RCRA Facility Investigation on Groundwater Plumes* report (GSC, 1997b). This valley is deepest below B001 and B003 (i.e., approximately 30 ft bgs to the top of the clay unit) and extends southward towards Boices Lane.

2.3 Generalized Hydrogeology

The varved clay unit serves as an aquitard throughout most the Site. Therefore groundwater in the bedrock and in the deep sand and gravel and glacial till units that underlie the varved silt and clay is under confined conditions. Groundwater within the surficial sand unit that overlies the varved silt and clay unit is unconfined. The surficial sand unit is typically unsaturated in the area of the bedrock high along Enterprise Drive.

The estimated horizontal hydraulic conductivity of the surficial sand unit ranges from approximately 65 feet per day (ft/day) to 270 ft/day (i.e., 2.3×10^{-2} centimeters per second [cm/sec] to 9.5×10^{-2} cm/sec), with an average hydraulic conductivity of approximately 100 ft/day [2.3×10^{-2} cm/sec]. The horizontal hydraulic conductivity of the varved silt and clay unit has been estimated at approximately one (1) foot per day [3.5×10^{-4} cm/sec]. The vertical hydraulic conductivity of this unit is likely significantly lower than its horizontal hydraulic conductivity due to the horizontal bedding structure.

The low vertical hydraulic conductivity and thickness of the unit support the designation of the varved silt and clay as an aquitard.

3.0 FORMER INDUSTRIAL WASTE SLUDGE LAGOON AREA (OU-5)

The former Industrial Waste Sludge Lagoon (IWSL) was rectangular in shape, approximately 158 feet by 60 feet by 10 feet deep and covered an area of approximately 9,500 square feet (0.22 acres). As constructed in 1955, the lagoon was lined with a six inch layer of clay. In 1978, the sludge lagoon was reconstructed and lined with a 45 mil thick membrane liner with nylon reinforcement. Closure of the sludge lagoon commenced on December 1, 1984 in accordance with a NYSDEC approved closure plan. Sludge and solids were removed in addition to the liner.

Trace levels of residual constituents were left in place below the liner (i.e., below an elevation of 141 feet). Two feet of crushed limestone was place to an elevation of 143 feet. The lagoon was then backfilled with clean sand to within 6 inches of finished grade and covered with top soil and seeded. Certification of closure was provided to NYSDEC on June 12, 1985.

In addition to the groundwater monitoring network, OU-5 currently includes two other Engineering Control systems associated with the former IWSL that potentially require maintenance: the IWSL cover system and the security fence. The former IWSL is enclosed within an 8-foot high chain-link fence and all gates are locked except when in use. Warning signs are posted around the fence and bear the legend “Danger – Unauthorized Personnel Keep Out”.

The lagoon cover system and security fence were inspected quarterly in 2020. Routine maintenance activities were conducted to preserve the integrity and functionality of the soil cover system and included mowing and reseeding as necessary to maintain the grass cover on the closed unit. No repairs were required to either the chain-link security fence or the cover system in 2020.

4.0 GROUNDWATER MONITORING RESULTS

The current Groundwater Monitoring Plan (GMP) was approved by the NYSDEC on August 7, 2013. The following sections detail the monitoring completed during the reporting period.

4.1 Summary of Field Activities

Monitoring wells and piezometers were inspected and sampled during the monitoring period as per the GMP.

4.1.1 Groundwater Monitoring Well Sampling

As per the approved GMP, no routine groundwater samples were collected during the reporting period. The next routine sampling per the GMP will be conducted in the first quarter of 2021.

4.1.2 Physical Well Inventory and Maintenance

Accessible wells and piezometers were inspected during the monitoring period. During each groundwater elevation measurement event, each accessible monitoring well was inspected for integrity in accordance with the Groundwater Monitoring System Inspection Plan.

4.1.3 Groundwater Elevation Measurements

In addition the GMP monitoring requirements, IBM measured water levels in the hydraulic effectiveness wells during the first, second, third and fourth quarters. The results of each of these water level surveys were converted to groundwater elevations and are presented in Appendix A and are discussed further in Section 4.2.

4.2 Groundwater Flow

Groundwater elevation measurements were used to generate groundwater elevation contour maps for the shallow water table aquifer underlying most of the developed portion of the site. Four groundwater elevation contour maps were prepared, one for each quarter of 2020, included as Figures 4-1 through Figure 4-4. An enlargement of the northern portion of the Site, including the Groundwater Collection System (GWCS) and the installed trench extension, are included on these

figures. Also shown on these figures are the locations of the storm sewer systems on the Site and the utility trench barrier wall.

An east-west trending groundwater divide has been identified at the Site underlying B001, Building 002 (B002), B003 and Building 005 (B005) (see Figures 4-1 through Figure 4-4). Groundwater to the north of the divide flows west and northwest. Groundwater to the south of the divide flows west and southwest. The water table gradient in the eastern portion of the Site and in the vicinity of the GWCS is higher than the water table gradient in the south and central portion of the Site, and estimated horizontal groundwater flow velocities range from approximately 0.8 ft/day to 2 ft/day (GSC, 1997b).

Groundwater flow is influenced by the presence of the perimeter control system (see Figures 4-1 through Figure 4-4), which is composed of:

- A 42-inch diameter storm sewer pipe that extends from east to west along a line south of B001 through B005, and passes under Enterprise Drive to the south of B201.
- A naturally occurring unsaturated portion of the surficial sand unit that intersects the 42-inch storm sewer south of B201, and extends east-northeast back across Enterprise Drive, and then continues toward the north portion of the Site.
- The GWCS extends along the western and northern perimeter of the North Parking Lot Area. The GWCS is comprised of a set of groundwater cut-off trenches. Water collected in the trenches is treated via air stripping.
- A 60-inch diameter storm sewer pipe that runs parallel to the north property line intersects the GWCS and extends along the western portion of the North Parking Lot Area.
- A utility trench barrier wall, consisting of an approximately 250-foot long trench backfilled with clay with the base keyed into the Varved Clay Unit and the top of the barrier wall completed a minimum of two feet above the recorded high water table. This barrier wall was installed to mitigate the potential for westward groundwater migration along the underground utility pipes which ultimately terminate at the former Industrial Waste Treatment Facility (IWTF).

4.3 Chemical Constituents in Groundwater

Identified constituents of concern in the surficial sand aquifer include the following chlorinated VOCs: 1,1,1-trichloroethance [111-TCA], trichloroethene [TCE] and tetrachloroethene [PCE], and related degradation products (i.e., 1,1-dichloroethene [1,1-DCE], 1,1-dichloroethane [1,1-DCA], 1,2-cis-dichloroethene [1,2-DCE] and 1,2-dichloroethane [1,2-DCA]). Other VOCs have been detected in groundwater, including carbon tetrachloride, Freon®, and petroleum hydrocarbons; however, concentrations of these VOCs are generally lower and less extensive than the chlorinated compounds.

Four groundwater plumes have been identified at the Site, including:

- The North Parking Lot Area (NPLA) Plume (located to the north of B001 and B003) is primarily composed of TCE and 111-TCA, and to a lesser degree PCE. Based on historic groundwater quality sampling and soil vapor screening investigations, the source areas for this plume are likely associated with historic manufacturing activities in B001, B002, B003, B004 and B005S, including industrial waste sewer lines located beneath these buildings (as noted below) and north of B001 and B003. PCE, TCE, and 111-TCA present in the NPLA Plume appear to originate in the central and western portions of the eastern campus, and and move north-northwest toward the GWCS.
- The B005 Plume Area, located beneath B001, B002, B003, B004 and B005, is primarily composed of TCE and 111-TCA. Based on historic groundwater quality sampling and soil vapor screening investigations, this plume is believed to have originated from activities in B001, B003, B004 and B005S.
- An isolated PCE plume, extending from the southern portion of B005 to the 42-inch sewer and originating from a release(s) at a PCE tank located in the southeastern corner of B005.
- The B036 Area Plume, located on the West Campus near Building 036 (B036), is primarily composed of TCE and 111-TCA. The plume in this area is not likely to have originated from the former IWSL or from activities associated with the IWTF, but is believed to have migrated from the eastern campus plume along the underground utility pipes prior to the installation of the utility trench barrier wall.

Figure 4-5 present a generalized depiction of areas where groundwater is impacted by VOCs that has been inferred based on historical monitoring data and corresponds to the following compounds: PCE; TCE; 12-DCE; VC; 111-TCA; 11-DCE; 11-DCA; Freon® 113; 12-DCA; TCM and 112-TCA. Compounds less frequently detected include: 12-dichlorobenzene (DCBZ), 13-DCBZ, 14-DCBZ, chlorobenzene (CBZ), and chloroethane (CEA). As noted in Section 4.1.1, as per the approved GMP, no routine groundwater samples were collected during the reporting period.

5.0 GROUNDWATER REMEDIATION SYSTEM OPERATION, MAINTENANCE AND MONITORING (OM&M)

The Groundwater Remediation System consists of the GWCS and NPLA system together with the associated treatment system. The OM&M Plan details the various components of the ongoing operations and maintenance of the system. Maintenance includes such items as pump replacement as needed and routine cleaning of the air stripper units and components.

5.1 Groundwater Remediation System Components

5.1.1 Groundwater Collection System (GWCS)

The two main elements of the GWCS are the interceptor trench and the lateral trench as shown on Figure 5-1. The interceptor portion of the GWCS lies more or less perpendicular to the direction of groundwater flow. The GWCS has been keyed into the relatively impermeable lacustrine silt and clay unit beneath the surficial sand water-bearing unit and, as such, fully intercepts groundwater flow.

From December 1986 through the end of June 1994, the interceptor trench portion of the GWCS consisted of five manholes (MH1 through MH5) which are connected by 6-inch diameter perforated pipe. Water recovered from these trenches was conveyed to the on-site IWTF for removal of VOCs using counter-current air stripping towers. During early 1994, upgrades to the GWCS were completed and included the installation of new pumps in the associated trench manholes, the construction of a new dedicated groundwater treatment building, and the installation of shallow tray aerator units.

As of July 8, 1994, these units were put on-line and groundwater collected by the GWCS was conveyed to the new treatment building, subjected to tray aeration and discharged to sanitary sewer. Additionally, in May 1995, the northwest leg of the GWCS trench was extended approximately 240 feet with three additional trench manholes (MH6 through MH8) with one pump installed at MH6 (see Figure 5-1). On July 10, 1996 the discharge from the tray-aerators was connected to the storm sewer system under the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) Permit NY0108138.

5.1.2 North Parking Lot Area System (Passive Groundwater Collection)

In 1996, IBM initiated a storm-sewer re-routing project at the Site. This project involved the installation of a new storm sewer system and re-routing of certain connections to mitigate groundwater infiltration into the storm water system in the area between and near B003 and B005N. Compliance with SPDES Permit discharge limits at several outfalls to the storm system was the primary focus of the project; however, as a secondary result is the continued use of the now inactive storm sewer line as a collection trench for infiltrating groundwater. Any groundwater collected in the inactive system is re-routed to the GWCS treatment building prior to discharge to a SPDES-permitted outfall. The NPLA system went online in December 1997. The NPLA system shown on Figure 5-1, consists of two pump stations, Pump Station-1 (PS-1), Pump Station-2 (PS-2), and associated conveyance piping.

5.1.3 Groundwater Treatment System

There is one groundwater treatment facility (GTF) operating at the Site which treats groundwater extracted by the GWCS and the NPLA system. The GTF consists of a 1,200 gallon, 4-foot diameter, conical bottom grit tank, two (2) Type 304L stainless steel North East Environmental Products Shallow Tray air strippers (Model 2641), the electrical supply and distribution system, instrumentation, and controls.

The GTF is designed to treat in excess of 120,000 gallons per day or approximately 83 gallons per minute (gpm) of groundwater. The average treatment system flow rate is typically between 30 to 50 gpm. The maximum SPDES-permitted daily discharge limit is 120,000 gallons.

5.2 Summary of Operations

Daily operating data for the GWCS and NPLA are presented in Appendix B. With the exception of minimal downtime for routine maintenance activities and minor repairs, the groundwater treatment system was operated continuously in accordance with the Operations, Maintenance, and Monitoring Plan.

Appendix C contains a summary printout of the GWCS and NPLA sampling data for the reporting period and also includes treatment system monitoring results for the samples collected under SPDES Permit NY0108138, including the final effluent from the treatment system, Outfall 01A.

6.0 PROGRESS OF REMEDIATION

Historical activities combined with the satisfaction of the RCRA Permit requirements from 1988 through 2011 and from July 2011 to present under the Order have resulted in extensive remediation of contaminated media on Site.

The Groundwater Remediation System, including the GWCS, NPLA system, and the on-site treatment system, operated as designed during the reporting period. The effluent concentrations from the on-site treatment system were within the SPDES permit effluent limits.

The 2020 mass removal calculations for the Groundwater Remediation System are presented in Appendix C.

Long-term operations began at the GWCS in December 1986 and continued operations since that time have extracted and treated 578 million gallons of groundwater. Total mass removed as of year-end 2020 is approximately 2,943 pounds. Approximately 16.6 million gallons of groundwater was collected and treated from the GWCS or, on average, 45,446 gallons per day over the 2020 calendar year. The average flowrate was approximately 31.6 gpm. For this annual period, approximately 27.03 pounds of VOCs were removed by the GWCS.

Operation of the NPLA pump stations began in December 1997. Continued operations since that time have extracted and treated 46.2 million gallons of water. Total mass removed by the NPLA as of year-end 2020 is approximately 42 pounds. Approximately 1.2 million gallons of groundwater was collected from the NPLA pump stations or, on average, 3,396 gallons per day over the 2020 calendar year. The average flowrate was approximately 2.4 gpm. For this annual period, approximately 0.36 pounds of VOCs were removed by the NPLA system.

The ongoing remedial program continues to be effective in reducing and containing the dissolved groundwater plume and in removing contaminant mass from Site groundwater.

7.0 OTHER ACTIVITIES AND REPORTING

In addition to routine groundwater monitoring other activities were conducted at the Site in 2020 under the oversight of NYSDEC. These activities included implementation of the NYSDEC approved work plans under the current Consent Order. The investigation results will be reported and submitted to NYSDEC in separate reports and are not included herein. Following is a summary of activities and submittals for the 2020 calendar year:

Supplemental SWMU M Investigation Data Report (March 31, 2020), Golder Associates.

In response to a NYSDEC request[2], an Emerging Contaminant, Poly- and Perfluoroalkyl Substances (PFAS) and 1,4-Dioxane, Sampling Work Plan (EC Sampling Work Plan)[3] was prepared and submitted to NYSDEC on July 31, 2018. NYSDEC approved the EC Sampling Work Plan on in a letter dated September 4, 2020[4]. Sampling pursuant to the EC Sampling Work Plan was completed during October 2020 and reported[5] to NYSDEC on January 29, 2021.

