2455 South Road
Poughkeepsie, NY 12601

April 29, 2020

Jess LaClair
Environmental Engineer
NYS Dept. of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau D
625 Broadway, 12th Floor
Albany, New York 12233-7013

Re: IBM Corporation, Poughkeepsie Main Plant Site
2019 Annual Groundwater Monitoring Report and Current Conditions Report
Part 373 Hazardous Waste Permit 3-1346-00035/00123
EPA ID Number NYD 080480734
Site Number 314001

Dear Ms. LaClair:

The purpose of this letter is to transmit the report entitled, *IBM Poughkeepsie RCRA 2019 Annual Groundwater Monitoring Report and Current Conditions Report*. The attached report satisfies the condition set forth in the site's Groundwater Monitoring Plan submitted on April 18, 1997, as revised October 25, 2002. In addition, this report serves to satisfy the site's Part 373 condition II.C.1 Current Conditions Reporting requirement. No new SWMUs or AOCs have been identified during the previous semiannual period.

If you have any questions regarding this submittal or require additional information, please call Steve Brannen at (845) 433-1509.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
International Business Machines Corporation

Nicolette Visalli

Nicolette Visalli
Environmental, Chemical and Safety Manager

Attachment

cc: Frank Kelley, NYSDEC, Region III w/o attachment
Wilfredo Palomino, USEPA, Region II w/ attachment
Adolph Everett, USEPA, Region II w/ attachment

Poughkeepsie, New York

IBM POUGHKEEPSIE
MAIN PLANT SITE

2019 ANNUAL GROUNDWATER MONITORING REPORT
and
CURRENT CONDITIONS REPORT
Solid Waste Management Unit and Area of Concern Status

Part 373 Hazardous Waste Permit 3-1346-00035/00123
EPA ID Number NYD 080480734
Site Number 314001

Prepared for:

IBM Poughkeepsie
Poughkeepsie, New York

April 29, 2020

Prepared by:
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IBM Poughkeepsie Main Plant Site
Town of Poughkeepsie
Dutchess County, New York

2019 Annual Groundwater Monitoring Report
and
Current Conditions Report
Solid Waste Management Unit and Area of Concern Status

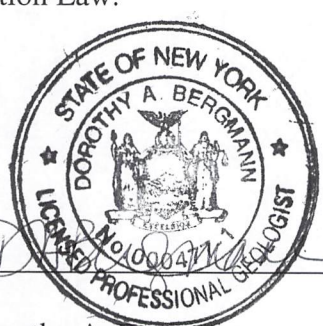
Part 373 Hazardous Waste Permit 3-1346-00035/00123
EPA ID Number NYD 080480734
Site Number 314001

April 29, 2020

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 *"IBM Poughkeepsie Main Plant Site, 2019 Annual Groundwater Monitoring Report and Current Conditions Report (Solid Waste Management Unit and Area of Concern Status), Part 373 Hazardous Waste Permit 3-1346-00035/00123, EPA ID Number NYD 080480734 and Site Number 314001"*. This report is dated April 29, 2020 and was prepared by Groundwater Sciences, P.C. (GSPC) and Groundwater Sciences Corporation (GSC) for IBM Corporation.

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 while working as agent for GSPC. 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: 4/29/2020

Name: Dorothy A. Bergmann

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Table of Contents

Table of Tables

Table of Figures

Table of Plates

Table of Appendices

Table A: Summary of Abbreviations Used in this Report	
AOC	Area of Concern
EPA	Environmental Protection Agency
FCM	Final Corrective Measure
GMP	Groundwater Monitoring Plan
GSC	Groundwater Sciences Corporation
GSPC	Groundwater Sciences, P.C.
IBM	International Business Machines Corporation
ICM	Interim Corrective Measure
IWTP	Industrial Waste Treatment Plant
NYSDEC	New York State Department of Environmental Conservation
SBPC	Site Boundary Plume Control System
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi Volatile Organic Compound
SWMU	Solid Waste Management Unit
VOC	Volatile Organic Compound
VPGAC	Vapor Phase Granular Activated Carbon
Monitoring Parameters	
1,1,1-TCA	1,1,1-Trichlorethane
1,1,2-TCA	1,1,2-Trichloroethane
1,1-DCA	1,1-Dichloroethane
1,1-DCE	1,1-Dichloroethene
1,2-DCA	1,2-Dichloroethane
1,2-DCE	1,2-Dichloroethene (total)
CBZ	Chlorobenzene
CEA	Chloroethane
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
MTBE	Methyl tert-butyl ether
PCE	Tetrachloroethene
TCE	Trichloroethylene
TCM	Chloroform (Trichloromethane)
VC	Vinyl Chloride

1 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 groundwater monitoring and remediation system operations and monitoring conducted during the 2019 calendar year at the Poughkeepsie, New York Main Plant Site (the Site).

The Site is listed as a Class 4 Site (Site Number 314001) in the Registry of Inactive Hazardous Waste Disposal Sites in New York State and is managed in compliance with the Site's Part 373 Hazardous Waste Permit 3-1346-00035/00123 (Part 373 Permit).

This report satisfies the condition set forth in the Site's approved Groundwater Monitoring Plan (GMP) submitted on April 18, 1997, with revisions dated February 23, 1998, November 15, 2000 and October 25, 2002. The GMP was resubmitted to the New York State Department of Environmental Conservation (NYSDEC) on January 18, 2010 in response to Module Condition II.B.5 and II-A.C in IBM's current Part 373 Hazardous Waste Permit. In a letter dated March 29, 2010, the NYSDEC affirmed the approval of the GMP. As such, this report contains a comprehensive review of groundwater data collected during the annual period from January 1, 2019 through December 31, 2019.

In addition, this report serves to satisfy the Site's Part 373 condition II.C.1 Current Conditions Reporting requirement. Plate A-1 of Appendix A shows the locations of the identified Solid Waste Management Units (SWMUs) and the Current Conditions Report for these SWMUs and the Areas of Concern (AOC) is presented in Appendix A. No new SWMUs or AOCs have been identified during the previous semiannual period.

The remainder of this report is organized in the following manner: Section 2 presents a Site overview; Section 3 reports on the work performed in 2019; Section 4 provides a summary of Site hydrogeology including groundwater flow directions; Section 5 presents a summary of the distribution of chemical concentrations; Section 6 presents a discussion on the progress of remediation including the annual evaluation of contaminant recovery levels, temporal changes in groundwater chemistry and the control of chemical flux to surface water. Section 7 of this report includes an update on available

remediation technologies; Section 8 presents summary conclusions regarding the progress of corrective action at the Site.

2 SITE OVERVIEW

The following sections provide details on the Site, including geologic setting, the Site chronology and current Site conditions. This section also presents a summary of the current corrective actions implemented at the site and the remedial goals.

2.1 Site Location and Description

The Site is located south of the City of Poughkeepsie in the Town of Poughkeepsie, Dutchess County, New York. As shown on Figure 2-1, the Site lies between Route 9 and the Hudson River, which forms its western boundary. Plate 1 presents a topographic and cultural map of the Site. Significant natural features include a prominent cliff above the Hudson River shoreline and a small stream crossing the site from east to west. This stream is officially an unnamed tributary to the Hudson River (H107).

As shown on Plate 1, the topography of this site is such that the manufacturing operations are generally situated in Buildings 002, 003, 004 and 012 and located on a level upland portion of the site that is not immediately adjacent to the Hudson River. Most of the former and current chemical support facilities at the site are located in more variable terrain along the western margin of the site, generally above a steep cliff that drops off to the Hudson River or along the valley of a small unnamed tributary to the Hudson River that crosses the site (H107). These support facilities include, from north to south: the former bulk chemical storage (B034 and B035) systems; chemical control (B028); the former Salvage Yard (B075, B076 and B095); the Industrial Waste Treatment Plant (IWTP) located at B450; the major oil storage facility (three large tanks west of B450); the central utility plant (B020 and B030); the former chemical storage and recycling and now paper and cardboard recycling (B077) and the final industrial waste water effluent stabilization facilities (B454 and related tanks).

2.2 Generalized Geologic Setting

The bedrock beneath the Site is primarily shale of the Snake Hill Formation with a small area in the eastern portion of the site underlain by dolostone of the Pine Plains Formation of the Wappinger Group. These two formations are in structural contact along a discontinuity consisting of a low-angle thrust fault trending northeast-southwest and located east of Buildings 003 and 012. Within the Snake Hill Formation, there is an ancient submarine gravity slide deposit, known as the

Taconic Mélange, the base of which is believed to be coincident with the shoreline of the Hudson River. This mélange is highly chaotic at its base and fines upward, blending into the Snake Hill shale proper. Structurally, the site is dominated by cleavage in the shale. A suspected fault zone coincides with the location of H107. The mapped faults on the site are very old and have not experienced any recent movement; most fault surfaces are mineralized with quartz or calcite. Directional hydraulic conductivity is believed to be greatest from northeast to southwest in a direction parallel to the strike cleavage. Joints oriented approximately normal to the cleavage trend also serve as conduits for groundwater flow, but are expected to exhibit lower directional hydraulic conductivity. Unlike bedrock formations located only a few miles to the east, the rocks beneath the site have undergone very little, if any, metamorphism.

Areas of closed depressions in the top of bedrock surface and low top of bedrock elevations reflect either buried pre-glacial topography or irregular bedrock surfaces created by glacial scour prior to deposition of the overlying glacial and paraglacial sediments.

Unconsolidated sediments at this Site have been characterized through the collection of continuous split-spoon samples. Based on these samples, the unconsolidated sequence includes a discontinuous basal till unit (probably lodgment till) directly on top of the underlying bedrock. A coarse-textured sand or sand and gravel generally overlies this till unit, which, where the till is absent, directly overlies the bedrock. This sand and gravel unit is also variable in terms of its thickness and texture, and is itself somewhat discontinuous. This sand and gravel has been termed the "Site Gravel." The Site Gravel extends from the area beneath the manufacturing buildings (B004 and B012) westward to H107, where it truncates against a bedrock high. This sand-and-gravel unit is believed to be associated with glacial outwash or ice contact deposits, potentially associated with kame deposits along the side of the Hudson River Valley and is principally found in a buried bedrock valley between the manufacturing buildings and H107.