[2] NYSDEC, June 5, 2018, *Request for Sampling of Emerging Contaminants, IBM Kingston, NYSDEC Site No. 356002.*

[3] Groundwater Sciences Corporation and Groundwater Sciences, P.C., July 31, 2018, *Former IBM Kingston Facility (TechCity) Emerging Contaminants Poly- and Perfluoroalkyl Substances and 1,4-Dioxane Sampling Work Plan, Site No. 356002, Order on Consent, Index #D3-10023-6-11.*

[4] NYSDEC, September 4, 2020, *Emerging Contaminants Sampling Work Plan, Former IBM Kingston Site, NYSDEC Site No. 356002, Kingston, Ulster County, NY.*

[5] NYSDEC, January 29, 2021, *Emerging Contaminants Sampling Work Report, Former IBM Kingston Site, NYSDEC Site No. 356002, Kingston, Ulster County, NY.*

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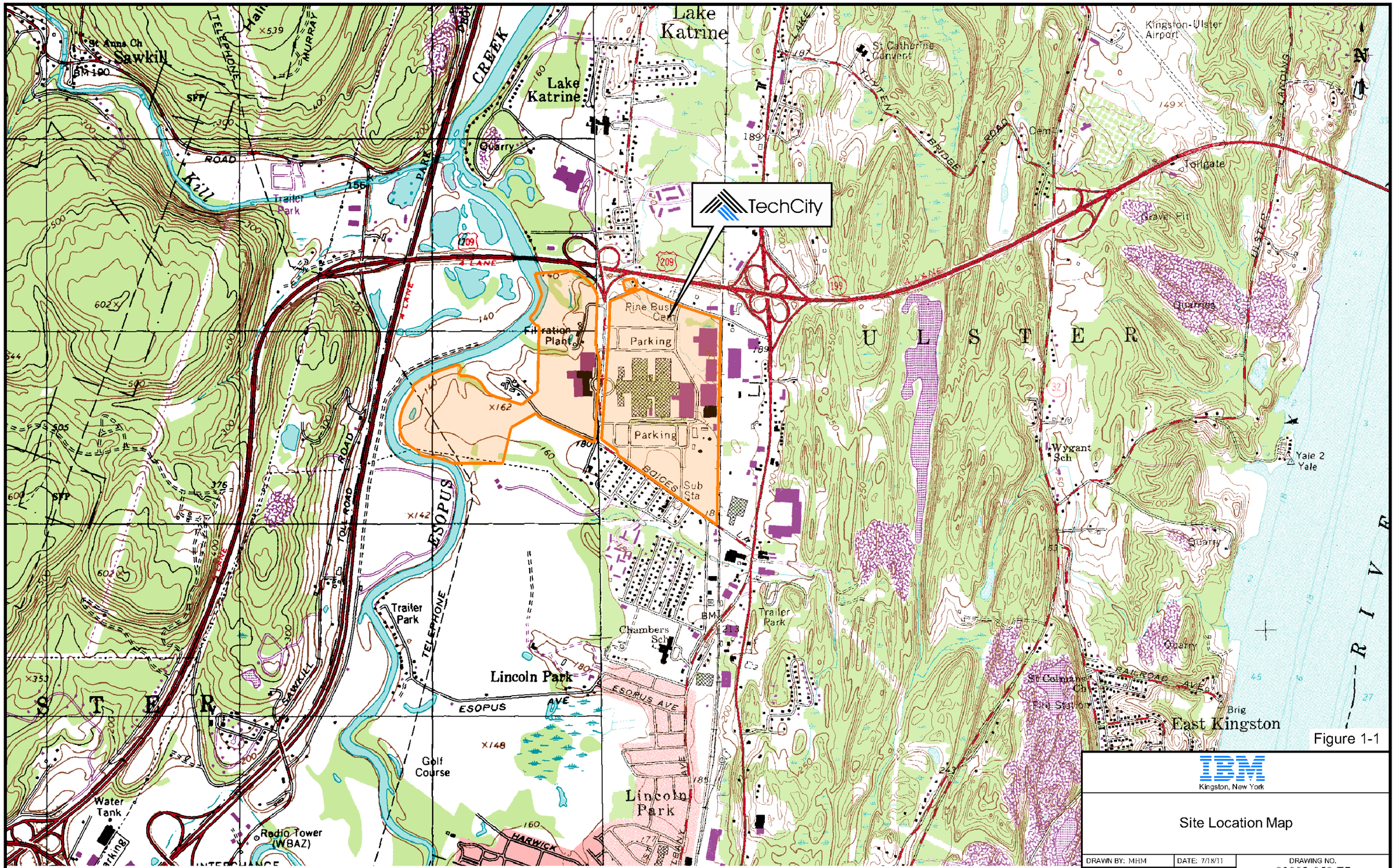

Portions of the Kingston East (1963, photorevised 1980) and Kingston West (1997) 7.5 Minute USGS Quadrangles

Scale
0 750' 1500'

Figure 1-1

IBM
Kingston, New York

Site Location Map

DRAWN BY: MHM	DATE: 7/18/11	DRAWING NO. 93002-059-E7
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION

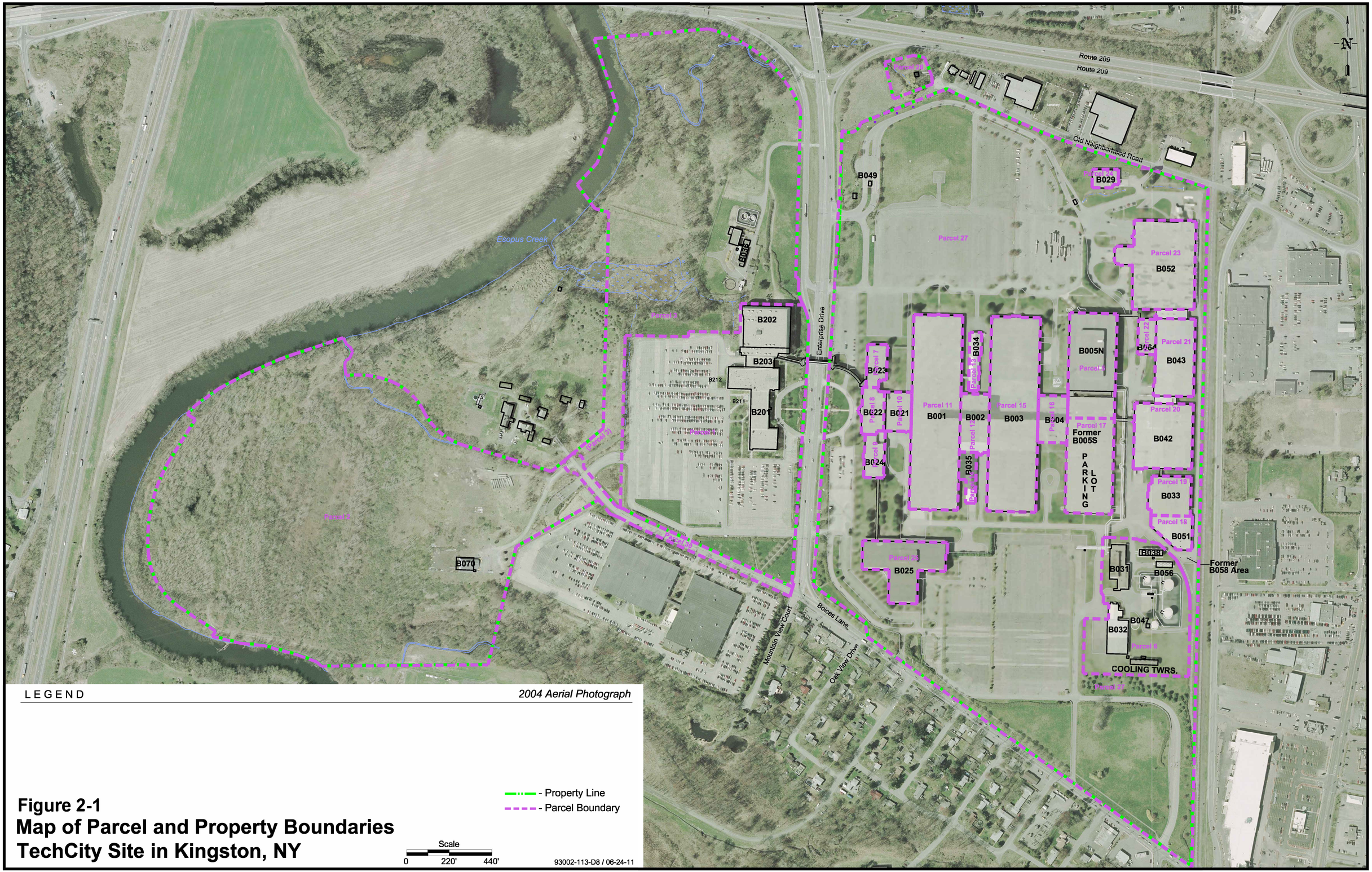

Figure 2-1
Map of Parcel and Property Boundaries
TechCity Site in Kingston, NY

SOLID WASTE MANAGEMENT UNITS (SWMUs)

A: B029 Chemical Distribution Center
B: B036 Container Storage Area
C: Former B058
D: Former Waste Acetone Storage Tank
E: Former Waste IPA Storage Tank
F: Former East Side Waste Tanks
G: Former Waste PCE Tank
H: Former East SRP Tank
I: Former West SRP
J: Wastewater Treatment Tanks
K: Emergency Wastewater Holding Tanks
L: Former Industrial Waste Sludge Lagoon
M: Industrial Waste Sewer Lines
N: Inactive B036 Construction and Debris Landfill
O: Salt Barn Parking Lot Sand Fill Area
P: Former B035 Dry Well
Q: Former B031 Lagoon
R: Former Waste TCA Tank (B005(S))
S: Former Waste TCA Tank (B001)
T: Former Waste Oil Tank
U: North Parking Lot Area Plume
V: B005 Plume
W: Former B004 Separator Tank
X: B031 Separator
Y: Former Fluoride Wastewater Ejector Tank
Z: Inactive B033 Septic System
AA: Inactive B031 Septic System
AB: Former B001 TCA Recovery Unit
AC: Former B005(S) Solvent Recovery Process Unit
AD: Former Fire Training Area
AE: B202 Elevator No. 2
AF: Inactive West Demolition Debris Fill Area

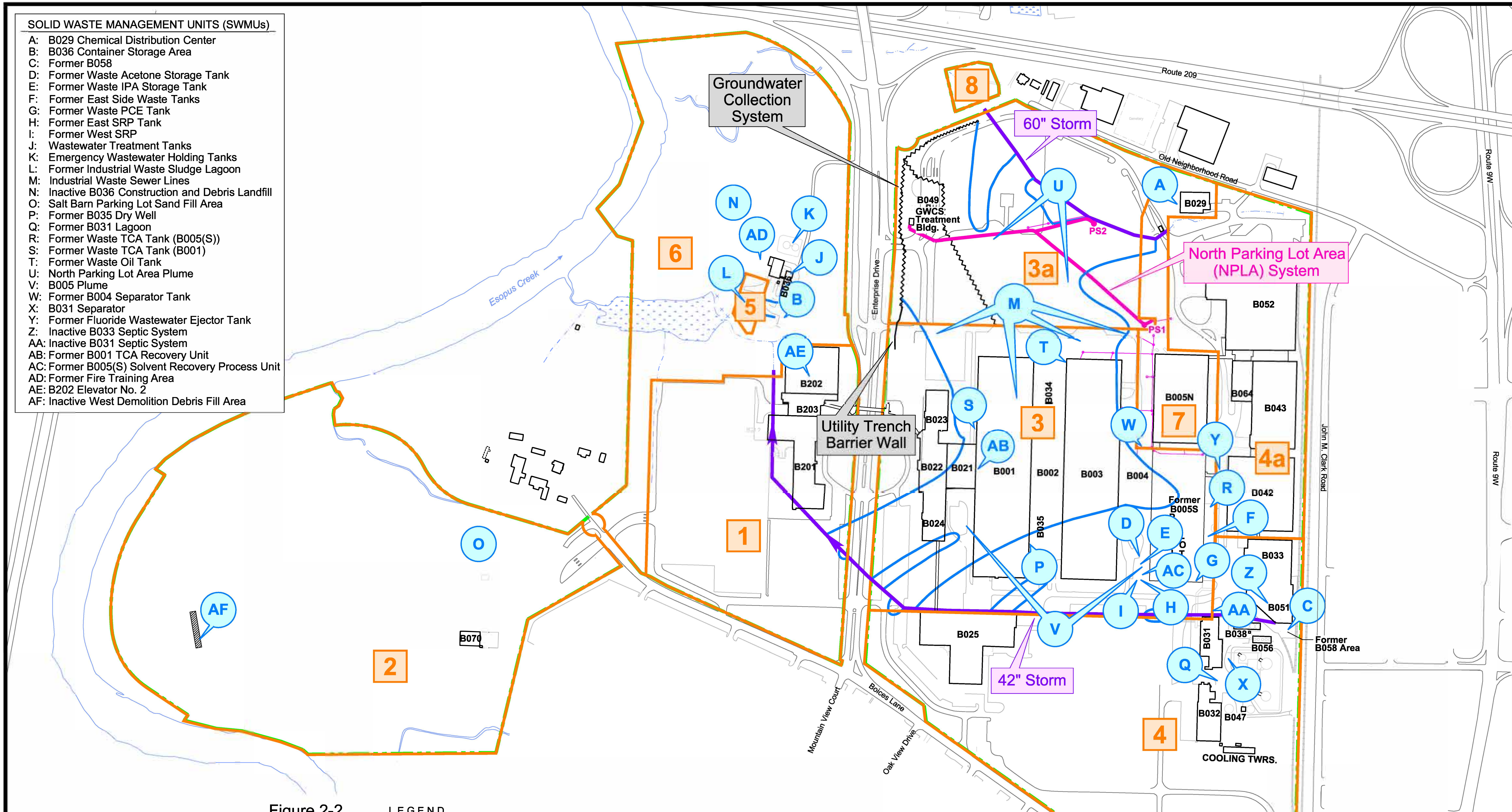

Figure 2-2

LEGEND

- Storm Sewer Line
- North Parking Lot Area (NPLA) System
- Area of 1,1,1-Trichloroethane/Tricholoroethene >5 µg/l (5/08)
- Groundwater Collection System (GWCS)
- GWCS Trench Extension
- Subsurface Utility Trench Barrier Wall
- Solid Waste Management Unit
- Operable Unit
- Property Line

N

Scale 0 220' 440'

IBM
Kingston, New York

Site Layout and Area Map

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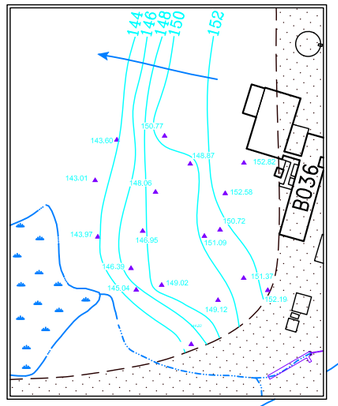
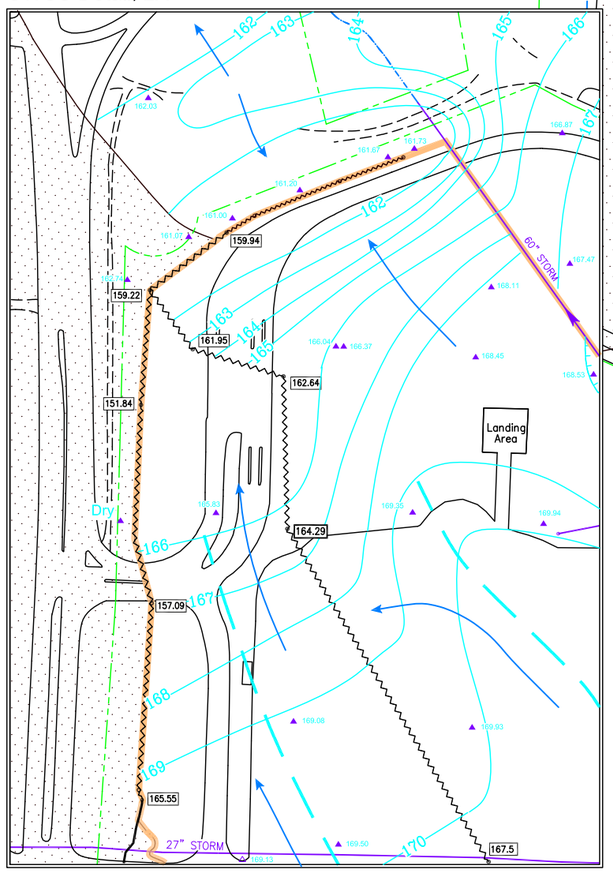
CHECKED & APPROVED BY: DAB		93002-113-F1

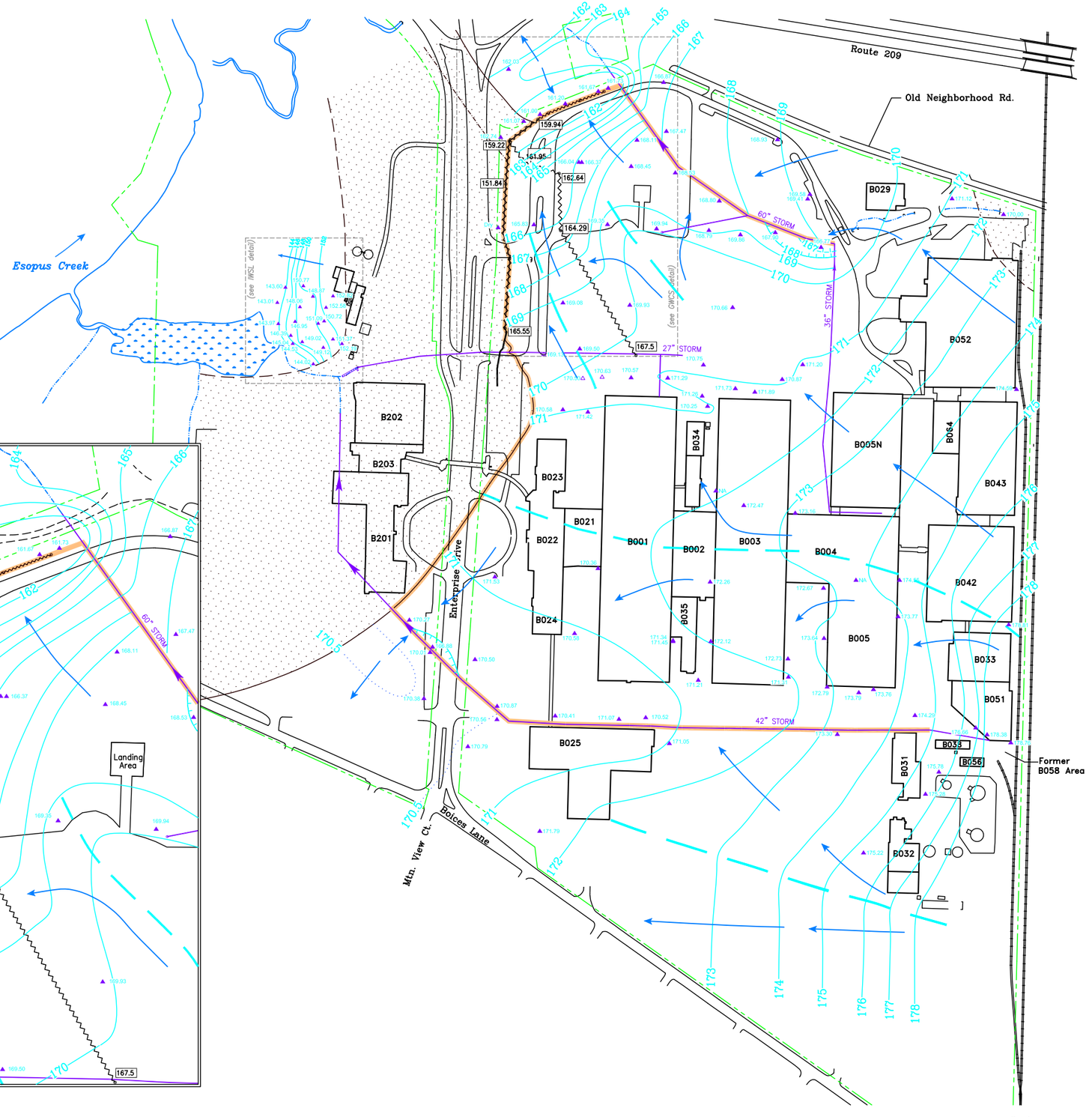
GROUNDWATER SCIENCES CORPORATION

IWSL Detail, 2X



GWCS Detail, 2X





LEGEND

- ▲ - Monitoring Well Location (installed in soil)
- △ - Temporary Monitoring Point
- ○ - North Parking Lot Area Pump Station
- Property Line
- Site Control Perimeter
- 178 - Groundwater Elevation Contour
- Supplemental Groundwater Elevation Contour
- 177.55 - Groundwater Elevation
- NA - Not Accessible
- Groundwater Divide
- Inferred Direction of Groundwater Flow
- Groundwater Collection System (GWCS)
- GWCS Trench Extension
- 162.64 - GWCS Invert Elevation
- Subsurface Utility Trench Barrier Wall
- Unsaturated Surficial Sand Unit (Perennially Saturated Shallow Sand Absent)

Scale
0 300' 400'

Figure 4-1

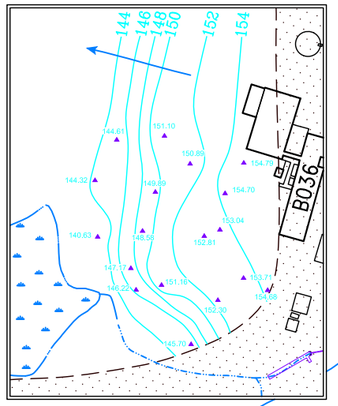
IBM
Kingston, New York

Surficial Sand Aquifer
Groundwater Elevation Contour Map
January 14, 2020 (First Quarter 2020)

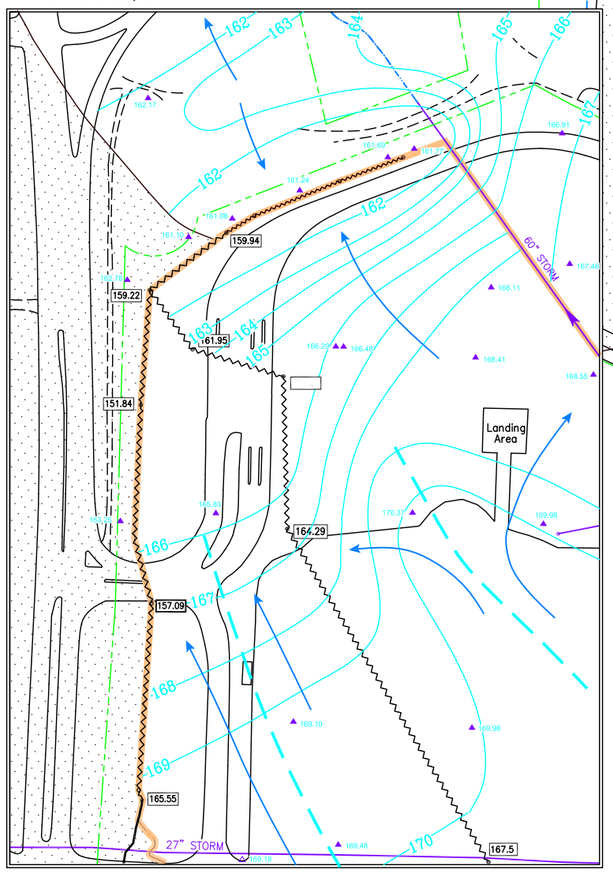
DRAWN BY: KA	DATE: 2/21/21	DRAWING NO.
CHECKED & APPROVED BY: CES/DAB		93002-129-1Q2020-H1

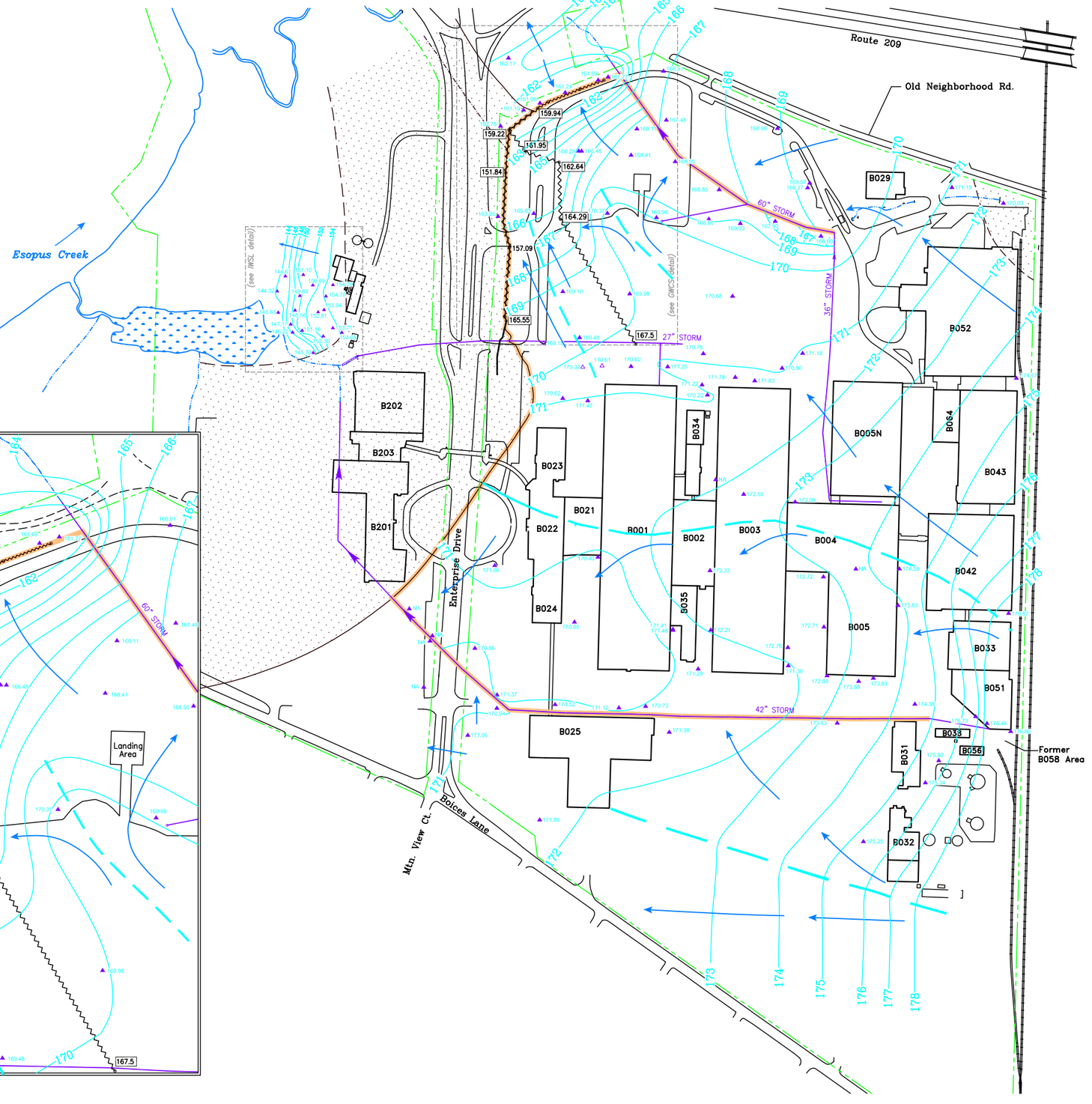
GROUNDWATER SCIENCES CORPORATION

IWSL Detail, 2X



GWCS Detail, 2X





Scale
0 300' 400'

LEGEND

- ▲ - Monitoring Well Location (installed in soil)
- △ - Temporary Monitoring Point
- ○ - North Parking Lot Area Pump Station
- Property Line
- Site Control Perimeter
- 178 - Groundwater Elevation Contour
- Supplemental Groundwater Elevation Contour
- 177.55 - Groundwater Elevation
- NA - Not Accessible
- Groundwater Divide
- Inferred Direction of Groundwater Flow
- Groundwater Collection System (GWCS)
- GWCS Trench Extension
- 162.64 - GWCS Invert Elevation
- Subsurface Utility Trench Barrier Wall
- Unsaturated Surficial Sand Unit (Perennially Saturated Shallow Sand Absent)

Figure 4-2

IBM
Kingston, New York

Surficial Sand Aquifer
Groundwater Elevation Contour Map
April 15, 2020 (Second Quarter 2020)

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CHECKED & APPROVED BY: CES/DAB		

GROUNDWATER SCIENCES CORPORATION

IWSL Detail, 2X

GWCS Detail, 2X

Esopus Creek

Route 209

Old Neighborhood Rd.

Enterprise Drive

Mtn. View Ct.

Boices Lane

Landing Area

60" STORM

36" STORM

42" STORM

27" STORM

(see IWSL detail)

(see GWCS detail)

B001 B002 B003 B004 B005 B005N B021 B022 B023 B024 B025 B029 B031 B032 B033 B034 B035 B036 B038 B042 B043 B051 B052 B056 B064 B201 B202 B203

Former B058 Area

159.94 159.22 161.95 151.84 162.64 164.29 157.09 165.55 167.5

Scale 0 300' 400'

LEGEND

- ▲ - Monitoring Well Location (installed in soil)
- △ - Temporary Monitoring Point
- ○ - North Parking Lot Area Pump Station
- Property Line
- Site Control Perimeter
- 178 - Groundwater Elevation Contour
- 177.55 - Groundwater Elevation
- NA - Not Accessible
- Groundwater Divide
- Inferred Direction of Groundwater Flow
- Groundwater Collection System (GWCS)
- GWCS Trench Extension
- 162.64 - GWCS Invert Elevation
- Subsurface Utility Trench Barrier Wall
- Unsaturated Surficial Sand Unit (Perennially Saturated Shallow Sand Absent)

Figure 4-3

IBM
Kingston, New York

Surficial Sand Aquifer
Groundwater Elevation Contour Map
July 14, 2020 (Third Quarter 2020)

DRAWN BY: KA	DATE: 2/21/21	DRAWING NO. 93002-129-H3
CHECKED & APPROVED BY: CES/DAB		

GROUNDWATER SCIENCES CORPORATION

IWSL Detail, 2X

GWCS Detail, 2X

Esopus Creek

Route 209

Old Neighborhood Rd.

Enterprise Drive

Mtn. View Ct.

Boices Lane

Landing Area

Former B058 Area

60" STORM

42" STORM

36" STORM

27" STORM

B001 B002 B003 B004 B005 B005N B021 B022 B023 B024 B025 B029 B031 B032 B033 B034 B035 B036 B038 B042 B043 B051 B052 B056 B064 B201 B202 B203

LEGEND

- ▲ - Monitoring Well Location (installed in soil)
- △ - Temporary Monitoring Point
- ○ - North Parking Lot Area Pump Station
- Property Line
- Site Control Perimeter
- 178 - Groundwater Elevation Contour
- 177.55 - Groundwater Elevation
- NA - Not Accessible
- Groundwater Divide
- Inferred Direction of Groundwater Flow
- Groundwater Collection System (GWCS)
- GWCS Trench Extension
- 162.64 - GWCS Invert Elevation
- Subsurface Utility Trench Barrier Wall
- Unsaturated Surficial Sand Unit (Perennially Saturated Shallow Sand Absent)

Scale 0 300' 400'

Figure 4-4

IBM
Kingston, New York

Surficial Sand Aquifer
Groundwater Elevation Contour Map
October 1, 2020 (Fourth Quarter 2020)

DRAWN BY: KA	DATE: 2/21/21	DRAWING NO. 93002-129-H-4Q2020
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GROUNDWATER SCIENCES CORPORATION