In the eastern portion of the manufacturing area, this sand and gravel is typically overlain by glaciolacustrine silt. This silt unit is variable in thickness and at places, appears to interfinger with the sand and gravel, suggesting a glacial lake delta environment for the deposition of some of this coarse-textured material. In the central portion of the manufacturing area, the Site Gravel unit is overlain by finer-textured sand and silt units, which may correspond to glaciofluvial sediments or

post-glacial alluvial sediments. On top of the uppermost natural sediments in this portion of the site, from the manufacturing building to H107, there is a significant layer of fill which reflects grading activities associated with the development of this site. This fill is typically coarse-textured, well-graded material, most likely associated with local borrow areas.

Just west of H107, there is shallow rock covered with a thin veneer of silt, sand and gravel. At the extreme western edge of the site, there is a thin section of unconsolidated sediments immediately adjacent to the Hudson River. From the top of weathered shale, this sequence of sediments includes a mixed silt, sand and gravel, probably associated with glacial outwash, overlain by dark organic silts. This dark organic silt would be typical of Hudson River sediments and was likely deposited by the modern Hudson River. The top of this dark organic silt is below sea level and is overlain by a 10- to 20-foot thickness of shaley fill that has been placed here, probably originally to support the development of the railroad corridor along the Hudson River and, subsequently, also to develop the IBM dock facility.

2.3 Site Characterization Chronology

IBM performed extensive voluntary investigations and corrective measures at the Site beginning in 1978 prior to the issuance of the Part 373 Permit. Historical activities combined with the satisfaction of the Part 373 Permit requirements have resulted in extensive characterization, monitoring and remediation of contaminated media on Site. The locations of all monitoring wells drilled at the site since the program began in 1979 are shown on Plate 2. The following paragraphs provide a brief chronology of these actions.

In 1991, as a result of discovery of a discharge of TCE-containing groundwater flux to an unnamed tributary to the Hudson River (H107), groundwater extraction and treatment operations were initiated using two extraction wells (T-8SB and T-315S, Plate 3) with treatment at the Building 450 (B450, Plate 3) Industrial Waste Treatment Plant (IWTP, Plate 3) for volatile organic compound (VOC) removal. A second remedial component in the Site Gravel is the B003 Passive Groundwater Collection System. The two extraction wells and passive collection system continue to operate and are part of the Site Gravel Groundwater Collection System.

On October 27, 1997, the Site's Part 373 permit was renewed and it included a corrective action module that called for the implementation of the RCRA Corrective Action Process at the Facility. Following the schedule provided, IBM completed a RCRA Facility Investigation (RFI) for the Former Antenna Drum Storage Area; a RCRA Facility Assessment - Sampling Visit for soils (RFA-SV Soils) and the groundwater RFI to further delineate the occurrence and extent of VOCs and other constituents in groundwater and in soils beneath the Site.

At the conclusion of these investigations, several plumes of organic compounds dissolved in groundwater were identified at this Site which have since been addressed through Corrective Measures: the Site Gravel Plume which extends from the area beneath Buildings 001 and 004 to the IWTP (B450) where the plume discharges to H107; the vinyl chloride plume associated with the Former Burn Pit, two mixed-VOC plumes associated with the Former Antenna Drum Storage Area and B025, and coalescing vinyl chloride plumes in the vicinity of B077, the overpass and the Final Effluent Stabilization Tanks near the southwest corner of the Site. Principal constituents associated with these plumes are: Trichloroethene (TCE); 1,1,1-Trichloroethane (1,1,1-TCA); Freon®113 and the associated degradation or transformation products of these principal constituents.

As part of the groundwater RFI, the chemical flux from the groundwater to surface water, including H107 and the Hudson River was also assessed. Based on the rate of groundwater flow and the associated chemistry determined during the RFI the total flux of chemicals to the Hudson River was calculated. It was further determined that following dilution and dispersion in the Hudson River, levels of these chemicals are essentially undetectable in the two closest surface-water supply intakes at Poughkeepsie and Chelsea. This report provides an update on these calculations of chemical flux from groundwater to surface water in Section 6.4.

In accordance with the outcome of the groundwater RFI, a Corrective Measures Study (CMS) was prepared which detailed a Corrective Measures Implementation (CMI) of groundwater extraction at three groundwater plume contamination areas with on-site treatment. On July 16, 1999, NYSDEC accepted the proposed CMI as an Interim Corrective Measure (ICM) which includes extracting contaminated groundwater from the Former Burn Pit, Antenna Drum Storage Area, Former B025, Former Waste Oil Leachfield, B077 and Overpass Areas with subsequent conveyance to a new wastewater treatment system to be installed on-site. The 100% Design for the groundwater

treatment system was submitted to the NYSDEC for review and comment on February 22, 2000. The construction of the groundwater collection, conveyance and treatment system was completed during the second quarter 2000, and system start-up was in July 2000. The final CMI report was submitted to the NYSDEC on November 15, 2000. In a letter dated February 26, 2001, NYSDEC approved the CMI groundwater collection and treatment system, referred to as the Site Boundary Plume Control (SBPC) System. The SBPC is comprised of three groups of extraction wells, a one-half mile conveyance piping system and a water and air treatment system, as shown Figure 2-3.

The Statement of Basis (August 2007) provides an update on the Corrective Action activities at the Site and describes the final selected remedy for addressing the groundwater and areas of contamination previously identified at the Site: pump and treat with source removal through excavation in some areas with the goal of the groundwater remedial action to reduce flux to surface water receptors and to stabilize plume movement.

On September 13, 2007, the Part 373 Permit was modified to include Interim Corrective Measures Program to monitor, collect and treat contaminated groundwater as the Selected Final Corrective Measures.

2.4 Current Conditions Report

The current status of all identified Solid Waste Management Units (SWMUs) and Areas of Concern listed in the Site's Part 373 Permit are presented in Appendix A, the Current Conditions Report and the locations are shown on Plate A-1 of Appendix A.

2.5 Corrective Action Elements

The following subsections provide a brief description of the corrective actions implemented at the Site and the various Site areas that are subject to Final Corrective Measures.

2.5.1 Groundwater Extraction in the Site Gravel Plume

A TCE plume is associated with the Site Gravel unit. This TCE plume discharges to the small on-site unnamed tributary to the Hudson River (H107). Historically, this discharge of groundwater flux to H107 had been determined to result in a TCE concentration in the stream that exceeds a state

guidance value. The two SPDES-regulated outfalls, outfall 009 (D009) and outfall 013 (D013), are shown on Plate 3.

In response to these findings, a groundwater extraction and treatment operation was initiated in 1991 using two extraction wells (T-8SB and T-315S, Plate 3) with treatment at the Building 450 (B450, Plate 3) Industrial Waste Treatment Plant (IWTP, Plate 3) for VOC removal. In total, these wells pump on the order of 22 gallons per minute. Monitoring of water quality and elevation since 1992, as well as water quality in H107, has shown that the operation of these two extraction wells has controlled the source of this plume, caused reductions in concentration in the plume and resulted in the reduction of concentrations in H107 to acceptable levels. The operation of T-8SB and T-315S continue to provide effective control of this plume.

The groundwater extraction operations in the Site Gravel and principally those at T-8SB, has effectively reduced concentrations at D013.

2.5.2 B003 Passive Groundwater Collection System (Site Gravel Plume)

Initial Site characterization performed in the late 1970s and early 1980s indicated that VOC-contaminated groundwater was infiltrating into storm sewer systems which discharged from SPDES-regulated outfalls to H107. The two outfalls, D009 and D013, are shown on Plate 3. As noted in the previous section, long-term operation of groundwater extraction well T-8SB has effectively reduced concentrations at D013. Elimination of flux to D009 was addressed with engineering controls that included rerouting the storm sewers around B003 (Plate 3). This project involved the installation of a new storm sewer system and re-routing of certain connections to mitigate groundwater infiltration in to the storm system in the area near and around B003 and the portion of the storm sewer system that is within the alcove between B003 and B416. The new sealed storm sewer system prevents contaminated groundwater from entering the storm water discharge pipe associated with D009. Compliance with SPDES Permit discharge limits at the D009 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. The end result of the re-routing project is such that storm water and dry weather flows meeting the SPDES permit limits continue to discharge to outfall D009 and the continuing groundwater chemical flux from the B003 area and the alcove between B003 and B416 is currently collected in two manholes

(CS434 and CS435, Plate 3 and Figure 2-2) and conveyed to the IWTP for treatment. The B003 Passive Groundwater Collection System consists of the inactive storm sewer line acting as a passive collection for infiltrating groundwater and the two pump stations, CS434 and CS435. The location of the B003 Passive Groundwater Collection System is shown on Plate 3 and the details of installation are shown on Figure 2-2.

2.5.3 Site Boundary Plume Control System (SBPC)

In addition to the Site Gravel TCE Plume, the Groundwater RFI also documented several other plumes, including one centered on the Former Burn Pit (SWMU 116, Plate 3), one located between the Former Antenna Drum Storage Area (SWMU 127, Plate 3) and the Hudson River, one located between Former Building 025 (SWMU 186, Plate 3) and the Hudson River, and several coalescing plumes located in the vicinity of B077 (SWMU 128, Plate 3), the overpass, and the Former Waste Oil Leachfield (SWMU 129, Plate 3) near the southwest corner of the property. As a result of the Groundwater RFI a Corrective Measures Study (CMS) was completed that included the evaluation of source control or plume reduction for these six SWMUs.

The areas were grouped into three pairs of SWMUs for consideration of corrective measures (Groups 1, 2 and 3, Plate 3 and Table 2-1). The first pair of SWMUs, known as Group 1, consists of the Former Burn Pit and the Former Waste Disposal Site (Group 1, Plate 3 and Table 2-1). Group 1 SWMUs are associated with the presence of vinyl chloride (VC). The second pair of SWMUs, identified as Group 2, includes the Former Antenna Drum Storage Area and Former B025 (Group 2, Plate 3 and Table 2-1). Group 2 SWMUs represent probable DNAPL source zones and are the sources for the plumes of Freon®113 in the lower plant area of the site. The third pair of SWMUs, known as Group 3, includes the B077 Container Storage Area and the Former Waste Oil Leachfield (Group 3, Plate 3 and Table 2-1). The Overpass Area, which is not an SWMU, has also been included in Group 3. Group 3 SWMUs are also associated with the presence of VC. The CMS resulted in a CMI that included the installation of ten extraction wells and treatment system known as the Site Boundary Plume Control System (SBPC System). The SBPC System controls flux to the Hudson River from groundwater plumes emanating from sources adjacent to the river. The SBPC System consists of the ten extraction wells and approximately 1850 feet of buried, double-walled HDPE exterior piping and approximately 200 feet of HDPE on trestles as shown on Figure 2-3.