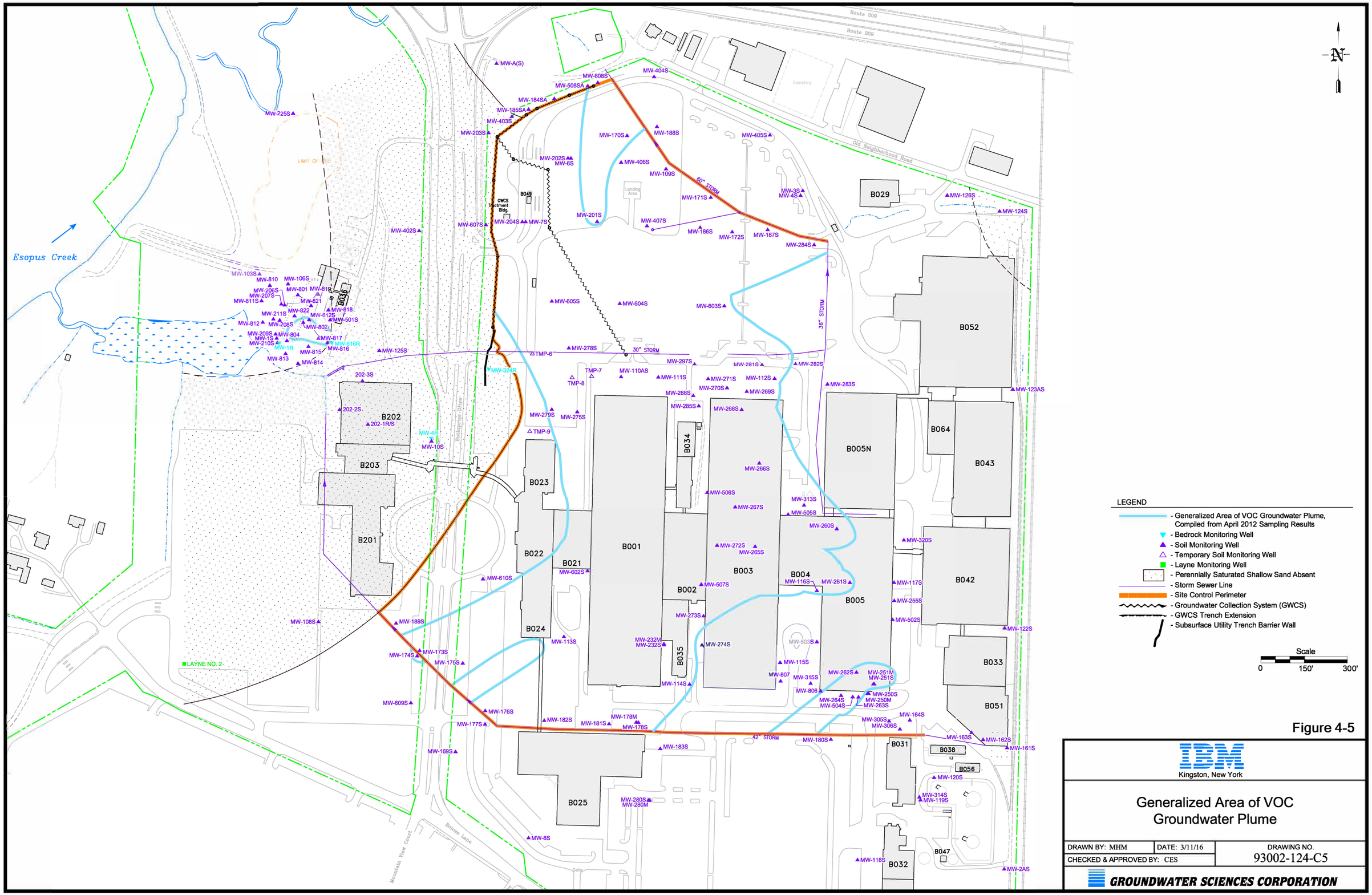


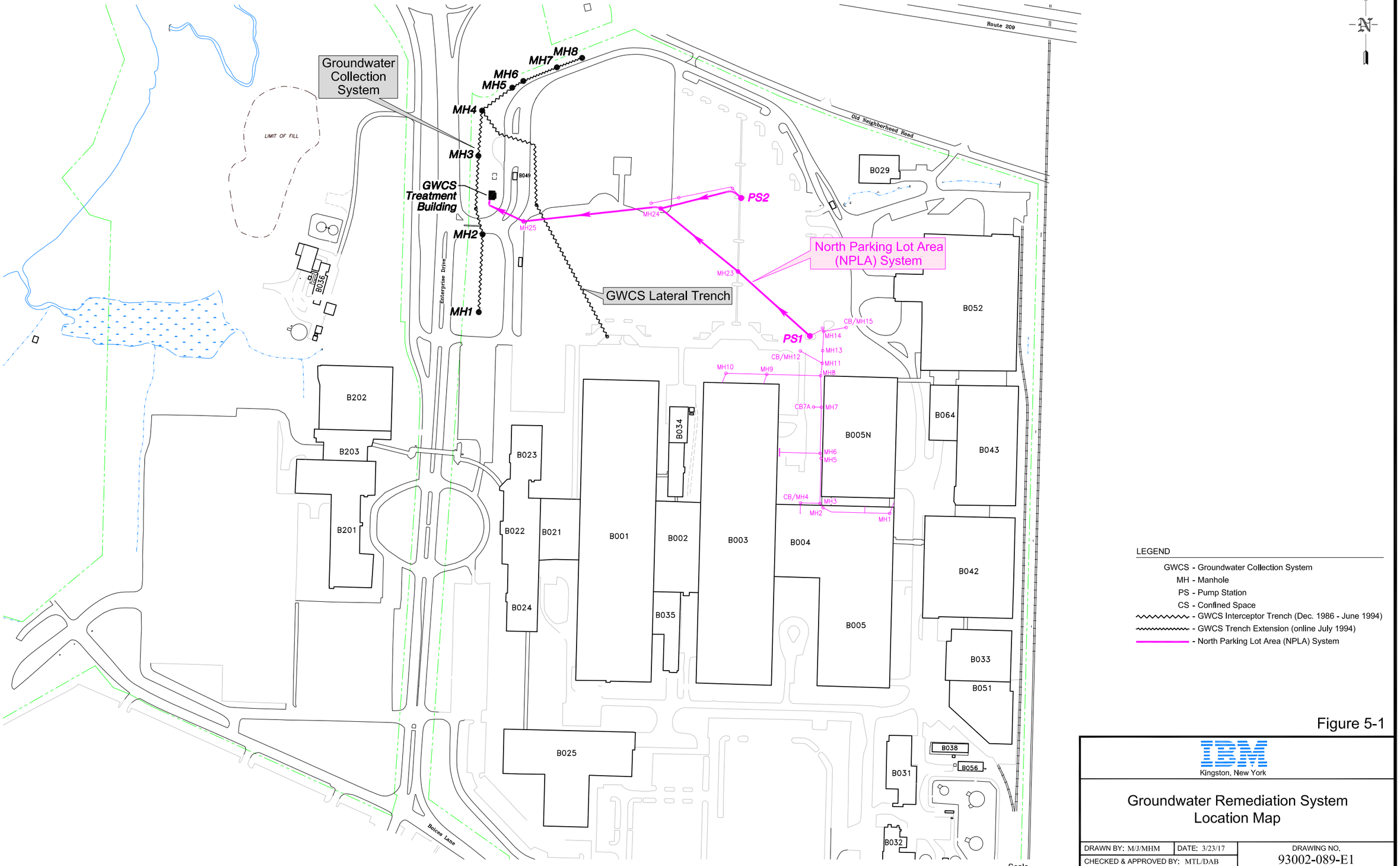
Figure 4-5

IBM
Kingston, New York

Generalized Area of VOC Groundwater Plume

DRAWN BY: MHM	DATE: 3/11/16	DRAWING NO. 93002-124-C5
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION



LEGEND

GWCS - Groundwater Collection System
MH - Manhole
PS - Pump Station
CS - Confined Space
- GWCS Interceptor Trench (Dec. 1986 - June 1994)
- GWCS Trench Extension (online July 1994)
- North Parking Lot Area (NPLA) System

Figure 5-1

IBM
Kingston, New York

Groundwater Remediation System Location Map

DRAWN BY: MJ/MHM	DATE: 3/23/17	DRAWING NO. 93002-089-E1
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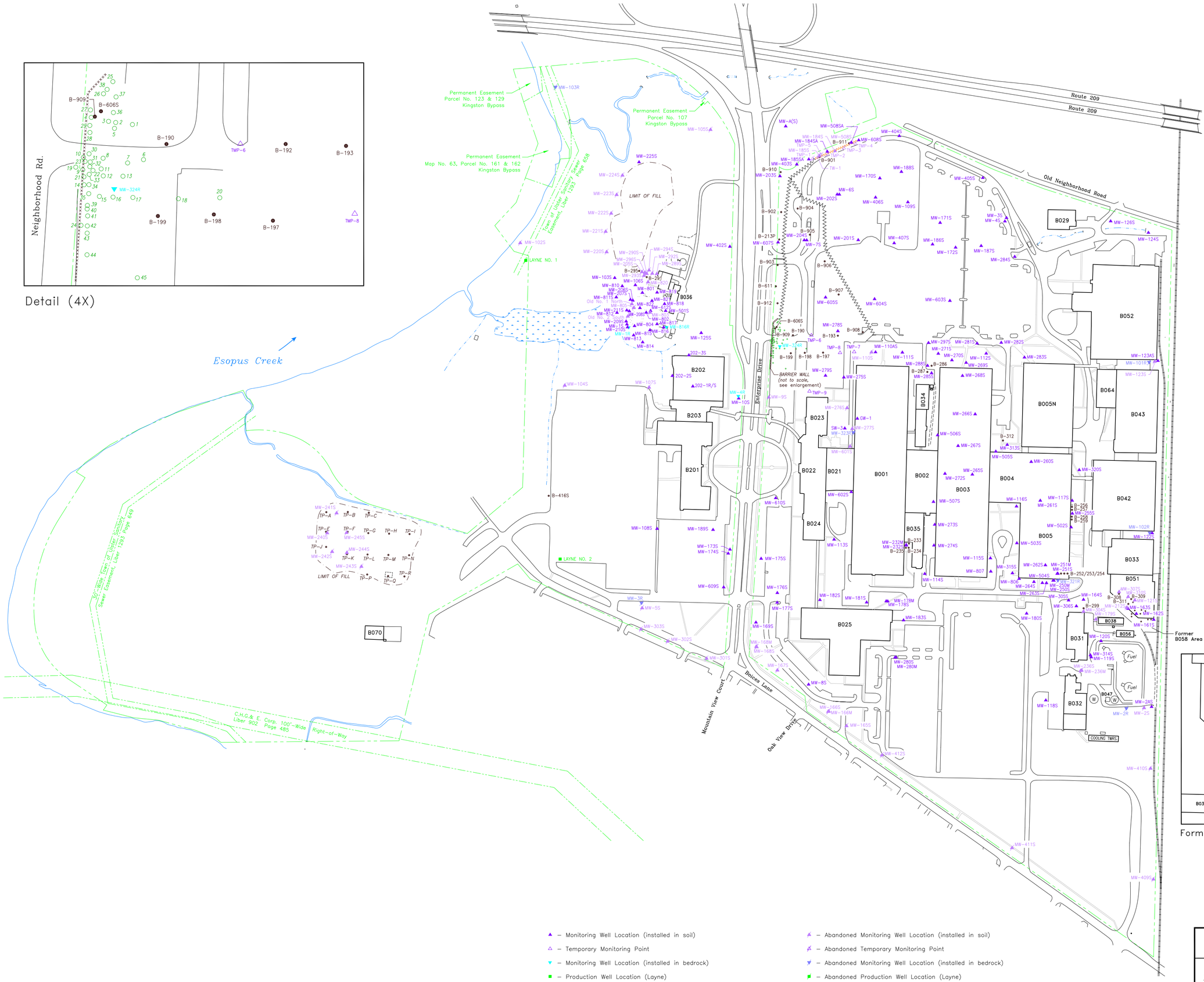
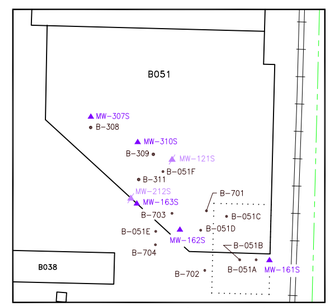
Detail (4X)





Former B058 Detail (Scale 3X)

– Monitoring Well Location (installed in soil)
– Temporary Monitoring Point
– Monitoring Well Location (installed in bedrock)
– Production Well Location (Layne)
– Railroad
– Property Line
– Former Structure
– Abandoned Monitoring Well Location (installed in soil)
– Abandoned Temporary Monitoring Point
– Abandoned Monitoring Well Location (installed in bedrock)
– Abandoned Production Well Location (Layne)
– Soil Boring or Test Pit Location
– Groundwater Collection System (GWCS)
– GWCS Trench Extension

Scale 0 150' 300'

Plate 1

IBM Kingston, New York

Soil Boring, Test Pit and Well Location Map

DRAWN BY: MHM	DATE: 9/18/17	DRAWING NO. 93002-055-N2
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION

Appendix A

Groundwater Elevation Table

Kingston Site
2020 Water Level Data

Well	Elevation	01/14/20		04/15/20		07/14/20		10/01/20	
	TOC	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE
MW-001-R	**150.93**	6.40	144.53	5.81	145.12	8.10	142.83	7.80	143.13
MW-003-S	**173.03**	3.45	169.58	3.46	169.57	4.42	168.61	4.78	168.25
MW-004-R	**176.08**	2.00	174.08	1.55	174.53	7.11	168.97	7.12	168.96
MW-004-S	**172.74**	3.33	169.41	3.37	169.37	4.00	168.74	4.38	168.36
MW-006-S	**172.69**	6.32	166.37	6.21	166.48	7.65	165.04	7.15	165.54
MW-008-S	**178.17**	6.38	171.79	6.28	171.89	6.39	171.78	6.25	171.92
MW-010-S	**176.94**	2.96	173.98	2.31	174.63	Dry		Dry	
MW-106-S	**152.00**	1.23	150.77	0.90	151.10	1.42	150.58	1.40	150.60
MW-108-S	**177.26**	6.00	171.26	NM		8.56	168.70	5.58	171.68
MW-109-S	**174.53**	6.00	168.53	5.98	168.55	8.10	166.43	7.15	167.38
MW-110-SA	**180.15**	9.58	170.57	9.53	170.62	10.00	170.15	10.04	170.11
MW-111-S	**179.39**	8.10	171.29	8.14	171.25	8.78	170.61	8.70	170.69
MW-112-S	**180.16**	9.29	170.87	9.26	170.90	9.45	170.71	9.46	170.70
MW-113-S	**177.03**	6.45	170.58	6.38	170.65	6.58	170.45	6.52	170.51
MW-114-S	**176.92**	5.71	171.21	5.63	171.29	5.92	171.00	5.86	171.06
MW-115-S	**181.20**	8.47	172.73	8.44	172.76	9.45	171.75	9.36	171.84
MW-116-S	**181.28**	8.61	172.67	8.56	172.72	8.63	172.65	8.51	172.77
MW-117-S	**180.75**	6.20	174.55	6.17	174.58	6.40	174.35	6.29	174.46
MW-118-S	**182.96**	7.74	175.22	7.71	175.25	7.92	175.04	7.32	175.64
MW-119-S	**183.87**	8.59	175.28	8.53	175.34	8.45	175.42	8.22	175.65
MW-120-S	**185.20**	9.42	175.78	9.40	175.80	9.33	175.87	9.28	175.92
MW-122-S	**183.62**	4.81	178.81	4.75	178.87	5.55	178.07	5.17	178.45
MW-123-SA	**178.21**	3.62	174.59	3.54	174.67	3.71	174.50	3.36	174.85
MW-124-S	**179.14**	9.14	170.00	9.11	170.03	9.95	169.19	9.51	169.63
MW-125-S	**173.88**	8.95	164.93	4.98	168.90	12.68	161.20	6.52	167.36
MW-126-S	**180.64**	9.52	171.12	9.45	171.19	10.10	170.54	9.45	171.19
MW-161-S	**183.36**	4.60	178.76	4.56	178.80	5.60	177.76	5.00	178.36
MW-162-S	**184.36**	5.98	178.38	5.92	178.44	5.99	178.37	5.53	178.83
MW-163-S	**185.65**	8.99	176.66	8.92	176.73	8.95	176.70	8.79	176.86
MW-164-S	**182.31**	8.02	174.29	7.93	174.38	8.25	174.06	8.10	174.21
MW-169-S	**178.07**	7.28	170.79	7.02	171.05	7.17	170.90	7.04	171.03
MW-170-S	**174.36**	6.25	168.11	6.25	168.11	7.40	166.96	6.90	167.46
MW-171-S	**172.51**	3.71	168.80	3.66	168.85	5.22	167.29	4.81	167.70
MW-172-S	**171.68**	1.82	169.86	1.75	169.93	4.90	166.78	2.42	169.26
MW-173-S	**179.83**	12.95	166.88	NM		13.40	166.43	12.78	167.05
MW-174-S	**179.89**	9.88	170.01	NM		11.07	168.82	10.71	169.18
MW-175-S	**177.99**	7.49	170.50	7.33	170.66	7.79	170.20	7.63	170.36
MW-176-S	**177.55**	6.68	170.87	6.18	171.37	7.92	169.63	7.85	169.70
MW-177-S	**177.94**	7.38	170.56	7.00	170.94	8.73	169.21	8.25	169.69
MW-178-S	**179.29**	8.77	170.52	8.56	170.73	8.42	170.87	8.31	170.98
MW-180-S	**179.45**	6.15	173.30	5.82	173.63	6.92	172.53	6.00	173.45
MW-181-S	**177.38**	6.31	171.07	6.26	171.12	6.92	170.46	6.77	170.61
MW-182-S	**180.09**	9.68	170.41	9.57	170.52	9.60	170.49	9.52	170.57
MW-183-S	**174.38**	3.33	171.05	3.00	171.38	4.00	170.38	3.30	171.08
MW-184-SA	**171.30**	10.10	161.20	10.06	161.24	11.11	160.19	10.75	160.55
MW-185-SA	**176.88**	15.88	161.00	15.80	161.08	17.22	159.66	17.22	159.66
MW-186-S	**172.60**	3.81	168.79	3.74	168.86	3.62	168.98	3.83	168.77
MW-187-S	**170.82**	2.92	167.90	2.89	167.93	3.65	167.17	2.90	167.92
MW-188-S	**174.59**	7.12	167.47	7.11	167.48	7.92	166.67	7.62	166.97
MW-189-S	**175.52**	5.25	170.27	NM		6.04	169.48	6.42	169.10
MW-201-S	**177.00**	7.65	169.35	6.63	170.37	8.80	168.20	7.55	169.45
MW-202-S	**173.29**	7.25	166.04	7.00	166.29	8.32	164.97	7.60	165.69
MW-203-S	**175.16**	12.42	162.74	12.38	162.78	Dry		Dry	
MW-204-S	**173.93**	8.10	165.83	8.10	165.83	8.81	165.12	8.53	165.40
MW-206-S	**152.42**	4.36	148.06	2.53	149.89	5.45	146.97	4.70	147.72
MW-208-S	**152.31**	5.36	146.95	3.73	148.58	5.92	146.39	4.89	147.42
MW-209-S	**152.02**	5.63	146.39	4.85	147.17	6.70	145.32	6.60	145.42
MW-210-S	**151.99**	6.95	145.04	5.77	146.22	7.95	144.04	8.10	143.89
MW-232-M	**180.94**	9.60	171.34	9.53	171.41	9.78	171.16	9.65	171.29
MW-232-S	**181.03**	9.58	171.45	9.55	171.48	10.11	170.92	10.00	171.03
MW-250-M	**178.09**	4.33	173.76	4.26	173.83	5.11	172.98	4.43	173.66
MW-261-S	**178.85**	NM		NM		NM		NM	
MW-267-S	**178.77**	6.30	172.47	6.22	172.55	6.37	172.40	6.35	172.42
MW-269-S	**180.89**	9.00	171.89	9.06	171.83	10.00	170.89	9.94	170.95
MW-270-S	**180.48**	8.75	171.73	8.70	171.78	9.88	170.60	9.85	170.63
MW-274-S	**177.71**	5.59	172.12	5.50	172.21	5.69	172.02	5.60	172.11
MW-275-S	**180.97**	9.55	171.42	9.50	171.47	10.72	170.25	10.10	170.87
MW-278-S	**180.48**	10.98	169.50	11.00	169.48	11.61	168.87	11.48	169.00
MW-279-S	**180.23**	9.65	170.58	9.61	170.62	10.69	169.54	9.72	170.51
MW-282-S	**176.63**	5.43	171.20	5.45	171.18	7.35	169.28	6.35	170.28
MW-284-S	**174.77**	8.00	166.77	7.97	166.80	8.16	166.61	7.63	167.14
MW-285-S	**180.46**	10.21	170.25	10.24	170.22	10.38	170.08	10.34	170.12