The combined influent from the SBPC is treated at the B030 Groundwater Treatment System, located in B030 (Plate 3). Figure 2-4 presents the flow diagram for the SBPC System which includes groundwater extraction from ten wells, pre-filtration with cartridge filters, equalization, pH adjustment, aeration and aerator off-gas treatment via Vapor Phase Carbon (VPGAC).

The original Northeast Environmental Products, Inc. (NEEP) Shallow Tray air stripper system, was installed in 1999 has been the equipment/model used to remove VOCs from collected groundwater since the treatment system was installed. This product was constructed of Type T-316L stainless steel and since the original installation has demonstrated ongoing corrosion concerns. In late December 2017, the Shallow Tray air stripper system was replaced with a QED model EZ-6.6SS Tray air stripper constructed of Type-2205 stainless steel. The Type-2205 stainless steel is a higher grade of stainless steel than T-316L and will provide superior corrosion resistance. The new QED air stripper is sized to treat anticipated influent concentrations and flows and will achieve effluent concentrations below the permitted maximum daily SPDES effluent limits for all VOCs.

Table 2-1: Site Boundary Plume Control System Summary

Site Boundary Plume Control Group	SWMU Number		SWMU Description	Groundwater Extraction Wells
	NYSDEC	IBM		
Group 1	115	19	Former Inactive Waste Disposal Site	101RA, 416R
	116	19B	Former Burn Pit	
Group 2	127	21	Former Antenna Drum Storage Area	405R, 413R, T-206RA
	186	78, 50	Former B025	
Group 3	128	95	B077 Container Storage Area	T-49RA, T-83RA, 423, 425 and 427
	129	22	Former Waste Oil Leach field	
	None	None	Overpass Area *	

* The Overpass Area, which is not a SWMU, has been included in Group 3.

2.5.4 Oil Skim Wells Component of the SBPC

The Building 075 Salvage Yard was located in the western part of the Site and occupied an area on the ridge between H107 and the steep slope leading to the Hudson River where the shale bedrock outcrops (Plate 3). The historical operation of a "burn pit" (Former Burn Pit, SWMU 116) to the north of B075 reportedly was used to burn off mixed waste oils. Oil and water were extracted from a

single well, T-58R in the Former Burn Pit area from 1981 to 1986 using an Auto Skimmer. This single extraction well system was later replaced by a three-well groundwater extraction and oil recovery system that operated until it was replaced by the deeper extraction wells associated with the SBPC (T-101RA and 416R). The three wells previously used for groundwater extraction and oil recovery in the Former Burn Pit Area are no longer used for that purpose (T-58R, T-102R and 75-B, Plate 3) and have been replaced by the two deeper extraction wells (T-101RA and 416R) of the Group 1 Former Burn Pit component of the SBPC System.

The three former extraction wells (T-58R, T-102R and 75-B) are located within the cone of depression created by groundwater extraction at the two active recovery wells. There is therefore the possibility that small amounts of oil may accumulate in these shallower wells. As a result, the three former recovery wells have been retained in the GMP for the purpose of monitoring any accumulation of oil in this area and to provide a means to skim any accumulated oil from the water table. In the event that any measurable thickness of oil is detected, it will be removed by bailing or by lowering an absorbent "sock" into the well.

2.5.5 Former Equipment Crusher Release Pathway Institutional Controls

Institutional controls implemented at the site can be categorized into two types: physical and documentary. The following paragraphs describe the controls that are currently implemented.

As a follow-up to the RFA-SV, an RFI was conducted at the Former Equipment Crusher (SWMU 118) and along the release pathway from this unit which extends into SWMU 199 the Old Debris Piles Northwest of the Bulk Oil Storage Facility (Figure 2-5).

The RFI concluded that within the release pathway of the Former Equipment Crusher, there was a limited area (approximately 0.04 acres) with elevated concentrations of four Base Neutral Compounds (BNCs). The area of higher BNC concentrations was in the southern portion of the B075 parking lot (the green-shaded area on Figure 2-5), and therefore, most of it was already paved over. However, the southernmost extent of this area was beyond the original southern edge of the B075 parking lot.

Based on the recommendations presented in the RFI, an Interim Corrective Measures (ICM) implemented and completed during the fourth quarter 2000 and a final report, was submitted to NYSDEC on January 9, 2001. The ICM consists of an extension of the current asphalt pavement to the northern edge of the Bulk Oil Storage Facility berm (Figure 2-5).

The extension and existing parking lot covering the lower portion of the release pathway is maintained to ensure its continued effectiveness and to ensure continued integrity of the impervious surface. Inspection and maintenance of the asphalt cover has been routinely conducted by IBM Poughkeepsie or its subcontractors.

The Site has also implemented a Solids Management Protocol to ensure that excavation does not occur within areas of known groundwater or soil contamination without proper health and safety plans and soil management procedures. It should be noted that the asphalt cover in the vicinity of the Former Equipment Crusher Release Pathway has been referenced on the site map in the facility's Solids Management Protocol.

2.6 Remedial Goals

Historical activities combined with the satisfaction of the Part 373 Permit requirements have resulted in extensive remediation of contaminated media on Site.

The Statement of Basis (August 2007) provides an update on the Corrective Action activities at the Site and describes the final selected remedy for addressing the groundwater and areas of contamination previously identified at the Site: pump and treat with source removal through excavation in some areas with the goal of the groundwater remedial action to reduce flux to surface water receptors and to stabilize plume movement. The remedy for the Site is accomplished by the following actions:

- Groups 1, 2 and 3 Solid Waste Management Units: Pump and Treat; Source Removal including underground storage tanks and contaminated soil.
- Site Gravel Plume: Pump and Treat.
- Former Equipment Crusher Release Pathway: Institutional Controls

On September 13, 2007, the Part 373 Permit was modified to include Interim Corrective Measures Program to monitor, collect and treat contaminated groundwater as the Selected Final Corrective Measures.

The remedial program continues to be effective in removing contaminant mass from Site groundwater and in controlling the migration of contaminated groundwater to surface water receptors.

3 DESCRIPTION OF WORK PERFORMED IN 2019

Monitoring programs relating to surface water, storm sewers and groundwater are ongoing at the Site. The following sections present information relating to these other activities conducted during the reporting period.

3.1 Surface Water Monitoring

Surface water monitoring in H107 is as specified in the Site's SPDES permit. Sampling is conducted at four locations shown on Figure 3-1. Analytical data results from the monitoring at these locations are presented in submittals to the NYSDEC under the SPDES program (Permit NY0005541).

3.2 Storm Sewer Sampling (SPDES Related Sampling)

Routine samples were collected from four SPDES-related outfalls shown on Plate 3: Discharge 005 (D005) associated with the SBPC B030 Groundwater Treatment System; Discharge 013 (D013) associated with storm sewers and building underdrains which originate beneath and to the north and west of B004; Discharge 026 (D026) and Discharge 027 (D027). Analytical data results for these four locations are presented in submittals to the NYSDEC under the SPDES program (Permit NY0005541).

As noted in Section 2.5.1, corrective actions have been implemented to maintain compliance at D013 including the current operation of groundwater extraction well T-8SB in the Site Gravel.

Figure 3-2 shows the status of Trichloroethene (TCE) and 1,2-Dichloroethene (1,2-DCE) concentrations monitored at D013. As can be seen from this figure, the corrective actions implemented have been able to maintain compliance at this outfall with the exception of one excursion during the compliance period beginning on May 1, 1993.

3.3 Building 003 Passive Groundwater Collection System

As described in detail in Section 2.5.2, during 1996 and 1997, a new storm sewer line was installed around Building 003 to mitigate groundwater infiltration into the storm sewer system. The old, now inactive, storm line remains and acts as a passive collection system for infiltrating groundwater. Figure 2-2 and Plate 3 show the configuration of the system including CS434 and CS435 pump

stations. Storm water continues to discharge to the outfalls and the groundwater collected in the old system is re-routed to the onsite IWTP for treatment prior to discharge to a SPDES-permitted outfall. Analytical data results for the B003 Passive Groundwater Collection System together with their associated field quality assurance and quality control samples for the previous annual period are presented in Appendix B-1.

3.4 Major Petroleum Facility License Sampling

Five (5) monitoring wells were sampled for compliance with the Site's Major Petroleum Facility License Number 3-1180 (License) on April 29, 2019. Samples were collected as per the Site's groundwater monitoring protocol and were analyzed by EPA Method 625, and SW-846 8260 plus MTBE. As per the License, analytical results were transmitted to NYSDEC directly from the Analytical Laboratory in a letter dated May 14, 2019. The five (5) sampled wells (BK-1, BK-2, BK-3, BK-4 and BK-5, shown on Plate 2) are included in the GMP as Hydraulic Effectiveness Wells. Appendix C-1 contains a summary of the results of this sampling and also contains the associated field Quality Assurance and Quality Control sample results.

3.5 Poly- and Perfluoroalkyl Substances (PFAS) Sampling

Results of the initial Poly and Perfluoroalkyl Substances (PFAS) sampling program completed in July 2017 indicate the presence of PFAS in Site groundwater and surface water. The concentrations of certain PFAS parameters detected are generally higher for groundwater samples collected near known disposal areas that are the subject of ongoing groundwater extraction operating as part of Final Corrective Measures (FCM) at the Site.

On June 21, 2018, IBM received a written request from the NYSDEC to provide additional information and conduct additional sampling to define the nature and extent of per- and polyfluoroalkyl substances (PFAS) and to evaluate whether 1,4-dioxane are present in groundwater at the Site. To address these requests, a work plan dated September 20, 2018 and entitled, *Emerging Contaminants, Poly- and Perfluoroalkyl Substances and 1,4-Dioxane Sampling Work Plan (Emerging Contaminants Work Plan)* was prepared.

On December 20, 2018, IBM received a conditional approval letter to proceed with the sampling activities outlined in the Emerging Contaminants Work Plan. Based on these NYSDEC and NYSDOH correspondences relating to the Emerging Contaminants Work Plan and the proposed sampling activities relating to those requests, IBM submitted a letter on June 14, 2019 to respond to the NYSDEC comments. IBM received a final approval letter to proceed with sampling on July 9, 2019 and emerging contaminant sampling was completed in the third quarter 2019.

3.6 Groundwater Monitoring Program

Groundwater monitoring activities performed during 2019 included measurement of groundwater elevations, inspection and maintenance of monitoring wells including repairs to surface seals, and collection of groundwater samples for chemical analysis. Each of these activities is described in one of the following subsections.

3.6.1 Groundwater Monitoring Plan

The purpose of the Site Groundwater Monitoring Plan (GMP) is twofold: (1) to specify a network of groundwater monitoring and extraction wells that will be used to monitor hydraulic and remedial action effectiveness and (2) to allow consistency in groundwater sampling and analytical procedures.