Kingston Site
2020 Water Level Data

Well	Elevation	01/14/20		04/15/20		07/14/20		10/01/20	
	TOC	DTW	GWE	DTW	GWE	DTW	GWE	DTW	GWE
MW-288-S	**180.22**	8.96	171.26	9.00	171.22	9.43	170.79	9.40	170.82
MW-297-S	**180.07**	9.32	170.75	9.29	170.78	10.12	169.95	10.07	170.00
MW-402-S	**173.94**	14.56	159.38	14.18	159.76	Dry		Dry	
MW-403-S	**176.89**	15.82	161.07	15.79	161.10	Dry		Dry	
MW-404-S	**171.17**	4.30	166.87	4.26	166.91	5.63	165.54	4.52	166.65
MW-405-S	**174.93**	6.00	168.93	5.97	168.96	6.31	168.62	7.12	167.81
MW-406-S	**175.85**	7.40	168.45	7.44	168.41	9.38	166.47	8.13	167.72
MW-407-S	**176.66**	6.72	169.94	6.68	169.98	8.18	168.48	7.10	169.56
MW-502-S	**180.90**	7.13	173.77	7.07	173.83	7.12	173.78	7.04	173.86
MW-503-S	**180.71**	7.07	173.64	8.00	172.71	8.08	172.63	7.96	172.75
MW-504-S	**177.11**	3.32	173.79	3.23	173.88	4.12	172.99	3.99	173.12
MW-505-S	**179.08**	5.92	173.16	6.00	173.08	6.29	172.79	5.30	173.78
MW-506-S	**180.14**	NM		NM		NM		NM	
MW-507-S	**178.61**	6.35	172.26	6.28	172.33	6.48	172.13	6.43	172.18
MW-508-SA	**169.89**	8.22	161.67	8.20	161.69	9.13	160.76	6.75	163.14
MW-602-S	**178.37**	8.01	170.36	7.94	170.43	8.17	170.20	7.93	170.44
MW-603-S	**174.74**	4.08	170.66	4.06	170.68	5.10	169.64	5.22	169.52
MW-604-S	**175.93**	6.00	169.93	5.95	169.98	7.00	168.93	6.82	169.11
MW-605-S	**176.06**	6.98	169.08	6.96	169.10	8.04	168.02	8.30	167.76
MW-607-S	**174.01**	Dry		10.76	163.25	Dry		Dry	
MW-608-S	**170.23**	8.50	161.73	8.46	161.77	9.23	161.00	8.70	161.53
MW-609-S	**178.58**	8.20	170.38	NM		9.17	169.41	9.28	169.30
MW-610-S	**178.05**	6.52	171.53	6.39	171.66	6.53	171.52	6.44	171.61
MW-612-S	**156.22**	5.50	150.72	3.18	153.04	6.20	150.02	6.46	149.76
MW-801-S	**152.27**	3.40	148.87	1.38	150.89	3.58	148.69	4.00	148.27
MW-802-S	**153.42**	2.33	151.09	0.61	152.81	2.89	150.53	3.32	150.10
MW-804-S	**152.74**	3.72	149.02	1.58	151.16	4.52	148.22	5.00	147.74
MW-806-S	**176.49**	3.70	172.79	3.61	172.88	4.22	172.27	4.13	172.36
MW-807-S	**177.63**	6.32	171.31	6.27	171.36	7.00	170.63	7.01	170.62
MW-810	**145.03**	1.43	143.60	0.42	144.61	1.07	143.96	1.00	144.03
MW-811S	**144.93**	1.92	143.01	0.61	144.32	1.20	143.73	1.14	143.79
MW-812	**146.73**	2.76	143.97	6.10	140.63	6.91	139.82	6.82	139.91
MW-814	**151.70**	7.68	144.02	6.00	145.70	9.75	141.95	7.82	143.88
MW-815	**156.30**	7.18	149.12	4.00	152.30	10.35	145.95	10.32	145.98
MW-816	**161.40**	9.21	152.19	6.72	154.68	10.62	150.78	10.51	150.89
MW-817	**160.53**	9.16	151.37	6.82	153.71	11.29	149.24	10.78	149.75
MW-819	**154.79**	1.97	152.82	0.00	154.79	2.78	152.01	2.33	152.46
MW-821	**154.70**	2.12	152.58	0.00	154.70	2.82	151.88	4.00	150.70
MW-A	**172.34**	10.31	162.03	10.17	162.17	10.97	161.37	11.63	160.71
TMP-6	**177.51**	8.38	169.13	8.33	169.18	9.00	168.51	8.82	168.69
TMP-7	**180.08**	9.45	170.63	9.47	170.61	10.22	169.86	10.18	169.90
TMP-8	**177.50**	7.00	170.50	7.18	170.32	7.82	169.68	7.25	170.25

NM = Not Measured, Damaged or Inaccessible

Appendix B

Groundwater Withdrawal Data Tables (GWCS and NPLA)

Former IBM Kingston Site (TechCity Facility)
Groundwater Collection System and North Parking Lot Area Extraction Data
Last Updated: *3/2/2021*

Date	NPLA PS1 & PS2 Daily Flow (gal)	Average Pumping Rate (NPLA) (gpm)	Total GWCS Daily Flow (gal)	Average Pumping Rate (GWCS) (gpm)	Average Daily Flow Treatment System (gal)	Average Pumping Rate Treatment Sys (gpm)	Cumulative Gallons Pumped (NPLA only)	Cumulative Gallons Pumped (GWCS only)	Cumulative Gallons Pumped (Overall)
1-Jan-20	9,016	6.3	57,109	39.7	66,125	45.9	44,933,080	561,342,834	606,275,914
2-Jan-20	9,325	6.5	57,375	39.8	66,700	46.3	44,942,405	561,400,209	606,342,614
3-Jan-20	9,416	6.5	58,428	40.6	67,844	47.1	44,951,821	561,458,637	606,410,458
4-Jan-20	9,461	6.6	57,238	39.7	66,699	46.3	44,961,282	561,515,875	606,477,157
5-Jan-20	9,451	6.6	58,820	40.8	68,271	47.4	44,970,733	561,574,695	606,545,428
6-Jan-20	9,416	6.5	58,266	40.5	67,682	47.0	44,980,149	561,632,961	606,613,110
7-Jan-20	9,391	6.5	56,763	39.4	66,154	45.9	44,989,540	561,689,724	606,679,264
8-Jan-20	9,333	6.5	58,617	40.7	67,950	47.2	44,998,873	561,748,341	606,747,214
9-Jan-20	9,210	6.4	56,627	39.3	65,837	45.7	45,008,083	561,804,968	606,813,051
10-Jan-20	9,308	6.5	55,714	38.7	65,022	45.2	45,017,391	561,860,682	606,878,073
11-Jan-20	9,065	6.3	54,652	38.0	63,717	44.2	45,026,456	561,915,334	606,941,790
12-Jan-20	9,052	6.3	55,587	38.6	64,639	44.9	45,035,508	561,970,921	607,006,429
13-Jan-20	9,151	6.4	54,000	37.5	63,151	43.9	45,044,659	562,024,921	607,069,580
14-Jan-20	8,938	6.2	53,112	36.9	62,050	43.1	45,053,597	562,078,033	607,131,630
15-Jan-20	8,857	6.2	52,891	36.7	61,748	42.9	45,062,454	562,130,924	607,193,378
16-Jan-20	8,772	6.1	52,426	36.4	61,198	42.5	45,071,226	562,183,350	607,254,576
17-Jan-20	8,500	5.9	52,330	36.3	60,830	42.2	45,079,726	562,235,680	607,315,406
18-Jan-20	8,684	6.0	48,800	33.9	57,484	39.9	45,088,410	562,284,480	607,372,890
19-Jan-20	8,444	5.9	51,192	35.6	59,636	41.4	45,096,854	562,335,672	607,432,526
20-Jan-20	8,318	5.8	50,468	35.0	58,786	40.8	45,105,172	562,386,140	607,491,312
21-Jan-20	7,994	5.6	49,219	34.2	57,213	39.7	45,113,166	562,435,359	607,548,525
22-Jan-20	8,116	5.6	48,627	33.8	56,743	39.4	45,121,282	562,483,986	607,605,268
23-Jan-20	8,047	5.6	48,538	33.7	56,585	39.3	45,129,329	562,532,524	607,661,853
24-Jan-20	7,877	5.5	46,969	32.6	54,846	38.1	45,137,206	562,579,493	607,716,699
25-Jan-20	7,972	5.5	45,674	31.7	53,646	37.3	45,145,178	562,625,167	607,770,345
26-Jan-20	7,805	5.4	47,281	32.8	55,086	38.3	45,152,983	562,672,448	607,825,431
27-Jan-20	7,843	5.4	46,567	32.3	54,410	37.8	45,160,826	562,719,015	607,879,841
28-Jan-20	7,620	5.3	48,222	33.5	55,842	38.8	45,168,446	562,767,237	607,935,683
29-Jan-20	7,636	5.3	47,753	33.2	55,389	38.5	45,176,082	562,814,990	607,991,072
30-Jan-20	7,457	5.2	46,849	32.5	54,306	37.7	45,183,539	562,861,839	608,045,378
31-Jan-20	7,592	5.3	46,126	32.0	53,718	37.3	45,191,131	562,907,965	608,099,096
1-Feb-20	7,275	5.1	44,786	31.1	52,061	36.2	45,198,406	562,952,751	608,151,157
2-Feb-20	7,328	5.1	45,196	31.4	52,524	36.5	45,205,734	562,997,947	608,203,681
3-Feb-20	7,006	4.9	47,248	32.8	54,254	37.7	45,212,740	563,045,195	608,257,935
4-Feb-20	7,095	4.9	45,095	31.3	52,190	36.2	45,219,835	563,090,290	608,310,125
5-Feb-20	6,801	4.7	45,845	31.8	52,646	36.6	45,226,636	563,136,135	608,362,771
6-Feb-20	6,947	4.8	42,691	29.6	49,638	34.5	45,233,583	563,178,826	608,412,409
7-Feb-20	6,823	4.7	45,159	31.4	51,982	36.1	45,240,406	563,223,985	608,464,391

Former IBM Kingston Site (TechCity Facility)
Groundwater Collection System and North Parking Lot Area Extraction Data
Last Updated: *3/2/2021*

Date	NPLA PS1 & PS2 Daily Flow (gal)	Average Pumping Rate (NPLA) (gpm)	Total GWCS Daily Flow (gal)	Average Pumping Rate (GWCS) (gpm)	Average Daily Flow Treatment System (gal)	Average Pumping Rate Treatment Sys (gpm)	Cumulative Gallons Pumped (NPLA only)	Cumulative Gallons Pumped (GWCS only)	Cumulative Gallons Pumped (Overall)
8-Feb-20	6,842	4.8	47,276	32.8	54,118	37.6	45,247,248	563,271,261	608,518,509
9-Feb-20	6,728	4.7	45,202	31.4	51,930	36.1	45,253,976	563,316,463	608,570,439
10-Feb-20	6,706	4.7	45,642	31.7	52,348	36.4	45,260,682	563,362,105	608,622,787
11-Feb-20	6,645	4.6	45,117	31.3	51,762	35.9	45,267,327	563,407,222	608,674,549
12-Feb-20	6,474	4.5	47,165	32.8	53,639	37.2	45,273,801	563,454,387	608,728,188
13-Feb-20	6,427	4.5	46,617	32.4	53,044	36.8	45,280,228	563,501,004	608,781,232
14-Feb-20	6,348	4.4	49,774	34.6	56,122	39.0	45,286,576	563,550,778	608,837,354
15-Feb-20	6,240	4.3	49,356	34.3	55,596	38.6	45,292,816	563,600,134	608,892,950
16-Feb-20	5,954	4.1	49,940	34.7	55,894	38.8	45,298,770	563,650,074	608,948,844
17-Feb-20	5,850	4.1	51,975	36.1	57,825	40.2	45,304,620	563,702,049	609,006,669
18-Feb-20	5,654	3.9	50,460	35.0	56,114	39.0	45,310,274	563,752,509	609,062,783
19-Feb-20	5,684	3.9	52,251	36.3	57,935	40.2	45,315,958	563,804,760	609,120,718
20-Feb-20	5,496	3.8	50,866	35.3	56,362	39.1	45,321,454	563,855,626	609,177,080
21-Feb-20	5,436	3.8	50,532	35.1	55,968	38.9	45,326,890	563,906,158	609,233,048
22-Feb-20	5,310	3.7	49,587	34.4	54,897	38.1	45,332,200	563,955,745	609,287,945
23-Feb-20	5,167	3.6	49,674	34.5	54,841	38.1	45,337,367	564,005,419	609,342,786
24-Feb-20	5,110	3.5	48,179	33.5	53,289	37.0	45,342,477	564,053,598	609,396,075
25-Feb-20	5,211	3.6	48,906	34.0	54,117	37.6	45,347,688	564,102,504	609,450,192
26-Feb-20	4,908	3.4	46,845	32.5	51,753	35.9	45,352,596	564,149,349	609,501,945
27-Feb-20	5,221	3.6	47,920	33.3	53,141	36.9	45,357,817	564,197,269	609,555,086
28-Feb-20	5,075	3.5	47,924	33.3	52,999	36.8	45,362,892	564,245,193	609,608,085
29-Feb-20	4,886	3.4	48,628	33.8	53,514	37.2	45,367,778	564,293,821	609,661,599
1-Mar-20	4,805	3.3	47,969	33.3	52,774	36.6	45,372,583	564,341,790	609,714,373
2-Mar-20	4,968	3.5	45,789	31.8	50,757	35.2	45,377,551	564,387,579	609,765,130
3-Mar-20	4,607	3.2	45,957	31.9	50,564	35.1	45,382,158	564,433,536	609,815,694
4-Mar-20	4,728	3.3	48,311	33.5	53,039	36.8	45,386,886	564,481,847	609,868,733
5-Mar-20	4,580	3.2	47,258	32.8	51,838	36.0	45,391,466	564,529,105	609,920,571
6-Mar-20	4,712	3.3	46,274	32.1	50,986	35.4	45,396,178	564,575,379	609,971,557
7-Mar-20	4,434	3.1	47,127	32.7	51,561	35.8	45,400,612	564,622,506	610,023,118
8-Mar-20	4,393	3.1	45,924	31.9	50,317	34.9	45,405,005	564,668,430	610,073,435
9-Mar-20	4,330	3.0	45,635	31.7	49,965	34.7	45,409,335	564,714,065	610,123,400
10-Mar-20	4,288	3.0	44,701	31.0	48,989	34.0	45,413,623	564,758,766	610,172,389
11-Mar-20	4,211	2.9	45,435	31.6	49,646	34.5	45,417,834	564,804,201	610,222,035
12-Mar-20	4,163	2.9	44,607	31.0	48,770	33.9	45,421,997	564,848,808	610,270,805
13-Mar-20	4,256	3.0	44,639	31.0	48,895	34.0	45,426,253	564,893,447	610,319,700
14-Mar-20	4,217	2.9	45,683	31.7	49,900	34.7	45,430,470	564,939,130	610,369,600
15-Mar-20	4,236	2.9	44,731	31.1	48,967	34.0	45,434,706	564,983,861	610,418,567
16-Mar-20	4,096	2.8	44,128	30.6	48,224	33.5	45,438,802	565,027,989	610,466,791

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17-Mar-20	4,041	2.8	44,124	30.6	48,165	33.4	45,442,843	565,072,113	610,514,956
18-Mar-20	4,200	2.9	44,284	30.8	48,484	33.7	45,447,043	565,116,397	610,563,440
19-Mar-20	4,075	2.8	43,834	30.4	47,909	33.3	45,451,118	565,160,231	610,611,349
20-Mar-20	4,083	2.8	43,659	30.3	47,742	33.2	45,455,201	565,203,890	610,659,091
21-Mar-20	4,093	2.8	45,147	31.4	49,240	34.2	45,459,294	565,249,037	610,708,331
22-Mar-20	4,027	2.8	44,757	31.1	48,784	33.9	45,463,321	565,293,794	610,757,115
23-Mar-20	4,088	2.8	43,870	30.5	47,958	33.3	45,467,409	565,337,664	610,805,073
24-Mar-20	4,109	2.9	45,232	31.4	49,341	34.3	45,471,518	565,382,896	610,854,414
25-Mar-20	3,978	2.8	45,428	31.5	49,406	34.3	45,475,496	565,428,324	610,903,820
26-Mar-20	3,993	2.8	45,340	31.5	49,333	34.3	45,479,489	565,473,664	610,953,153
27-Mar-20	3,795	2.6	48,653	33.8	52,448	36.4	45,483,284	565,522,317	611,005,601
28-Mar-20	3,738	2.6	47,776	33.2	51,514	35.8	45,487,022	565,570,093	611,057,115
29-Mar-20	3,774	2.6	47,501	33.0	51,275	35.6	45,490,796	565,617,594	611,108,390
30-Mar-20	3,592	2.5	47,038	32.7	50,630	35.2	45,494,388	565,664,632	611,159,020
31-Mar-20	3,520	2.4	49,334	34.3	52,854	36.7	45,497,908	565,713,966	611,211,874
1-Apr-20	3,398	2.4	49,066	34.1	52,464	36.4	45,501,306	565,763,032	611,264,338
2-Apr-20	3,295	2.3	49,192	34.2	52,487	36.4	45,504,601	565,812,224	611,316,825
3-Apr-20	3,105	2.2	50,898	35.3	54,003	37.5	45,507,706	565,863,122	611,370,828
4-Apr-20	3,086	2.1	50,919	35.4	54,005	37.5	45,510,792	565,914,041	611,424,833
5-Apr-20	3,121	2.2	51,053	35.5	54,174	37.6	45,513,913	565,965,094	611,479,007
6-Apr-20	2,777	1.9	50,703	35.2	53,480	37.1	45,516,690	566,015,797	611,532,487
7-Apr-20	2,948	2.0	48,651	33.8	51,599	35.8	45,519,638	566,064,448	611,584,086
8-Apr-20	2,889	2.0	50,024	34.7	52,913	36.7	45,522,527	566,114,472	611,636,999
9-Apr-20	3,003	2.1	48,340	33.6	51,343	35.7	45,525,530	566,162,812	611,688,342
10-Apr-20	2,854	2.0	50,754	35.2	53,608	37.2	45,528,384	566,213,566	611,741,950
11-Apr-20	2,793	1.9	51,910	36.0	54,703	38.0	45,531,177	566,265,476	611,796,653
12-Apr-20	2,883	2.0	50,425	35.0	53,308	37.0	45,534,060	566,315,901	611,849,961
13-Apr-20	2,616	1.8	47,661	33.1	50,277	34.9	45,536,676	566,363,562	611,900,238
14-Apr-20	3,419	2.4	53,570	37.2	56,989	39.6	45,540,095	566,417,132	611,957,227
15-Apr-20	3,006	2.1	56,356	39.1	59,362	41.2	45,543,101	566,473,488	612,016,589
16-Apr-20	2,719	1.9	59,232	41.1	61,951	43.0	45,545,820	566,532,720	612,078,540
17-Apr-20	2,578	1.8	58,198	40.4	60,776	42.2	45,548,398	566,590,918	612,139,316
18-Apr-20	2,662	1.8	58,926	40.9	61,588	42.8	45,551,060	566,649,844	612,200,904
19-Apr-20	2,374	1.6	58,352	40.5	60,726	42.2	45,553,434	566,708,196	612,261,630
20-Apr-20	2,254	1.6	58,803	40.8	61,057	42.4	45,555,688	566,766,999	612,322,687
21-Apr-20	2,156	1.5	58,064	40.3	60,220	41.8	45,557,844	566,825,063	612,382,907
22-Apr-20	2,170	1.5	59,346	41.2	61,516	42.7	45,560,014	566,884,409	612,444,423
23-Apr-20	3,602	2.5	57,041	39.6	60,643	42.1	45,563,616	566,941,450	612,505,066

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24-Apr-20	3,607	2.5	56,914	39.5	60,521	42.0	45,567,223	566,998,364	612,565,587
25-Apr-20	3,430	2.4	56,719	39.4	60,149	41.8	45,570,653	567,055,083	612,625,736
26-Apr-20	3,675	2.6	54,981	38.2	58,656	40.7	45,574,328	567,110,064	612,684,392
27-Apr-20	3,705	2.6	55,925	38.8	59,630	41.4	45,578,033	567,165,989	612,744,022
28-Apr-20	3,581	2.5	55,155	38.3	58,736	40.8	45,581,614	567,221,144	612,802,758
29-Apr-20	3,634	2.5	54,340	37.7	57,974	40.3	45,585,248	567,275,484	612,860,732
30-Apr-20	3,671	2.5	53,000	36.8	56,671	39.4	45,588,919	567,328,484	612,917,403
1-May-20	4,074	2.8	54,327	37.7	58,401	40.6	45,592,993	567,382,811	612,975,804
2-May-20	4,188	2.9	57,329	39.8	61,517	42.7	45,597,181	567,440,140	613,037,321
3-May-20	3,726	2.6	57,454	39.9	61,180	42.5	45,600,907	567,497,594	613,098,501
4-May-20	3,617	2.5	59,376	41.2	62,993	43.7	45,604,524	567,556,970	613,161,494
5-May-20	3,309	2.3	60,065	41.7	63,374	44.0	45,607,833	567,617,035	613,224,868
6-May-20	3,051	2.1	58,804	40.8	61,855	43.0	45,610,884	567,675,839	613,286,723
7-May-20	3,201	2.2	59,576	41.4	62,777	43.6	45,614,085	567,735,415	613,349,500
8-May-20	2,986	2.1	58,485	40.6	61,471	42.7	45,617,071	567,793,900	613,410,971
9-May-20	2,967	2.1	59,390	41.2	62,357	43.3	45,620,038	567,853,290	613,473,328
10-May-20	3,006	2.1	57,546	40.0	60,552	42.1	45,623,044	567,910,836	613,533,880
11-May-20	2,907	2.0	57,173	39.7	60,080	41.7	45,625,951	567,968,009	613,593,960
12-May-20	547	0.4	57,906	40.2	58,453	40.6	45,626,498	568,025,915	613,652,413
13-May-20	1,299	0.9	56,504	39.2	57,803	40.1	45,627,797	568,082,419	613,710,216
14-May-20	2,023	1.4	54,854	38.1	56,877	39.5	45,629,820	568,137,273	613,767,093
15-May-20	2,361	1.6	54,511	37.9	56,872	39.5	45,632,181	568,191,784	613,823,965
16-May-20	2,275	1.6	55,482	38.5	57,757	40.1	45,634,456	568,247,266	613,881,722
17-May-20	2,232	1.6	54,166	37.6	56,398	39.2	45,636,688	568,301,432	613,938,120
18-May-20	2,205	1.5	53,166	36.9	55,371	38.5	45,638,893	568,354,598	613,993,491
19-May-20	2,323	1.6	53,040	36.8	55,363	38.4	45,641,216	568,407,638	614,048,854
20-May-20	2,235	1.6	52,655	36.6	54,890	38.1	45,643,451	568,460,293	614,103,744
21-May-20	2,241	1.6	51,872	36.0	54,113	37.6	45,645,692	568,512,165	614,157,857
22-May-20	2,262	1.6	50,991	35.4	53,253	37.0	45,647,954	568,563,156	614,211,110
23-May-20	2,191	1.5	51,558	35.8	53,749	37.3	45,650,145	568,614,714	614,264,859
24-May-20	2,233	1.6	51,179	35.5	53,412	37.1	45,652,378	568,665,893	614,318,271
25-May-20	2,228	1.5	50,229	34.9	52,457	36.4	45,654,606	568,716,122	614,370,728
26-May-20	2,212	1.5	49,650	34.5	51,862	36.0	45,656,818	568,765,772	614,422,590
27-May-20	2,157	1.5	49,435	34.3	51,592	35.8	45,658,975	568,815,207	614,474,182
28-May-20	2,301	1.6	48,697	33.8	50,998	35.4	45,661,276	568,863,904	614,525,180
29-May-20	2,182	1.5	48,149	33.4	50,331	35.0	45,663,458	568,912,053	614,575,511
30-May-20	2,251	1.6	48,624	33.8	50,875	35.3	45,665,709	568,960,677	614,626,386
31-May-20	2,194	1.5	48,423	33.6	50,617	35.2	45,667,903	569,009,100	614,677,003

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1-Jun-20	2,195	1.5	47,450	33.0	49,645	34.5	45,670,098	569,056,550	614,726,648
2-Jun-20	2,192	1.5	46,021	32.0	48,213	33.5	45,672,290	569,102,571	614,774,861
3-Jun-20	2,196	1.5	45,770	31.8	47,966	33.3	45,674,486	569,148,341	614,822,827
4-Jun-20	2,296	1.6	46,881	32.6	49,177	34.2	45,676,782	569,195,222	614,872,004
5-Jun-20	2,160	1.5	46,018	32.0	48,178	33.5	45,678,942	569,241,240	614,920,182
6-Jun-20	2,171	1.5	45,362	31.5	47,533	33.0	45,681,113	569,286,602	614,967,715
7-Jun-20	2,242	1.6	45,076	31.3	47,318	32.9	45,683,355	569,331,678	615,015,033
8-Jun-20	2,251	1.6	44,884	31.2	47,135	32.7	45,685,606	569,376,562	615,062,168
9-Jun-20	2,183	1.5	43,655	30.3	45,838	31.8	45,687,789	569,420,217	615,108,006
10-Jun-20	1,162	0.8	24,186	16.8	25,348	17.6	45,688,951	569,444,403	615,133,354
11-Jun-20	1,125	0.8	41,696	29.0	42,821	29.7	45,690,076	569,486,099	615,176,175
12-Jun-20	1,820	1.3	43,516	30.2	45,336	31.5	45,691,896	569,529,615	615,221,511
13-Jun-20	2,877	2.0	50,918	35.4	53,795	37.4	45,694,773	569,580,533	615,275,306
14-Jun-20	568	0.4	46,205	32.1	46,773	32.5	45,695,341	569,626,738	615,322,079
15-Jun-20	738	0.5	45,011	31.3	45,749	31.8	45,696,079	569,671,749	615,367,828
16-Jun-20	2,206	1.5	44,090	30.6	46,296	32.2	45,698,285	569,715,839	615,414,124
17-Jun-20	2,093	1.5	43,175	30.0	45,268	31.4	45,700,378	569,759,014	615,459,392
18-Jun-20	2,104	1.5	42,830	29.7	44,934	31.2	45,702,482	569,801,844	615,504,326
19-Jun-20	2,244	1.6	42,020	29.2	44,264	30.7	45,704,726	569,843,864	615,548,590
20-Jun-20	2,256	1.6	41,863	29.1	44,119	30.6	45,706,982	569,885,727	615,592,709
21-Jun-20	2,274	1.6	40,397	28.1	42,671	29.6	45,709,256	569,926,124	615,635,380
22-Jun-20	2,278	1.6	40,929	28.4	43,207	30.0	45,711,534	569,967,053	615,678,587
23-Jun-20	2,264	1.6	39,059	27.1	41,323	28.7	45,713,798	570,006,112	615,719,910
24-Jun-20	2,277	1.6	40,311	28.0	42,588	29.6	45,716,075	570,046,423	615,762,498
25-Jun-20	2,274	1.6	40,281	28.0	42,555	29.6	45,718,349	570,086,704	615,805,053
26-Jun-20	2,193	1.5	39,345	27.3	41,538	28.8	45,720,542	570,126,049	615,846,591
27-Jun-20	2,331	1.6	39,053	27.1	41,384	28.7	45,722,873	570,165,102	615,887,975
28-Jun-20	2,355	1.6	39,808	27.6	42,163	29.3	45,725,228	570,204,910	615,930,138
29-Jun-20	2,391	1.7	39,622	27.5	42,013	29.2	45,727,619	570,244,532	615,972,151
30-Jun-20	2,465	1.7	39,566	27.5	42,031	29.2	45,730,084	570,284,098	616,014,182
1-Jul-20	2,487	1.7	38,820	27.0	41,307	28.7	45,732,571	570,322,918	616,055,489
2-Jul-20	2,506	1.7	38,953	27.1	41,459	28.8	45,735,077	570,361,871	616,096,948
3-Jul-20	3,243	2.3	39,121	27.2	42,364	29.4	45,738,320	570,400,992	616,139,312
4-Jul-20	2,650	1.8	39,117	27.2	41,767	29.0	45,740,970	570,440,109	616,181,079
5-Jul-20	2,452	1.7	39,362	27.3	41,814	29.0	45,743,422	570,479,471	616,222,893
6-Jul-20	2,286	1.6	40,054	27.8	42,340	29.4	45,745,708	570,519,525	616,265,233
7-Jul-20	2,551	1.8	39,418	27.4	41,969	29.1	45,748,259	570,558,943	616,307,202
8-Jul-20	2,455	1.7	38,519	26.7	40,974	28.5	45,750,714	570,597,462	616,348,176