Sampling and analysis of groundwater was performed at the Site for the previous annual period in accordance with protocols contained in the Groundwater Monitoring Plan (GMP) submitted to NYSDEC on April 18, 1997, with revisions dated February 23, 1998, November 15, 2000 and October 24, 2002. The most recent revision was based on implementation of a Corrective Measure at the Site and was approved by the NYSDEC in a letter dated February 18, 2003. As noted in the introductory section of this report, the GMP was resubmitted to the NYSDEC on January 18, 2010 in response to Module Condition II.B.5 and II-A.C in IBM's Part 373 Hazardous Waste Permit. In a letter dated March 29, 2010, the NYSDEC affirmed the approval of the GMP.

The groundwater monitoring network, consists of 8 Compliance Monitoring Locations, 31 Corrective Action Monitoring Locations; 3 Oil Skim Wells, 12 Groundwater Extraction Wells and 84 hydraulic effectiveness (HE) monitoring wells (33 of which are HE monitoring only). The location of each monitoring point is shown on Figure 4-1 and a summary of the GMP Sampling and Analysis Plan is

presented in Appendix C-2. Due to the maturity of the monitoring program, there is an opportunity to reduce the HE number of wells while accomplishing an appropriate level of monitoring of site conditions.

The Site Groundwater Monitoring Plan consists of the following elements: (1) sampling of groundwater monitoring and extraction wells in accordance with a Site-specific Groundwater Monitoring Plan (GMP) and (2) sampling of influent and effluent from the various groundwater extraction and treatment systems to satisfy the treatment requirements of the Part 373 Permit. (Influent and effluent sampling is described in Section 2.5.2 and 2.5.3 of this report.)

On May 22, 2019, IBM submitted a request for GMP modifications. This request included the submittal of a revised GMP[1] which incorporates an adjustment in the sampling frequencies at compliance monitoring well locations, an adjustment in the sampling frequencies at corrective action monitoring locations and the removal of 11 hydraulic effectiveness wells from the monitoring program. Together with the updated plan document, a separate request[2] was submitted for reduction in groundwater monitoring analytical reporting list to adjust the number of parameters being routinely analyzed and reported from 64 compounds to 16 compounds. The sixteen parameters selected for future monitoring include: thirteen VOCs, two metals and one polychlorinated biphenyl (PCB). On December 20, 20193, the NYSDEC approved the reduction of the list of parameters from 64 compounds to 16 compounds. IBM implemented the reduced groundwater analytical reporting list beginning with the first quarter 2020.

3.6.2 Groundwater Elevation Measurements

During each quarterly sampling period as specified in the Site's GMP, water levels are measured at those wells indicated in the GMP as hydraulic effectiveness wells for the purpose of determining the

[1] IBM, May 22, 2019, *Request for Groundwater Monitoring Plan Modifications, IBM Poughkeepsie Main Plant Site*.

[2] IBM, May 22, 2019, *Request for Reduction in Groundwater Monitoring Analytical Reporting List, IBM Poughkeepsie Main Plant Site*.

[3] NYSDEC, December 20, 2019, *Request for Reduction in Groundwater Monitoring Analytical Reporting List, IBM Poughkeepsie Main Plant Site*.

direction of groundwater flow. Groundwater elevations were calculated by subtracting the measured depth to water from the surveyed elevation of the measurement point listed in Appendix D. For most wells, the designated measurement point is the top of the inner well casing (the "TOC Elevation"). This measurement reference point is typically notched into the top of the well casing.

The results of each of these water level surveys were converted to groundwater elevations and are published in Appendix D.

3.6.3 Physical Well Inventory and Maintenance

Each monitoring well was inspected for integrity in accordance with the Part 373 Permit Module II-A, Appendix II-A-B, Groundwater Monitoring System Inspection Plan during each sampling event. In addition, all Site wells and piezometers, including those in the GMP, were inspected between February 7 and February 22, 2019.

3.6.4 Groundwater Sampling

The groundwater sampling and analysis plan for 2019 is summarized in Appendix C-2. The principal quarterly sampling events occurred in January, April, July, and October 2019. The semiannual sampling events occurred in April and October 2019 and the comprehensive sampling event which included monitoring of all quarterly, semiannual and annual locations occurred in April 2019. All groundwater samples collected in 2019 were analyzed by EnviroTest Laboratories, Inc. of Newburgh, New York (NYSDOH ELAP #10142).

As discussed in Section 3.6.1, groundwater samples were collected at the locations and sampling frequencies specified in the GMP for the corrective action and compliance monitoring programs. In general, all samples were analyzed for the SW-846 Method 8021B (halogenated only or halogenated and aromatic parameter list, plus Freon®113). In addition, other parameters were collected as per the GMP including: priority pollutant metals; PCBs and cyanide.

As reported in Section 3.4 of this report, one set of samples was collected from five (5) groundwater monitoring wells designated in the Major Fuel Oil Storage Facility Permit and were analyzed for VOCs plus MTBE by method 8260C with a detection level of 1.0 ug/l for MTBE and Semi Volatile Organic Compounds (SVOCs) by method 8270D.

Groundwater sampling results are presented in Appendix C-3. Additionally, Appendix C-4 contains copies of the laboratory case narratives for each of the associated Sample Delivery Groups (SDGs) for the reporting period.

3.6.5 Oil Skim Wells

Three former extraction wells (T-58R, T-102R and 75-B) are located within the cone of depression created by groundwater extraction at the two active recovery wells within Group 1 of the SBPC. The three wells were monitored for accumulation of oil in this area and absorbent "socks" were deployed in the wells to provide a means to skim any accumulated oil from the water table as needed.

3.6.6 Quality Assurance / Quality Control Results

QA/QC analytical data for 2019 consisted of duplicate samples, equipment rinse blanks, and trip blanks. Analytical chemistry data for quality assurance / quality control samples is presented in Appendix C-5.

Duplicate samples were collected by filling multiple sample containers from the same sampling device during each sampling round at a frequency of at least one duplicate sample per 20 groundwater samples (i.e., a minimum of five percent of all groundwater samples). In total, eight (8) duplicate samples were collected under the GMP during 2019.

In addition to duplicate split samples, twenty-one (21) trip blanks for VOCs were prepared using deionized water for each cooler containing VOC samples to be delivered to the laboratory. The purpose of trip blanks is to detect contamination in sample transportation or storage. A trip blank was the first item placed into each cooler by the laboratory and accompanied the sample containers from the laboratory to the field sampling locations and back to the laboratory.

Environmental samples associated with each trip blank can be determined by noting the dates over which the trip blanks are valid.

Equipment rinse blanks were collected to confirm the efficiency of decontamination procedures for each sampling round by rinsing non-dedicated equipment with analyte-free deionized water supplied by the laboratory. Twenty-one (21) equipment rinse blanks for VOCs were collected in 2019,

mostly from water level indicators, which are used in every well and are decontaminated between wells.

3.7 Groundwater Collection and Treatment

This section presents the operating data for the Groundwater Remediation Systems currently active at this Site and provides an update on the effectiveness of the corrective action program as per the semiannual reporting requirements specified in 6NYCRR Subpart 373-2.6(k)(7).

The Groundwater Remediation System at the Site consists of the following components: Site Gravel Groundwater Extraction and Collection System which includes groundwater extraction wells T-8SB and T-315S and the B003 Passive Groundwater Collection System with treatment at the B450 IWTP and; the SBPC which includes groundwater extraction at ten locations with subsequent treatment at the B030 Groundwater Treatment System and the building footing drains systems associated with B450 and B012.

Table 3-1 summarizes the monthly pumping volumes and average flow rates for the two extraction wells associated with the Site Gravel (T-8SB and T-315S), the pump station associated with the B003 Passive Groundwater Collection System (CS 434), the combined influent for the SBPC, the footing drain associated with B450 (CS 0198) and the footing drain associated with B012 (D009A). Plate 3 shows the locations of each of these corrective action elements and Appendix B-2 contains the 2019 pumping records, including totalizer readings for each of the locations. Appendix B-3 contains the analytical data collected from each of the groundwater extraction wells associated with the Site Gravel and the SBPC. As noted in Section 3.3, analytical data results for the passive groundwater collection system together with their associated field quality assurance and quality control samples for the previous annual period are presented in Appendix B-1.

Table 3-1: Monthly Flows and Average Flow Rates

	Site Gravel Remediation System			Site Boundary Plume Control System	Building Footer Drain Systems	
	Extraction Well T-8-SB	Extraction Well T-315-S	B003 Passive GW Collection System CS 434		B450 Footers (CS 0198)	B012 Footers (D009A)
January	422,599	656,283	1,548,792	441,420	1,381,223	2,486,982
February	379,546	592,170	1,335,739	376,318	1,150,626	2,177,270
March	418,305	652,710	1,420,690	436,585	1,227,868	2,236,250
April	405,692	537,769	1,347,316	403,627	1,363,669	1,959,460
May	410,679	459,940	1,527,643	459,136	1,469,082	2,343,230
June	392,935	380,120	1,341,899	418,971	1,343,385	1,873,527
July	405,571	407,653	1,199,810	395,109	1,255,224	1,313,263
August	405,582	409,349	1,217,821	404,035	1,246,958	1,105,763
September	392,237	687,968	846,657	215,586	925,768	749,318
October	406,026	720,828	813,103	189,944	1,121,477	660,970
November	389,570	695,382	1,060,975	377,947	1,240,441	705,990
December	400,460	718,386	1,409,864	426,739	1,316,521	1,236,090
2019 Gallons (total)	4,829,201	6,918,557	15,070,309	4,545,417	15,042,242	18,848,112
2019 Average gpm	**9.2**	**13.2**	**28.7**	**8.6**	**28.6**	**35.9**

Notes:
All flow totals are in gallons
gpm = gallons per minute
Water from CS 435 is pumped to the CS 434 sump, and therefore is not included in this table.

3.7.1 Site Gravel Groundwater Extraction and Collection Systems

Two groundwater extraction wells, T-8SB and T-315S, operate in the Site Gravel Plume and are associated with the remediation of AOC B: Site-wide Groundwater. In addition, the B003 Passive Groundwater Collection System also operates within the Site Gravel.

Long-term pumping at T-8SB began on October 29, 1991. Continued long-term pumping since that time has produced 316 million gallons of water. During the 2019 calendar year, approximately 4.8 million gallons were produced from T-8SB with an average flow rate of 9.2 gallons per minute (gpm).