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9-Jul-20	2,539	1.8	39,144	27.2	41,683	28.9	45,753,253	570,636,606	616,389,859
10-Jul-20	2,296	1.6	37,469	26.0	39,765	27.6	45,755,549	570,674,075	616,429,624
11-Jul-20	2,543	1.8	38,254	26.6	40,797	28.3	45,758,092	570,712,329	616,470,421
12-Jul-20	2,506	1.7	38,301	26.6	40,807	28.3	45,760,598	570,750,630	616,511,228
13-Jul-20	2,339	1.6	39,060	27.1	41,399	28.7	45,762,937	570,789,690	616,552,627
14-Jul-20	2,555	1.8	38,932	27.0	41,487	28.8	45,765,492	570,828,622	616,594,114
15-Jul-20	2,510	1.7	38,448	26.7	40,958	28.4	45,768,002	570,867,070	616,635,072
16-Jul-20	2,381	1.7	38,158	26.5	40,539	28.2	45,770,383	570,905,228	616,675,611
17-Jul-20	2,496	1.7	37,177	25.8	39,673	27.6	45,772,879	570,942,405	616,715,284
18-Jul-20	2,529	1.8	37,555	26.1	40,084	27.8	45,775,408	570,979,960	616,755,368
19-Jul-20	2,459	1.7	36,901	25.6	39,360	27.3	45,777,867	571,016,861	616,794,728
20-Jul-20	2,431	1.7	36,953	25.7	39,384	27.4	45,780,298	571,053,814	616,834,112
21-Jul-20	2,549	1.8	36,693	25.5	39,242	27.3	45,782,847	571,090,507	616,873,354
22-Jul-20	2,398	1.7	36,216	25.2	38,614	26.8	45,785,245	571,126,723	616,911,968
23-Jul-20	2,317	1.6	36,216	25.2	38,533	26.8	45,787,562	571,162,939	616,950,501
24-Jul-20	2,603	1.8	36,708	25.5	39,311	27.3	45,790,165	571,199,647	616,989,812
25-Jul-20	2,327	1.6	35,982	25.0	38,309	26.6	45,792,492	571,235,629	617,028,121
26-Jul-20	2,546	1.8	34,693	24.1	37,239	25.9	45,795,038	571,270,322	617,065,360
27-Jul-20	2,453	1.7	34,678	24.1	37,131	25.8	45,797,491	571,305,000	617,102,491
28-Jul-20	2,456	1.7	35,788	24.9	38,244	26.6	45,799,947	571,340,788	617,140,735
29-Jul-20	2,452	1.7	34,585	24.0	37,037	25.7	45,802,399	571,375,373	617,177,772
30-Jul-20	2,325	1.6	34,552	24.0	36,877	25.6	45,804,724	571,409,925	617,214,649
31-Jul-20	2,584	1.8	34,305	23.8	36,889	25.6	45,807,308	571,444,230	617,251,538
1-Aug-20	2,323	1.6	34,057	23.7	36,380	25.3	45,809,631	571,478,287	617,287,918
2-Aug-20	2,558	1.8	33,972	23.6	36,530	25.4	45,812,189	571,512,259	617,324,448
3-Aug-20	2,320	1.6	34,454	23.9	36,774	25.5	45,814,509	571,546,713	617,361,222
4-Aug-20	4,294	3.0	33,750	23.4	38,044	26.4	45,818,803	571,580,463	617,399,266
5-Aug-20	2,805	1.9	36,203	25.1	39,008	27.1	45,821,608	571,616,666	617,438,274
6-Aug-20	2,478	1.7	36,171	25.1	38,649	26.8	45,824,086	571,652,837	617,476,923
7-Aug-20	2,551	1.8	37,048	25.7	39,599	27.5	45,826,637	571,689,885	617,516,522
8-Aug-20	2,528	1.8	36,017	25.0	38,545	26.8	45,829,165	571,725,902	617,555,067
9-Aug-20	2,430	1.7	36,076	25.1	38,506	26.7	45,831,595	571,761,978	617,593,573
10-Aug-20	3,496	2.4	35,894	24.9	39,390	27.4	45,835,091	571,797,872	617,632,963
11-Aug-20	3,138	2.2	36,616	25.4	39,754	27.6	45,838,229	571,834,488	617,672,717
12-Aug-20	2,479	1.7	38,965	27.1	41,444	28.8	45,840,708	571,873,453	617,714,161
13-Aug-20	2,555	1.8	38,274	26.6	40,829	28.4	45,843,263	571,911,727	617,754,990
14-Aug-20	2,480	1.7	38,307	26.6	40,787	28.3	45,845,743	571,950,034	617,795,777
15-Aug-20	2,310	1.6	38,368	26.6	40,678	28.2	45,848,053	571,988,402	617,836,455

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16-Aug-20	2,597	1.8	38,086	26.4	40,683	28.3	45,850,650	572,026,488	617,877,138
17-Aug-20	2,521	1.8	37,836	26.3	40,357	28.0	45,853,171	572,064,324	617,917,495
18-Aug-20	2,092	1.5	37,703	26.2	39,795	27.6	45,855,263	572,102,027	617,957,290
19-Aug-20	2,566	1.8	38,238	26.6	40,804	28.3	45,857,829	572,140,265	617,998,094
20-Aug-20	2,411	1.7	37,415	26.0	39,826	27.7	45,860,240	572,177,680	618,037,920
21-Aug-20	2,410	1.7	36,286	25.2	38,696	26.9	45,862,650	572,213,966	618,076,616
22-Aug-20	2,410	1.7	36,747	25.5	39,157	27.2	45,865,060	572,250,713	618,115,773
23-Aug-20	2,469	1.7	36,769	25.5	39,238	27.2	45,867,529	572,287,482	618,155,011
24-Aug-20	2,422	1.7	35,187	24.4	37,609	26.1	45,869,951	572,322,669	618,192,620
25-Aug-20	2,356	1.6	35,660	24.8	38,016	26.4	45,872,307	572,358,329	618,230,636
26-Aug-20	2,045	1.4	35,692	24.8	37,737	26.2	45,874,352	572,394,021	618,268,373
27-Aug-20	2,662	1.8	27,581	19.2	30,243	21.0	45,877,014	572,421,602	618,298,616
28-Aug-20	2,005	1.4	15,536	10.8	17,541	12.2	45,879,019	572,437,138	618,316,157
29-Aug-20	3,027	2.1	35,675	24.8	38,702	26.9	45,882,046	572,472,813	618,354,859
30-Aug-20	2,839	2.0	38,810	27.0	41,649	28.9	45,884,885	572,511,623	618,396,508
31-Aug-20	2,429	1.7	39,276	27.3	41,705	29.0	45,887,314	572,550,899	618,438,213
1-Sep-20	2,416	1.7	38,975	27.1	41,391	28.7	45,889,730	572,589,874	618,479,604
2-Sep-20	2,628	1.8	38,184	26.5	40,812	28.3	45,892,358	572,628,058	618,520,416
3-Sep-20	4,377	3.0	40,067	27.8	44,444	30.9	45,896,735	572,668,125	618,564,860
4-Sep-20	2,867	2.0	43,906	30.5	46,773	32.5	45,899,602	572,712,031	618,611,633
5-Sep-20	1,989	1.4	52,333	36.3	54,322	37.7	45,901,591	572,764,364	618,665,955
6-Sep-20	1,680	1.2	56,262	39.1	57,942	40.2	45,903,271	572,820,626	618,723,897
7-Sep-20	1,680	1.2	56,262	39.1	57,942	40.2	45,904,951	572,876,888	618,781,839
8-Sep-20	2,050	1.4	49,606	34.4	51,656	35.9	45,907,001	572,926,494	618,833,495
9-Sep-20	2,477	1.7	44,507	30.9	46,984	32.6	45,909,478	572,971,001	618,880,479
10-Sep-20	2,211	1.5	43,706	30.4	45,917	31.9	45,911,689	573,014,707	618,926,396
11-Sep-20	2,422	1.7	44,138	30.7	46,560	32.3	45,914,111	573,058,845	618,972,956
12-Sep-20	2,376	1.7	43,345	30.1	45,721	31.8	45,916,487	573,102,190	619,018,677
13-Sep-20	2,201	1.5	43,178	30.0	45,379	31.5	45,918,688	573,145,368	619,064,056
14-Sep-20	2,596	1.8	43,560	30.3	46,156	32.1	45,921,284	573,188,928	619,110,212
15-Sep-20	2,456	1.7	41,679	28.9	44,135	30.6	45,923,740	573,230,607	619,154,347
16-Sep-20	2,335	1.6	42,441	29.5	44,776	31.1	45,926,075	573,273,048	619,199,123
17-Sep-20	2,342	1.6	41,484	28.8	43,826	30.4	45,928,417	573,314,532	619,242,949
18-Sep-20	2,351	1.6	41,765	29.0	44,116	30.6	45,930,768	573,356,297	619,287,065
19-Sep-20	2,327	1.6	42,107	29.2	44,434	30.9	45,933,095	573,398,404	619,331,499
20-Sep-20	2,308	1.6	41,364	28.7	43,672	30.3	45,935,403	573,439,768	619,375,171
21-Sep-20	2,320	1.6	40,226	27.9	42,546	29.5	45,937,723	573,479,994	619,417,717
22-Sep-20	2,330	1.6	39,151	27.2	41,481	28.8	45,940,053	573,519,145	619,459,198

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23-Sep-20	2,249	1.6	40,166	27.9	42,415	29.5	45,942,302	573,559,311	619,501,613
24-Sep-20	2,330	1.6	39,651	27.5	41,981	29.2	45,944,632	573,598,962	619,543,594
25-Sep-20	2,233	1.6	39,790	27.6	42,023	29.2	45,946,865	573,638,752	619,585,617
26-Sep-20	2,331	1.6	38,582	26.8	40,913	28.4	45,949,196	573,677,334	619,626,530
27-Sep-20	2,282	1.6	38,257	26.6	40,539	28.2	45,951,478	573,715,591	619,667,069
28-Sep-20	2,262	1.6	38,529	26.8	40,791	28.3	45,953,740	573,754,120	619,707,860
29-Sep-20	2,315	1.6	37,245	25.9	39,560	27.5	45,956,055	573,791,365	619,747,420
30-Sep-20	4,098	2.8	39,905	27.7	44,003	30.6	45,960,153	573,831,270	619,791,423
1-Oct-20	2,443	1.7	41,140	28.6	43,583	30.3	45,962,596	573,872,410	619,835,006
2-Oct-20	2,253	1.6	41,423	28.8	43,676	30.3	45,964,849	573,913,833	619,878,682
3-Oct-20	2,339	1.6	42,072	29.2	44,411	30.8	45,967,188	573,955,905	619,923,093
4-Oct-20	2,249	1.6	41,087	28.5	43,336	30.1	45,969,437	573,996,992	619,966,429
5-Oct-20	2,352	1.6	40,802	28.3	43,154	30.0	45,971,789	574,037,794	620,009,583
6-Oct-20	2,276	1.6	40,399	28.1	42,675	29.6	45,974,065	574,078,193	620,052,258
7-Oct-20	2,183	1.5	39,225	27.2	41,408	28.8	45,976,248	574,117,418	620,093,666
8-Oct-20	2,338	1.6	41,416	28.8	43,754	30.4	45,978,586	574,158,834	620,137,420
9-Oct-20	2,257	1.6	39,619	27.5	41,876	29.1	45,980,843	574,198,453	620,179,296
10-Oct-20	2,260	1.6	38,690	26.9	40,950	28.4	45,983,103	574,237,143	620,220,246
11-Oct-20	2,247	1.6	40,369	28.0	42,616	29.6	45,985,350	574,277,512	620,262,862
12-Oct-20	2,252	1.6	38,522	26.8	40,774	28.3	45,987,602	574,316,034	620,303,636
13-Oct-20	2,245	1.6	38,092	26.5	40,337	28.0	45,989,847	574,354,126	620,343,973
14-Oct-20	2,328	1.6	38,617	26.8	40,945	28.4	45,992,175	574,392,743	620,384,918
15-Oct-20	2,249	1.6	38,187	26.5	40,436	28.1	45,994,424	574,430,930	620,425,354
16-Oct-20	2,323	1.6	38,145	26.5	40,468	28.1	45,996,747	574,469,075	620,465,822
17-Oct-20	2,240	1.6	38,587	26.8	40,827	28.4	45,998,987	574,507,662	620,506,649
18-Oct-20	2,317	1.6	38,130	26.5	40,447	28.1	46,001,304	574,545,792	620,547,096
19-Oct-20	2,312	1.6	37,651	26.1	39,963	27.8	46,003,616	574,583,443	620,587,059
20-Oct-20	2,320	1.6	37,754	26.2	40,074	27.8	46,005,936	574,621,197	620,627,133
21-Oct-20	2,320	1.6	37,873	26.3	40,193	27.9	46,008,256	574,659,070	620,667,326
22-Oct-20	2,249	1.6	37,614	26.1	39,863	27.7	46,010,505	574,696,684	620,707,189
23-Oct-20	2,175	1.5	36,602	25.4	38,777	26.9	46,012,680	574,733,286	620,745,966
24-Oct-20	2,406	1.7	37,464	26.0	39,870	27.7	46,015,086	574,770,750	620,785,836
25-Oct-20	2,210	1.5	36,935	25.6	39,145	27.2	46,017,296	574,807,685	620,824,981
26-Oct-20	2,387	1.7	36,712	25.5	39,099	27.2	46,019,683	574,844,397	620,864,080
27-Oct-20	2,217	1.5	36,918	25.6	39,135	27.2	46,021,900	574,881,315	620,903,215
28-Oct-20	2,251	1.6	36,561	25.4	38,812	27.0	46,024,151	574,917,876	620,942,027
29-Oct-20	2,459	1.7	35,405	24.6	37,864	26.3	46,026,610	574,953,281	620,979,891
30-Oct-20	2,748	1.9	38,434	26.7	41,182	28.6	46,029,358	574,991,715	621,021,073

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31-Oct-20	2,366	1.6	39,052	27.1	41,418	28.8	46,031,724	575,030,767	621,062,491
1-Nov-20	2,379	1.7	36,112	26.7	38,490	26.7	46,034,103	575,069,257	621,100,981
2-Nov-20	2,338	1.6	39,230	28.9	41,568	28.9	46,036,441	575,110,825	621,142,549
3-Nov-20	2,221	1.5	41,229	30.2	43,450	30.2	46,038,662	575,154,276	621,185,999
4-Nov-20	2,243	1.6	40,190	29.5	42,433	29.5	46,040,905	575,196,709	621,228,433
5-Nov-20	2,362	1.6	40,601	29.8	42,963	29.8	46,043,266	575,239,671	621,271,395
6-Nov-20	2,137	1.5	40,409	29.5	42,546	29.5	46,045,404	575,282,217	621,313,941
7-Nov-20	2,365	1.6	40,723	29.9	43,088	29.9	46,047,769	575,325,305	621,357,029
8-Nov-20	2,104	1.5	40,738	29.8	42,841	29.8	46,049,872	575,368,146	621,399,870
9-Nov-20	2,360	1.6	40,051	29.5	42,410	29.5	46,052,232	575,410,557	621,442,281
10-Nov-20	2,360	1.6	40,419	29.7	42,780	29.7	46,054,593	575,453,336	621,485,060
11-Nov-20	2,122	1.5	39,454	28.9	41,576	28.9	46,056,714	575,494,912	621,526,636
12-Nov-20	2,332	1.6	40,386	29.7	42,718	29.7	46,059,046	575,537,630	621,569,354
13-Nov-20	2,331	1.6	39,165	28.8	41,496	28.8	46,061,377	575,579,126	621,610,850
14-Nov-20	2,121	1.5	39,869	29.2	41,990	29.2	46,063,498	575,621,117	621,652,841
15-Nov-20	2,345	1.6	38,204	28.2	40,549	28.2	46,065,843	575,661,666	621,693,390
16-Nov-20	2,321	1.6	39,468	29.0	41,789	29.0	46,068,164	575,703,454	621,735,178
17-Nov-20	2,307	1.6	39,598	29.1	41,905	29.1	46,070,471	575,745,359	621,777,083
18-Nov-20	2,098	1.5	40,278	29.4	42,376	29.4	46,072,568	575,787,735	621,819,459
19-Nov-20	2,333	1.6	38,950	28.7	41,283	28.7	46,074,901	575,829,019	621,860,743
20-Nov-20	2,266	1.6	38,761	28.5	41,027	28.5	46,077,168	575,870,045	621,901,769
21-Nov-20	2,247	1.6	39,166	28.8	41,414	28.8	46,079,415	575,911,459	621,943,183
22-Nov-20	2,231	1.5	38,078	28.0	40,308	28.0	46,081,646	575,951,767	621,983,491
23-Nov-20	2,262	1.6	37,232	27.4	39,495	27.4	46,083,908	575,991,262	622,022,986
24-Nov-20	2,281	1.6	37,411	27.6	39,691	27.6	46,086,189	576,030,954	622,062,677
25-Nov-20	2,205	1.5	38,548	28.3	40,753	28.3	46,088,394	576,071,707	622,103,431
26-Nov-20	2,223	1.5	38,548	28.3	40,771	28.3	46,090,617	576,112,478	622,144,202
27-Nov-20	2,211	1.5	38,344	28.2	40,556	28.2	46,092,828	576,153,034	622,184,758
28-Nov-20	2,234	1.6	38,687	28.4	40,921	28.4	46,095,062	576,193,955	622,225,679
29-Nov-20	2,139	1.5	39,058	28.6	41,197	28.6	46,097,201	576,235,152	622,266,876
30-Nov-20	5,245	3.6	37,906	30.0	43,151	30.0	46,102,446	576,278,303	622,310,027
1-Dec-20	3,262	2.3	49,828	36.9	53,090	36.9	46,105,708	576,331,393	622,363,117
2-Dec-20	2,566	1.8	55,290	40.2	57,856	40.2	46,108,274	576,389,249	622,420,973
3-Dec-20	2,300	1.6	56,030	40.5	58,330	40.5	46,110,574	576,447,579	622,479,303
4-Dec-20	2,082	1.4	54,906	39.6	56,988	39.6	46,112,656	576,504,567	622,536,291
5-Dec-20	2,132	1.5	54,962	39.6	57,094	39.6	46,114,788	576,561,661	622,593,385
6-Dec-20	2,134	1.5	54,991	39.7	57,125	39.7	46,116,922	576,618,786	622,650,510
7-Dec-20	2,031	1.4	54,002	38.9	56,033	38.9	46,118,953	576,674,819	622,706,543

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8-Dec-20	2,112	1.5	53,597	38.7	55,709	38.7	46,121,065	576,730,528	622,762,252
9-Dec-20	2,079	1.4	52,336	37.8	54,415	37.8	46,123,144	576,784,943	622,816,667
10-Dec-20	2,089	1.5	52,901	38.2	54,990	38.2	46,125,233	576,839,933	622,871,657
11-Dec-20	2,019	1.4	51,490	37.2	53,509	37.2	46,127,252	576,893,442	622,925,166
12-Dec-20	2,068	1.4	49,931	36.1	51,999	36.1	46,129,320	576,945,441	622,977,165
13-Dec-20	2,021	1.4	49,998	36.1	52,019	36.1	46,131,341	576,997,460	623,029,184
14-Dec-20	2,025	1.4	48,579	35.1	50,604	35.1	46,133,366	577,048,064	623,079,788
15-Dec-20	1,931	1.3	48,859	35.3	50,790	35.3	46,135,297	577,098,854	623,130,578
16-Dec-20	2,091	1.5	47,767	34.6	49,858	34.6	46,137,388	577,148,712	623,180,436
17-Dec-20	1,936	1.3	47,200	34.1	49,136	34.1	46,139,324	577,197,848	623,229,572
18-Dec-20	2,061	1.4	47,067	34.1	49,128	34.1	46,141,385	577,246,976	623,278,700
19-Dec-20	2,001	1.4	45,827	33.2	47,828	33.2	46,143,386	577,294,804	623,326,528
20-Dec-20	1,984	1.4	44,993	32.6	46,977	32.6	46,145,370	577,341,781	623,373,505
21-Dec-20	2,052	1.4	43,489	31.6	45,541	31.6	46,147,422	577,387,322	623,419,046
22-Dec-20	2,023	1.4	45,358	32.9	47,381	32.9	46,149,445	577,434,703	623,466,427
23-Dec-20	2,025	1.4	44,124	32.0	46,149	32.0	46,151,470	577,480,852	623,512,576
24-Dec-20	2,244	1.6	42,151	30.8	44,395	30.8	46,153,714	577,525,247	623,556,971
25-Dec-20	4,820	3.3	46,556	35.7	51,376	35.7	46,158,534	577,576,623	623,608,347
26-Dec-20	2,936	2.0	54,771	40.1	57,707	40.1	46,161,470	577,634,330	623,666,054
27-Dec-20	2,512	1.7	56,455	40.9	58,967	40.9	46,163,982	577,693,297	623,725,021
28-Dec-20	2,323	1.6	57,158	41.3	59,481	41.3	46,166,305	577,752,778	623,784,502
29-Dec-20	2,162	1.5	58,435	42.1	60,597	42.1	46,168,467	577,813,375	623,845,099
30-Dec-20	2,073	1.4	55,632	40.1	57,705	40.1	46,170,540	577,871,080	623,902,804
31-Dec-20	2,033	1.4	57,442	41.3	59,475	41.3	46,172,573	577,930,555	623,962,279

Appendix C

Groundwater Extraction and Treatment System Data Report including Flux Calculations

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/03/2020	01/09/2020	02/06/2020	02/13/2020	03/05/2020	03/12/2020
Laboratory Sample I.D.		420-165436-3	420-165784-2	420-167169-3	420-16795-2	420-168692-3	420-169124-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
TOTAL SUSPENDED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	38	31	35	37	32	32
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	26	9.2	9.6	11	10	16
1,1-DICHLOROETHYLENE	ug/l	22	4.4	4.8	5.3	4.5	14
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	22	30	34	37	33	23
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/03/2020	01/09/2020	02/06/2020	02/13/2020	03/05/2020	03/12/2020
Laboratory Sample I.D.		420-165436-3	420-165784-2	420-167169-3	420-16795-2	420-168692-3	420-169124-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	1.5	1.7	1.6	1.6	1.3
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	47 D	57 D	120 D	150 D	130 D	83 D
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/02/2020	04/09/2020	05/07/2020	05/14/2020	06/04/2020	06/16/2020
Laboratory Sample I.D.		420-170017-3	420-170385-2	420-171760-3	420-172173-2	420-173451-3	420-174261-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
TOTAL SUSPENDED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	29	39	26	24	31	38
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	11	23	6.6	9.1	11	27
1,1-DICHLOROETHYLENE	ug/l	4.9	31	4.0	3.8	4.9	22
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	35	19	29	27	33	23
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/02/2020	04/09/2020	05/07/2020	05/14/2020	06/04/2020	06/16/2020
Laboratory Sample I.D.		420-170017-3	420-170385-2	420-171760-3	420-172173-2	420-173451-3	420-174261-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	1.9	ND@1	1.7	1.9	1.7	1.1
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	100 D	110 D	98 D	110 D	110 D	93 D
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/02/2020	07/14/2020	08/06/2020	08/13/2020	09/03/2020	09/10/2020
Laboratory Sample I.D.		420-175426-3	420-176057-2	420-177744-3	420-178426-2	420-180020-3	420-180423-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
TOTAL SUSPENDED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	29	31	28	25	39	22
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	16	11	9.4	10	22	7.7
1,1-DICHLOROETHYLENE	ug/l	13	6.5	5.1	5.4	15	4.9
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	19	36	36	36	30	30
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/02/2020	07/14/2020	08/06/2020	08/13/2020	09/03/2020	09/10/2020
Laboratory Sample I.D.		420-175426-3	420-176057-2	420-177744-3	420-178426-2	420-180020-3	420-180423-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	1.1	2.4	2.0	2.0	1.4	1.8
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	56 D	110 D	230 D	120 D	130 D	150 D
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Groundwater Treatment System Effectiveness Data
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Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/01/2020	10/08/2020	11/05/2020	11/12/2020	12/04/2020	12/10/2020
Laboratory Sample I.D.		420-182155-3	420-182638-2	420-184633-3	420-185147-2	420-186658-3	420-187120-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
TOTAL SUSPENDED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	36	31	21	14	22	13
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	21	22	19	6.3	17	5.6
1,1-DICHLOROETHYLENE	ug/l	14	17	9.2	2.7	13	2.6
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	33	20	27	24	20	21
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS	GWCS UP AS
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/01/2020	10/08/2020	11/05/2020	11/12/2020	12/04/2020	12/10/2020
Laboratory Sample I.D.		420-182155-3	420-182638-2	420-184633-3	420-185147-2	420-186658-3	420-187120-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	1.4	ND@1	1.3	1.3	1.1	1.3
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	150 D	110 D	130 D	91 D	130 D	120 D
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/03/2020	02/06/2020	03/05/2020	04/02/2020	05/07/2020	06/04/2020
Laboratory Sample I.D.		420-165436-2	420-167169-2	420-168692-2	420-170017-2	420-171760-2	420-173451-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
TOTAL SUSPENDED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	42 D	11	2.6	5.5	110 D	ND@1
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	49 D	7.3	1.6	4.7	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	110 D	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	19	4.8	2.0	5.1	31	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/03/2020	02/06/2020	03/05/2020	04/02/2020	05/07/2020	06/04/2020
Laboratory Sample I.D.		420-165436-2	420-167169-2	420-168692-2	420-170017-2	420-171760-2	420-173451-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	3.5	2.0	1.7	ND@1	3.9	1.9
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	13	6.0	3.3	4.1	18	2.1
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	1.7	ND@1	ND@1	ND@1	6.5	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/02/2020	08/06/2020	09/03/2020	10/01/2020	11/05/2020	12/04/2020
Laboratory Sample I.D.		420-175426-2	420-177744-2	420-180020-2	420-182155-2	420-184633-2	420-186658-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
TOTAL SUSPENDED SOLIDS	mg/l	NA	NA	NA	NA	NA	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	9.8
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	ND@1	ND@1	1.8	ND@1	ND@1	7.7
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	ND@1	1.1	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL	NPLA INFL
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/02/2020	08/06/2020	09/03/2020	10/01/2020	11/05/2020	12/04/2020
Laboratory Sample I.D.		420-175426-2	420-177744-2	420-180020-2	420-182155-2	420-184633-2	420-186658-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	2.1	1.8	ND@1	2.0	1.2	ND@1
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	1.4	3.5	1.2	3.8	2.2	6.5
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		01/03/2020	01/09/2020	02/06/2020	02/13/2020	03/05/2020	03/12/2020
Laboratory Sample I.D.		420-165436-1	420-165784-1	420-167169-1	420-167595-1	420-168692-1	420-169124-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	8.18	8.31	7.97	8.19	8.27	8.35
TEMPERATURE	C	13.5	12.3	11.7	12.3	12.8	11.4
TOTAL DISSOLVED SOLIDS	mg/l	360	NA	450	NA	400	NA
TOTAL SUSPENDED SOLIDS	mg/l	ND@1.0	NA	ND@1.0	NA	ND@1.0	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	ND@5	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		01/03/2020	01/09/2020	02/06/2020	02/13/2020	03/05/2020	03/12/2020
Laboratory Sample I.D.		420-165436-1	420-165784-1	420-167169-1	420-167595-1	420-168692-1	420-169124-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

Former IBM Kingston Facility
Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		04/02/2020	04/09/2020	05/07/2020	05/14/2020	06/04/2020	06/16/2020
Laboratory Sample I.D.		420-170017-1	420-170385-1	420-171760-1	420-172173-1	420-173451-1	420-174261-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	8.34	8.41	7.67	7.71	7.96	7.55
TEMPERATURE	C	12.9	12.7	12.70	12.69	16.77	17.24
TOTAL DISSOLVED SOLIDS	mg/l	410	NA	300	NA	540	NA
TOTAL SUSPENDED SOLIDS	mg/l	ND@1.0	NA	ND@1.0	NA	ND@1.0	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	ND@5	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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January 1, 2020 - December 31, 2020

Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		04/02/2020	04/09/2020	05/07/2020	05/14/2020	06/04/2020	06/16/2020
Laboratory Sample I.D.		420-170017-1	420-170385-1	420-171760-1	420-172173-1	420-173451-1	420-174261-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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January 1, 2020 - December 31, 2020

Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		07/02/2020	07/14/2020	08/06/2020	08/13/2020	09/03/2020	09/10/2020
Laboratory Sample I.D.		420-175426-1	420-176057-1	420-177744-1	420-178426-1	420-180020-1	420-180423-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.88	8.46	8.22	8.31	8.49	8.44
TEMPERATURE	C	18.4	20.4	21.3	21.7	20	20.4
TOTAL DISSOLVED SOLIDS	mg/l	390	NA	400	NA	370	NA
TOTAL SUSPENDED SOLIDS	mg/l	ND@1.1	NA	ND@1.0	NA	ND@1.0	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	ND@1	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Groundwater Treatment System Effectiveness Data
January 1, 2020 - December 31, 2020

Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		07/02/2020	07/14/2020	08/06/2020	08/13/2020	09/03/2020	09/10/2020
Laboratory Sample I.D.		420-175426-1	420-176057-1	420-177744-1	420-178426-1	420-180020-1	420-180423-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		10/01/2020	10/08/2020	11/05/2020	11/12/2020	12/04/2020	12/10/2020
Laboratory Sample I.D.		420-182155-1	420-182638-1	420-184633-1	420-185147-1	420-186658-1	420-187120-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	8.3	8.65	8.53	8.05	8.28	8.36
TEMPERATURE	C	18.6	17.8	19.3	16.2	16.5	16.7
TOTAL DISSOLVED SOLIDS	mg/l	430	NA	360	NA	300	NA
TOTAL SUSPENDED SOLIDS	mg/l	2	NA	1.5	NA	ND@1.3	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
Metals							
LEAD, TOTAL	mg/l	ND@1	NA	NA	NA	NA	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Sample Location		SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A	SPDES OF 01A
Sample Description		SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL	SPDES OUTFL
Sample Date		10/01/2020	10/08/2020	11/05/2020	11/12/2020	12/04/2020	12/10/2020
Laboratory Sample I.D.		420-182155-1	420-182638-1	420-184633-1	420-185147-1	420-186658-1	420-187120-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ACROLEIN	ug/l	ND@2	ND@2	ND@2	ND@2	ND@2	ND@2
ACRYLONITRILE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

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Reporting Conventions

NA	Not Analyzed
ND@X	Not Detected at Detection Limit X

Code	Explanation
D	Compound identified at a secondary dilution factor (Organics)

Former IBM Kingston Facility Flux Calculations

Groundwater Collection System and
North Parking Lot Area Passive Groundwater Collection System

Groundwater Collection System

Total Gallons Extracted January 1, 2020- December 31, 2020: 16,587,721

Average Flow Rate 45,446 gal/day

	avg. ug/l	Flux lbs/day
Tetrachloroethene	1.4	0.00053
Trichloroethene	114.0	0.04318
12-Dichloroethene(tot)	28.2	0.01069
Vinyl Chloride	0.0	0.00000
111-Trichloroethane	28.1	0.01066
11-Dichloroethane	14.0	0.00531
12-Dichloroethane	0.0	0.00000
11-Dichloroethene	9.7	0.00369
Freon 113	0.0	0.00000
Freon 123a	0.0	0.00000

Total flux contributed by GWCS: 0.07405 lbs/day
Annual Flux for GWCS: 27.03 lbs

North Parking Lot Area Passive Groundwater Collection System

Total Gallons Extracted January 1, 2020- December 31, 2020: 1,239,493

Average Flow Rate 3,396 gal/day

	avg. ug/l	Flux lbs/day
Tetrachloroethene	1.4	0.00004
Trichloroethene	5.4	0.00015
12-Dichloroethene(tot)	6.3	0.00018
Vinyl Chloride	0.7	0.00002
111-Trichloroethane	5.9	0.00017
11-Dichloroethane	15.2	0.00043
12-Dichloroethane	0.0	0.00000
11-Dichloroethene	0.0	0.00000
Freon 113	0.0	0.00000
Freon 123a	0.0	0.00000

Total flux contributed by NPLA pump stations: 0.00099 lbs/day
Annual Flux for NPLA pump stations: 0.36 lbs

overall flux: ***27.3891***