Long-term pumping was begun at well T-315S on April 18, 1992. Continued long-term pumping since that time has produced 248 million gallons. During the 2019 calendar year, approximately 6.9 million gallons were produced from T-315S with an average flow rate of 13.2 gpm.

The B003 Passive Groundwater Collection System start-up was in December 1998, continued operations since that time has collected 240 million gallons. During the 2019 calendar year, approximately 15.0 million gallons with an average 28.7 gpm of flow is captured by the system.

3.7.2 Site Boundary Plume Control System

Operations began at the SBPC during October 2000 and continued operations since that time has produced 118 million gallons. During the 2019 calendar year approximately 4.5 million gallons were produced by the SBPC with an average flow rate of 8.6 gpm. Groundwater collected by the SBPC is treated at the B030 Groundwater Treatment System.

3.7.3 B030 Groundwater Treatment System

The combined influent from the SBPC is treated at the B030 Groundwater Treatment System, located in B030 (Plate 3). Influent samples were collected monthly and effluent samples were collected once every two (2) weeks from the B030 Groundwater Treatment System. Sampling points for the B030 Groundwater Treatment System include the combined influent from Groups 1, 2 and 3 prior to entering the cartridge filters and a final effluent prior to discharge to SPDES Outfall 005 (D005) as shown on Figure 2-4. All influent and effluent samples were analyzed for VOC by SW-846 Method 8021 plus Freon®113 and Freon®123a, Oil and Grease, Total Suspended Solids and Total Dissolved Solids. The pH and temperature of the influent and effluent samples were also recorded in the field. Analytical chemistry data for the combined influent samples collected in 2019 are presented in Appendix B-4 and the final effluent samples from the system are presented are presented in submittals to the NYSDEC under the SPDES program (Permit NY0005541).

4 HYDROGEOLOGY

This section of the report presents hydrogeologic interpretations at the Site and provides information on the hydraulic effectiveness of the groundwater extraction wells.

4.1 Generalized Hydrogeology

In general, groundwater in saturated soils flows from east to west across the site in the direction of H107 and the Hudson River. To the east of H107, the principal conduit for groundwater flow in the soils is the Site Gravel, which extends from beneath the manufacturing buildings to H107. However, this east-to-west flow of groundwater within the soils is interrupted by three "groundwater extraction systems." From north to south, these include the groundwater extraction activities at T-8SB, T-315S, and a passive groundwater collection system into abandoned storm sewers in the B003 area. Groundwater extracted by the two pumping wells is discharged to the IWTP, and groundwater collected by the abandoned storm sewer systems around B003 is collected by a manhole pumping system and also directed to the IWTP.

Groundwater flow in bedrock also generally occurs from east to west across the site, with apparent discharge to H107 and also to the Hudson River. This overall pattern of east-to-west flow is interrupted on the west side of H107 where groundwater flows from west to east toward H107 from a groundwater divide associated with the cliff area above the Hudson River. On the other side of this divide, however, groundwater flow is again towards the Hudson River and is interrupted by the SBPC System. The SBPC consists of ten extraction wells and treatment facilities that control the flux to the Hudson River from onsite groundwater plumes.

4.2 Groundwater Flow Directions

Groundwater elevation measurements were used to contour groundwater elevations for the soil and shallow bedrock. These groundwater elevation contour maps are presented for each quarter of 2019 as Figures 4-2 through 4-9: Figures 4-2 and 4-3 present soil and bedrock groundwater elevation data with contours for the first quarter; Figures 4-4 and 4-5 present soil and bedrock groundwater elevation data with contours for the second quarter; Figures 4-6 and 4-7 present soil and bedrock groundwater elevation data with contours for the third quarter and; Figures 4-8 and 4-9 present soil and bedrock groundwater elevation data with contours for the fourth quarter.

4.2.1 Groundwater Flow in Soils

Figures 4-2, 4-4, 4-6 and 4-8 show the groundwater elevation contour map for soil monitoring wells with the interpretation focusing on the manufacturing area of the Site. In addition to groundwater elevation contours, the areas within which there is no saturated soil are shown by a cross-hatched pattern.

In general, groundwater in saturated soils flows from east to west across the site in the direction of H107 and the Hudson River. To the east of H107, the principal conduit for groundwater flow in the soils is the Site Gravel, which extends from beneath the manufacturing buildings to H107. However, this east-to-west flow of groundwater within the soils is interrupted by three groundwater extraction systems. From north to south, these include the groundwater extraction activities at T-8SB, T-315S, and groundwater drainage into storm sewers in the B003 area. Groundwater extracted by the two pumping wells is discharged to the IWTP and groundwater collected by the abandoned storm sewer systems around B003 is collected by a manhole pumping system and also directed to the IWTP.

In the vicinity of B008, groundwater flow within the Site Gravel is funneled between two areas of high bedrock where there are no saturated soils. Where this funneling occurs, the gradient steepens markedly to convey the converging groundwater flow through this restriction. Downgradient from this restriction, groundwater in the Site Gravel flows beneath the IWTP and discharges predominantly to H107.

Other than the major component of groundwater flow within the Site Gravel, groundwater flow occurs within saturated sediments associated with the limited extent of these sediments in the Former Antenna Drum Storage Area (associated with T-99S), in the B020/B030/IBM dock area (associated with T-206S and 412S), and in the Former Waste Oil Leach Field Area (associated with T-14S and T-20SA). The principal groundwater flow within these soils occurs in the shaley fill material placed for development of the railroad, and in the case of the Former Antenna Drum Storage Area, in natural coarse-textured sediments. At Former B025, groundwater flow directly toward the Hudson River in saturated soil is precluded by the presence of a slurry wall.

4.2.2 Groundwater Flow in Bedrock

As shown on Figures 4-3, 4-5, 4-7 and 4-9, groundwater flow in bedrock also generally occurs from east to west across the site, with apparent discharge to H107 and also to the Hudson River. This overall pattern of east-to-west flow is interrupted on the west side of H107 where groundwater flows from west to east toward H107 from a groundwater divide associated with the cliff area above the Hudson River. On the other side of this divide, however, groundwater flow is again towards the Hudson River and is interrupted by the SBPC System. The SBPC consists of ten extraction wells and treatment facilities that control the flux to the Hudson River from onsite groundwater plumes.

5 HYDROGEOCHEMISTRY

This section of the annual report presents an analysis of the chemical concentration data collected in 2019, including an assessment of the distribution of chemical concentrations in groundwater.

5.1 Chemicals of Concern

The dissolved hazardous constituent plumes at this Site are associated with organic compounds that can be grouped into a number of chemical classes. These include chlorinated ethenes, chlorinated ethanes, chlorofluorocarbons, chlorinated benzenes, aromatics and chlorinated methanes.

Principal constituents identified at the Site in dissolved groundwater plumes are Trichloroethene (TCE), 1,1,1-Trichloroethane (1,1,1-TCA), Freon®113 and the associated degradation or transformation products of these principal constituents.

5.2 Distribution of Chemical Concentrations (Spatial Variations)

The spatial distribution of each of the organic compounds detected in groundwater at concentrations that exceed the current New York State Groundwater Quality Standard (NYSGQS) is presented on Figures 5-1 through 5-20. The groundwater monitoring data results are posted and contoured for the soil and shallow bedrock monitoring wells separately.

The data selected for presentation on these figures includes data from the second quarter of 2019. The selected date range includes all quarterly, semiannual and annual sampling locations and therefore presents the most complete data set for the 2019 calendar year. Where sufficient detections are present, concentration contours have been drawn. In each case, the lowest contour value is equal to the NYSGQS for that compound.

These figures are presented as Figures 5-1 through 5-20 (soil and shallow bedrock, in sequence by parameter) and correspond to the following compounds: Tetrachloroethene (PCE); Trichloroethene (TCE); 1,2-Dichloroethene (1,2-DCE); Vinyl Chloride (VC); 1,1,1-Trichloroethane (1,1,1-TCA); 1,1-Dichloroethane (1,1-DCA); 1,1-Dichloroethene (1,1-DCE); Chloroethane (CEA); Freon®113 (1,1,2-trichloro (1,2,2) trifluoromethane) and; Freon®123a (1,2-dichloro (1,2,2) trifluoromethane).

Several other compounds were detected infrequently in groundwater with concentrations that exceed the NYSGQS including: 1,2-dichloroethane; 1,2-dichloropropane; 1,4-dichlorobenzene, chlorobenzene; chloroform; dibromomethane; dichlorodifluoromethane and; methylene chloride. Data for these compounds were therefore not posted and contoured. Reported concentrations for these and other compounds can be found in the data printouts presented in Appendix C-1.

Two observations should be made about these figures, one relating to the control of the Site Gravel TCE Plume and the other related to the control of the plumes associated with the SBPC. The first observation is illustrated best on Figure 5-3 which demonstrates the capture of the Site Gravel TCE Plume source zone by the operation principally of extraction well T-8SB.

The second observation is illustrated on all of the chemical concentration contour maps for principal compounds in the shallow bedrock zone. These include: Figure 5-4 (TCE), Figure 5-8 (VC), Figure 5-10 (1,1,1-TCA) and Figure 5-18 (Freon®113). As a result of the hydraulic effects of the SBPC extraction wells discussed in Section 4.2.2 and observed chemical concentrations in downgradient wells, the contours on these figures exhibit closure on the river side of the plumes. These figures, therefore, further illustrate the elimination of chemical flux to the Hudson River.

6 PROGRESS OF REMEDIATION

This section discusses the progress toward remediation at this Site and provides an update on the contaminant mass removal from Site groundwater as per the annual reporting requirements specified in the GMP. In addition, this section provides an update on control of the migration of contaminated groundwater to surface water receptors. As such, this section relates the data presented in previous sections to these site remediation goals stated in Section 2.6 and provides an update on the effectiveness of the corrective action program as per the semiannual reporting requirements specified in 6NYCRR Subpart 373-2.6(k)(7).

The remedial program in place at the facility continues to be effective in removing contaminant mass from site groundwater, and in controlling the migration of contaminated groundwater to surface water receptors.

6.1 Contaminant Removal from Site Groundwater

Two groundwater extraction wells, T-8SB and T-315S, operate in the Site Gravel and are associated with the remediation of AOC B: Site-wide Groundwater. In addition, the B003 Passive Groundwater Collection System also operates within the Site Gravel. The following subsections discuss the operations, pumping rates and contaminant recovery levels for T-8SB, T-315S and the B003 Passive Groundwater Collection System.

6.1.1 Site Gravel TCE Plume

Long-term pumping at T-8SB began on October 29, 1991. Total mass removed as of year-end 2019 is approximately 1,318 pounds. During the 2019 calendar year, approximately 3.65 pounds of TCE, 0.22 pounds of 1,2-DCE and 0.64 pounds of PCE were removed at this location, based on the results of routine groundwater samples collected from an in-line sampling port at T-8SB.

Long-term pumping was begun at well T-315S on April 18, 1992. Total mass removed as of year-end 2019 is 125.7 pounds. During the 2019 calendar year, a total of 0.93 pounds of TCE and 0.30 pounds of 1,2-DCE have been removed at this location, based on the results of routine groundwater quality samples collected from an in-line sampling port at T-315S.

The B003 Passive Groundwater Collection System began operations in December 1998. Total mass removed as of year-end 2019 is 1,873 pounds. During the 2019 calendar year, water quality samples and flow measurements were collected from CS 434 for removal calculations associated with the B003 Passive Groundwater Collection System. On the basis of these routine samples, 49.5 pounds of TCE and 16.3 pounds of 1,2-DCE have been removed from this location.

6.1.2 Building Footer Drains

During the 2019 calendar year, water quality samples and flow measurements were collected from the B450 Footer Drains at CS 0198 for removal calculations. On the basis of these routine samples, 0.01 pounds of PCE, 0.68 pounds of TCE and 0.01 pounds of 1,2-DCE have been removed from this location. Total mass removed as of year-end 2019 is 116.8 pounds.

6.1.3 Plumes Along the Hudson River

During the 2019 calendar year, water quality samples and flow measurements were collected from the influent to the treatment system associated with the Site Boundary Plume Control Groundwater Extraction System these measurements were used for removal calculations. On the basis of these routine samples, 2.8 pounds of Freon®113, 0.1 pounds of Methylene Chloride, 0.7 pounds of 1,1,1-Trichloroethane, 1.9 pounds of 1,2-DCE, 0.7 pounds TCE, 0.5 pounds of 1,1-DCA and 0.2 pounds of Freon®123a were removed by the SBPC extraction system during 2019. Total mass removed as of year-end 2019 is 1,226 pounds.

6.2 Elimination of Contaminated Groundwater from Storm Sewers

Measures taken to comply with SPDES discharge limits for stormwater outfalls impacted by groundwater flux include the installation of the B003 Passive Groundwater Collection System which collects infiltration inflow of contaminated groundwater and the operation of the two Site Gravel extraction wells, T-8SB and T-315S.

As can be seen from Figure 3-2 the operation of T-8SB has reduced the flux to acceptable concentrations at SPDES Outfall D013.

6.3 Temporal Changes in Groundwater Chemistry (Concentration Trends)

The groundwater chemistry database was examined to identify apparent trends in concentrations of the principal constituents at the Site that may be occurring at specific monitoring locations. This examination included a review of time versus concentration data for monitoring wells and extraction wells in the various plumes at the Site at monitoring wells where sampling is being performed to assess concentration trends since implementation of groundwater extraction operations within the Site Gravel and along the Hudson River at the ten SBPC groundwater extraction wells. The graphs of time versus concentration for the selected wells are included in Appendix C-6. In the following discussion, the existence of trends is examined in the Site Gravel TCE Plume and then in the other plumes bordering the Hudson River on the western edge of the site.

6.3.1 Site Gravel TCE Plume

The time versus concentration plots for monitoring wells in the Site Gravel TCE Plume (Appendix C-6) were examined for increasing or decreasing trends that were visually apparent in the data since groundwater extraction began in the Site Gravel in late 1991. In all, eleven (11) monitoring wells and the two extraction wells (T-8SB and T-315S) were believed, based on visual inspection, to exhibit decreasing trends in one or more constituents associated with the ethene-series compounds in the Site Gravel TCE Plume, and nine (9) monitoring wells since the first quarter of 1992. As shown on Table 6-1, all of these wells were determined to have a decreasing trend associated with at least one constituent. In analyzing these trends, a confidence level of 95 percent or greater was assumed to confirm the presence of a decreasing trend.

These decreasing trends in chlorinated ethene compound concentrations demonstrate the overall effectiveness of the implementation of groundwater extraction activities in the Site Gravel plume.

Table 6-1: Analysis of Chemical Concentration Trends for Site Gravel Area Wells				
Extraction Well	**Period**	**Parameter**	**Trend**	**Confidence Level%**
T-8-SB	1/92 to present	PCE	Decreasing	95%
		TCE	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-315-S	7/92 to present	TCE	Decreasing	95%
		1,2-DCE	Decreasing	95%
Monitoring Well	**Period**	**Parameter**	**Trend**	**Confidence Level%**
T-22-S	1/92 to present	TCE-Series	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-32-S	3/92 to 11/02	TCE	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-34S	4/98 to present	TCE	None	
	4/98 to present	1,2-DCE	Decreasing	95%
T-41-S	3/92 to present	TCE	Decreasing	95%
		1,2-DCE	Increasing	95%
		TCE-Series	Decreasing	95%
T-42-R	1/93 to present	TCE	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-43-SB	3/92 to present	TCE-Series	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-57-S	3/92 to present	PCE	Decreasing	95%
		TCE	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-75-S	4/94 to present	PCE	Decreasing	95%
		TCE	Decreasing	95%
		1,2-DCE	Decreasing	95%
T-85R	4/98 to present	1,2-DCE	Decreasing	95%
	3/92 to present	TCE-Series	Decreasing	95%
		VC	Decreasing	95%
T-217-S	1/92 to present	TCE	Decreasing	95%
		1,2-DCE	None	
T-314-S	1/92 to present	TCE	Decreasing	95%
		1,2-DCE	Increasing	95%
		TCE-Series	Decreasing	95%

6.3.2 Plumes Along the Hudson River

Time versus concentration plots for monitoring wells in areas adjacent to the Hudson River (Appendix C-6) were visually examined for increasing or decreasing trends or the absence of any trend. In total, nine monitoring wells were believed, based on visual inspection, to exhibit trends in one or more constituents associated with ethane-series and / or ethane-series compounds. The results of these analyses are presented in Table 6-2. This table is divided into groupings of Solid

Waste Management Units (SWMUs) and/or Areas of Concern (AOCs) adjacent to the Hudson River which are being controlled by groundwater extraction wells in the SBPC. In analyzing these trends, a confidence level of 95 percent or greater was assumed to confirm the presence of a trend.

As shown on Table 6-2, in general, decreasing trends associated with at least one constituent occur in all key wells installed in the B077, Overpass, Former Antenna Drum Storage Area, Former Burn Pit, Former Inactive Waste Disposal Site and B025 Areas.

These decreasing trends in key wells in chlorinated ethane and / or ethene compound concentrations demonstrate the overall effectiveness of the implementation of groundwater extraction activities in the areas adjacent to the Hudson River known as the SBPC.

Table 6-2: Analysis of Chemical Concentration Trends for Areas Adjacent to the Hudson River

Area of Site	Well	Period (to present)	Parameter	Trend	Confidence Level
B077	T-49-RA	1st Qtr 1993	1,2-DCE Vinyl Chloride TCE-Series	Decreasing Decreasing Decreasing	95% 95% 95%
Overpass	T-87-RA	2nd Qtr 1994	1,1,1-TCA TCA-Series TCE TCE-Series	Decreasing Decreasing Decreasing Decreasing	95% 95% 95% 95%
Former Antenna Drum Storage Area	T-100-RA	3rd Qtr 1991	TCA-Series TCE-Series	Decreasing Decreasing	95% 95%
	T-83-RA	1st Qtr 1993	1,1,1-TCA TCA-Series TCE TCE-Series	Decreasing Decreasing Decreasing Decreasing	95% 95% 95% 95%
Former Burn Pit	75-GA	1st Qtr 1991 to 4th Qtr 2002	TCE 1,2-DCE TCE-Series	Decreasing Decreasing Decreasing	95% 95% 95%
Former Inactive Waste Disposal Site	T-203-RA	1st Qtr 1990	TCE 1,2-DCE TCE-Series	Decreasing Decreasing Decreasing	95% 95% 95%
Former Waste Oil Leach Field	T-20-SA	2nd Qtr 1991	1,2-DCE Vinyl Chloride TCE-series	Decreasing Decreasing Decreasing	95% 95% 95%
	T-20-RA	3rd Qtr 2002	TCE 1,2-DCE Vinyl Chloride	Decreasing Increasing Increasing	95% 95% 95%
B025	T-206-S	1st Qtr 1991	1,1,1-TCA 1,1-DCA TCA-Series TCE 1,2-DCE Vinyl Chloride TCE-series	Decreasing Decreasing Decreasing Decreasing Decreasing Decreasing Decreasing	95% 95% 95% 95% 95% 95% 95%

6.4 Control of Groundwater Chemical Flux to Surface Water

This section combines the 2019 annual groundwater chemistry results with the groundwater flow characterization to assess the chemical flux from groundwater to surface water, including H107 and the Hudson River. As such, this section satisfies the requirement to present revised flux calculations specified in the site's GMP. These revised calculations include flux to H107 from groundwater sources, the H107 flux to the Hudson River and the direct flux to the Hudson River.

6.4.1 Groundwater Flux to H107

Surface water monitoring in H107 is as specified in the Site's SPDES permit and sampling is conducted at four locations shown on Figure 3-1. Results from the monitoring at these locations are presented in submittals to the NYSDEC under the SPDES program (Permit NY0005541). Based on the 2019 sampling results, there is no TCE flux in H107 at sampling locations H107-1 Upstream, H107 Upstream, which are non-IBM off-site sources, the Confluence which is upstream from the stream segment into which the Site Gravel TCE Plume discharges. These sampling locations show the upstream background flux before the Site Gravel Plume discharges to the stream is undetected.

Similarly, the flux measured at the first station downstream from the stream segment in which the Site Gravel Plume discharges to H107 can be used to measure the groundwater chemical flux from the Site Gravel to H107 which corresponds to surface water monitoring station H107 Downstream, as shown on Figure 3-1. Based on the 2019 sampling results, there is no TCE or 12-DCE flux in H107 at sampling location H107 Downstream. These results show the flux attributable from the where the Site Gravel Plume discharges to the stream is undetected.

In order to assess the flux from H107 to the Hudson River, flux calculations for surface water sampling station H107 Downstream was used. There is no TCE or 12-DCE flux in H107 at sampling location H107 Downstream, therefore the flux used in Section 6.4.2 as part of the calculation of flux to the Hudson River was 0.0000 lbs. per day of TCE and 0.0000 lbs per day of 12-DCE.

6.4.2 Direct Groundwater Flux to the Hudson River

In making these flux calculations, flux within the saturated soil units has not been included because this flux is so small it is considered insignificant when compared to the flux within the bedrock. For bedrock groundwater, the flux calculations take into account the effects of the SBPC extraction wells. As described in Section 5.2, the effect of these wells has been to control all of the sources of this flux and, with the exception of the Former Burn Pit Area (Group 1 wells) to eliminate the flux itself by reversing the gradient in the plume over the entire distance from the source area to the river. In the Group 1 area, gradient reversal does not extend all the way to the river and there is still flux to the river from an area of low concentrations that lies between the Group 1 capture zone and the river. However, with time, even these low concentrations will diminish due to the control exerted by the Group 1 wells on the source zone.

Prior to commencing operations at the SBPC, the initial step in this process was to divide up the Hudson River shoreline into four segments, as shown on Figure 6-1 and to then calculate the flux through each of these segments. However, due to the effects of the SBPC wells, the current flux calculation entails only flux from a portion of the shoreline segment associated with the area west of the Group 1 wells. This segment corresponds to the groundwater surface water boundary across which the flow from the Former Burn Pits/Inactive Waste Disposal Site occurs. As shown in Table 6-3, this shoreline length is 420 feet.

Transmissivity for this segment was determined during the groundwater RFI and is summarized in Table 6-3. Since the shoreline is roughly parallel to the strike of cleavage planes in the rock, the initial estimate of groundwater flow across this segment was based on the average transmissivity measured in observation wells perpendicular to the strike of cleavage based on results of pumping tests conducted under the groundwater RFI. This corresponds to 70 gpd/ft. The transmissivity that was used in the second estimate of groundwater flow is 400 gpd/ft. This transmissivity corresponds to the tidal method analysis of transmissivity along strike based on data collected under the groundwater RFI.

Table 6-3: Parameters used in Bedrock Groundwater Flux Calculations				
Plume Area	**Parameters**			**Calculated Flow Value (gpd)**
	Gradient	Length of Shoreline (feet)	Transmissivity (gpd/ft)	
Former Burn Pit / Former Inactive Waste Disposal Site (Bedrock)	0.0361	420	70	1062
	0.0361	420	400	6070

The final parameter for these groundwater flow calculations is the hydraulic gradient. In the Former Burn Pit/Inactive Waste Disposal Site Area, this gradient was calculated based on the arithmetic average groundwater elevation difference during 2019 between monitoring well T-101RA and 422R. This calculation yielded a hydraulic gradient of 0.0314.

The calculated flow across the shoreline segment using each set of assumptions is also given in Table 6-3. These flow values were then used to calculate the estimated range in groundwater chemical flux across the segment for each of the hazardous constituents associated with these plume areas.

Table 6-4 contains a list of the monitoring locations used to calculate average concentrations of each of the hazardous constituents associated with the Former Burn Pit Area. The location of these wells are shown on Plate 3. In calculating the average concentrations of each constituent, the arithmetic average of the concentrations was used for all samples collected during the 2019 calendar year. This, however, generates a conservative estimate of the average concentration, since the very high concentrations in the core of each of these plumes are weighted higher than they would be if the calculated average was based on the area between concentration contours.

The results of the detailed flux calculations are presented in Appendix E. The summary of these flux calculations is presented in Table 6-5 which totals the groundwater chemical flux for each individual compound from the remaining uncaptured plume area along the Hudson River and the contribution from H107. As shown on this table, the total groundwater chemical flux to the Hudson River is 0.000976 pounds per day, which is the contribution from the Former Burn Pit / Former Inactive Waste Disposal Area. As noted in Section 6.4.1, there is no chemical flux to the Hudson River from H107.

Table 6-4: Monitoring Locations Used for Flux Calculations		
Area of Investigation	**Wells / Sampling Locations**	
Former Burn Pit / Former Inactive Waste Disposal Site (Bedrock)	T-104RA	T-104RB
	T-203RA	T-204R
	415R	422R

In the assessment of groundwater flux to surface water conducted in the early 1980s, a dispersion model was developed for the Hudson River by Lawler, Matusky and Skelly Engineers of Pearl River, New York. This model was used to predict the concentrations of the various constituents that would be present in surface water drawn from the Hudson River at the Poughkeepsie and Chelsea intakes. The results of this modeling effort have been used to calculate the maximum concentrations of each of the individual constituents that might occur in these two intakes given the flux calculations summarized in Table 6-5. These calculated maximum concentrations are listed in Table 6-5 for both Poughkeepsie and Chelsea intakes. As shown in this table, the resultant concentrations of each of these constituents are virtually immeasurable at either intake.

Table 6-5: Summary of Chemical Flux to Hudson River and Predicted Maximum Concentrations in Surface Water Intakes			
Parameter	**Overall Flux (lbs / day)**	**Maximum Model Calculated Concentrations (ug/l)**	
		Chelsea	**Poughkeepsie**
Tetrachloroethene	0.000000	0.000000	0.000000
Trichloroethene	0.000629	0.000013	0.000003
1,2-Dichloroethene (total)	0.000316	0.000007	0.000001
Vinyl Chloride	0.000011	0.000000	0.000000
1,1,1-Trichloroethane	0.000010	0.000000	0.000000
1,1-Dichloroethane	0.000000	0.000000	0.000000
1,2-Dichloroethane	0.000006	0.000000	0.000000
1,1-Dichloroethene	0.000001	0.000000	0.000000
Freon®113	0.000000	0.000000	0.000000
Methylene Chloride	0.000000	0.000000	0.000000
Benzene	0.000000	0.000000	0.000000
Toluene	0.000000	0.000000	0.000000
Ethylbenzene	0.000000	0.000000	0.000000
Xylenes (total)	0.000000	0.000000	0.000000
1,2-Dichlorobenzene	0.000000	0.000000	0.000000
1,3-Dichlorobenzene	0.000000	0.000000	0.000000
1,4-Dichlorobenzene	0.000000	0.000000	0.000000
Chlorobenzene	0.000002	0.000000	0.000000
Dichlorodifluoromethane	0.000000	0.000000	0.000000
Freon®123a	0.000002	0.000000	0.000000
All Parameters	***0.000976***	***0.000021***	***0.000004***

7 TECHNOLOGY REVIEW

As requested in NYSDEC's October 18, 1998 letter to IBM regarding the Technical Impracticability demonstration for the CMS, an evaluation regarding DNAPL remediation technologies was conducted. The results of this evaluation were presented in the CMS report submitted to the NYSDEC on March 31, 1999. It should be noted that no new DNAPL remediation technologies have been identified for this Site and therefore the evaluation provided in the CMS is still appropriate. IBM has implemented a CMI in accordance with the CMS (refer to Section 2.3 of this report) and on September 13, 2007, the Part 373 Permit was modified to include Interim Corrective Measures Program to monitor, collect and treat contaminated groundwater as the Selected Final Corrective Measures.

8 SUMMARY CONCLUSIONS

From the preceding report, it is possible to summarize the accomplishments of the groundwater corrective action program at the Site as follows:

1.) The remedial program in place at the facility continues to be effective in removing contaminant mass from site groundwater, and in controlling the migration of contaminated groundwater to surface water receptors.

2.) With the exception of a portion of the plume emanating from the Former Burn Pit/ Inactive Waste Disposal Area, the flux of groundwater related dissolved chemicals directly to the Hudson River has been eliminated and it is expected that, with time, the remaining flux directly to the river will also be eliminated. The flux to the river from all plumes has been reduced from 1.8 lbs/day in 1996 (prior to Corrective Action implementation) to 0.000976 lbs/ day in 2019.

3.) Groundwater contributions of chemical flux to storm sewers leading to SPDES outfalls are being controlled.

4.) Key monitoring wells in all plumes show a strong preponderance of decreasing trends in concentration of dissolved chemicals in groundwater.

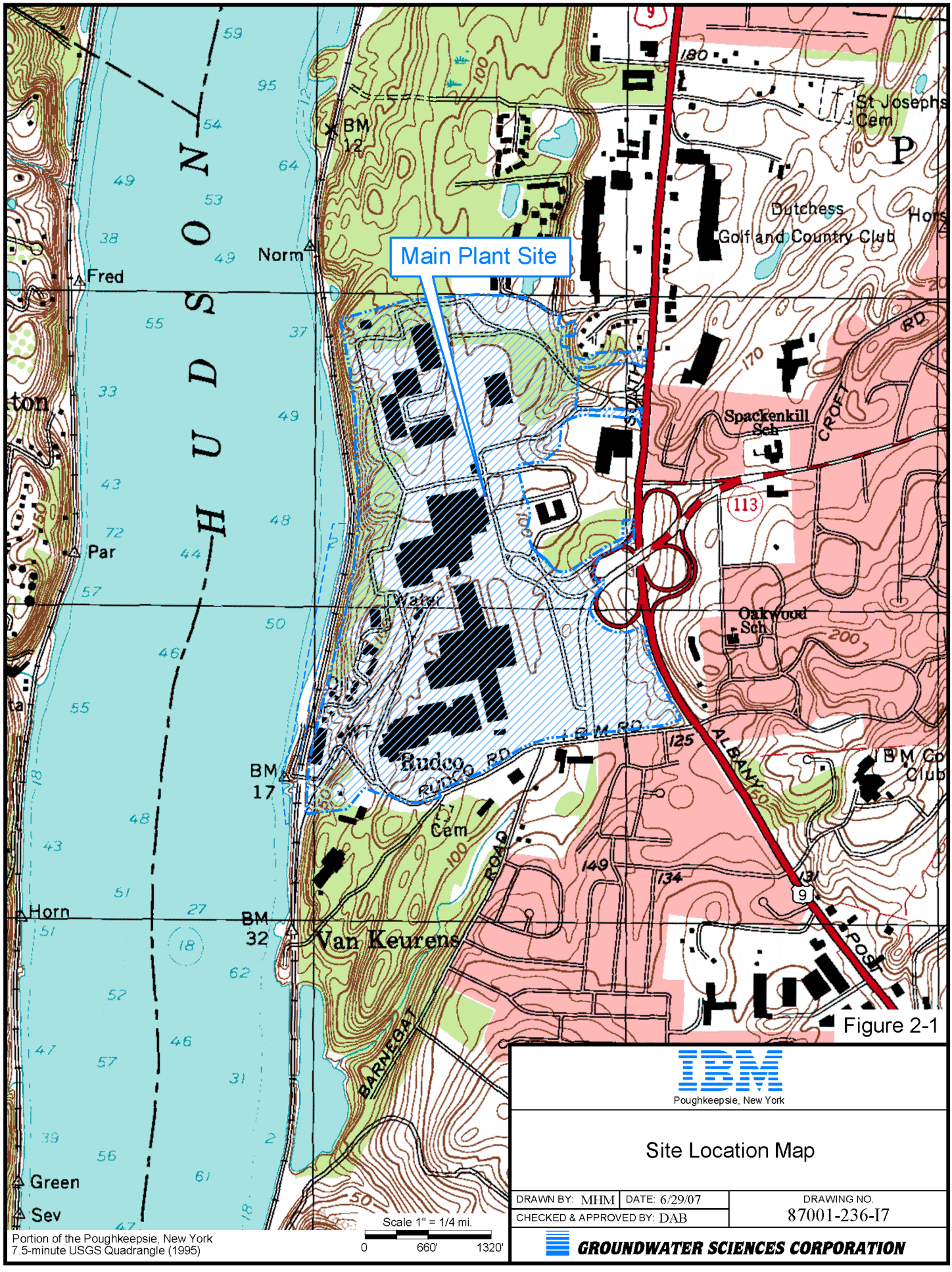

Figure 2-1

IBM
Poughkeepsie, New York

Site Location Map

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CHECKED & APPROVED BY: DAB		87001-236-I7

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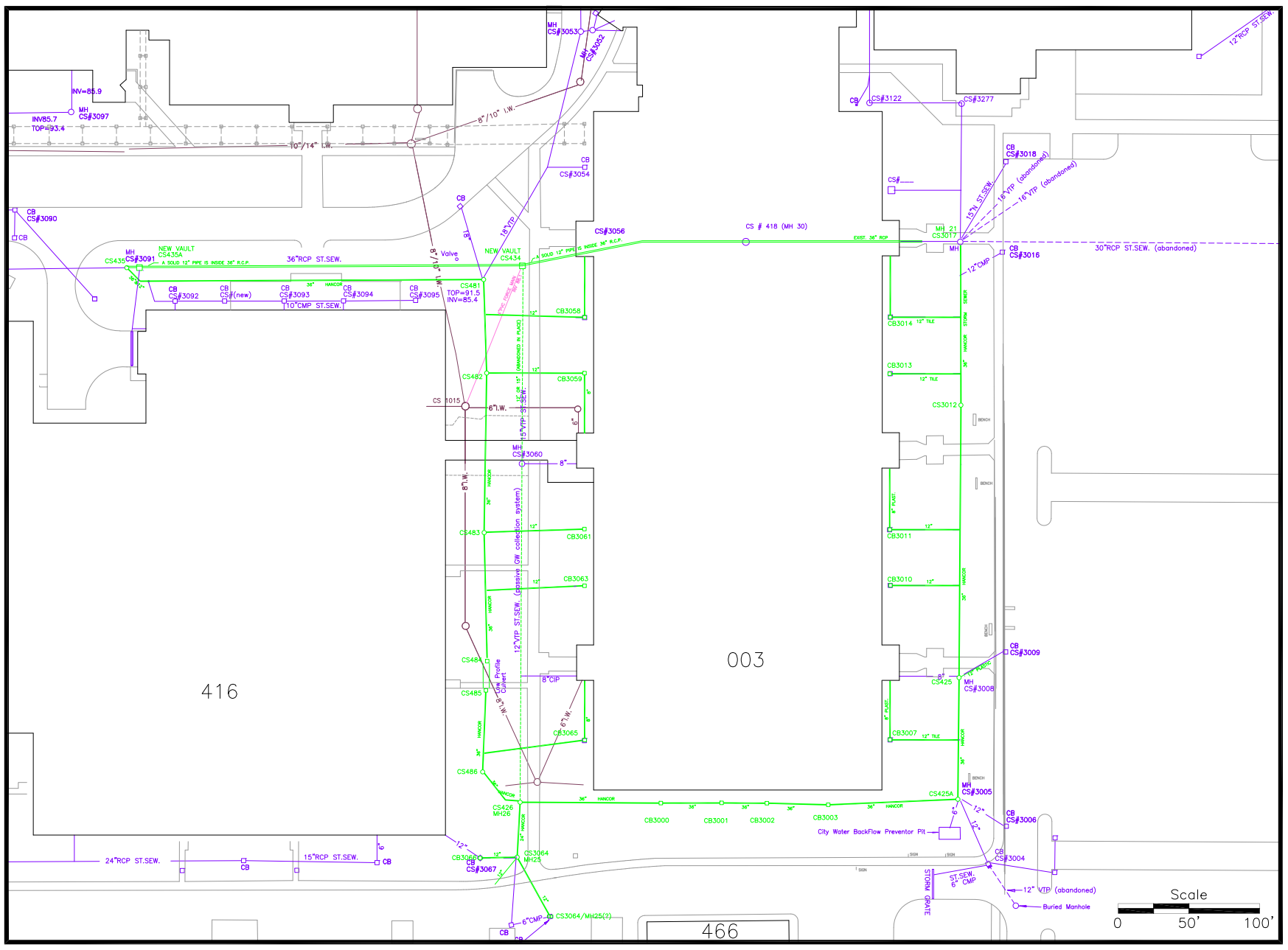

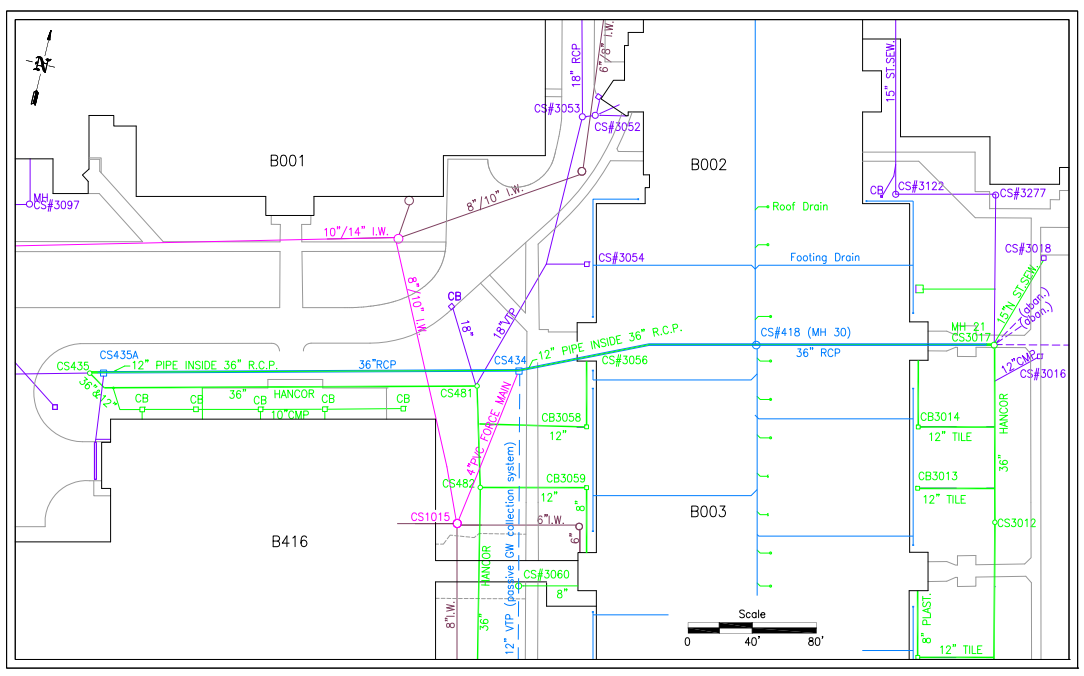

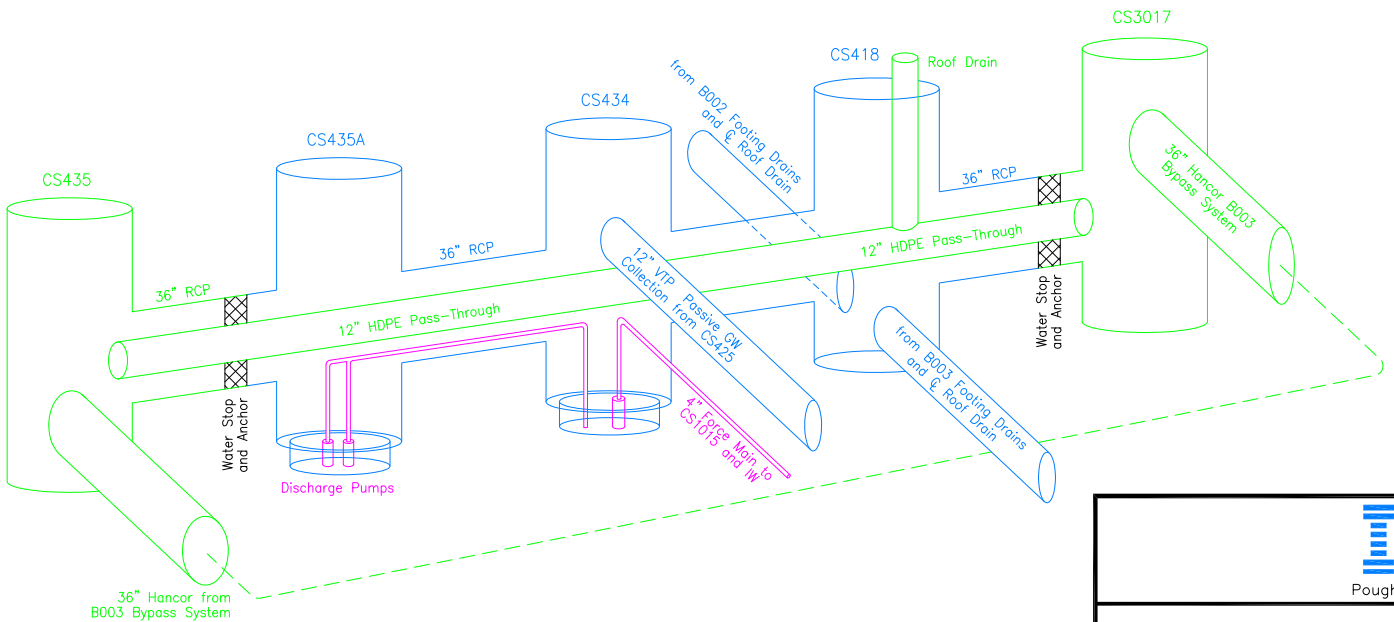

Figure 2-2

IBM
Poughkeepsie, New York

B003 Passive Groundwater Collection System

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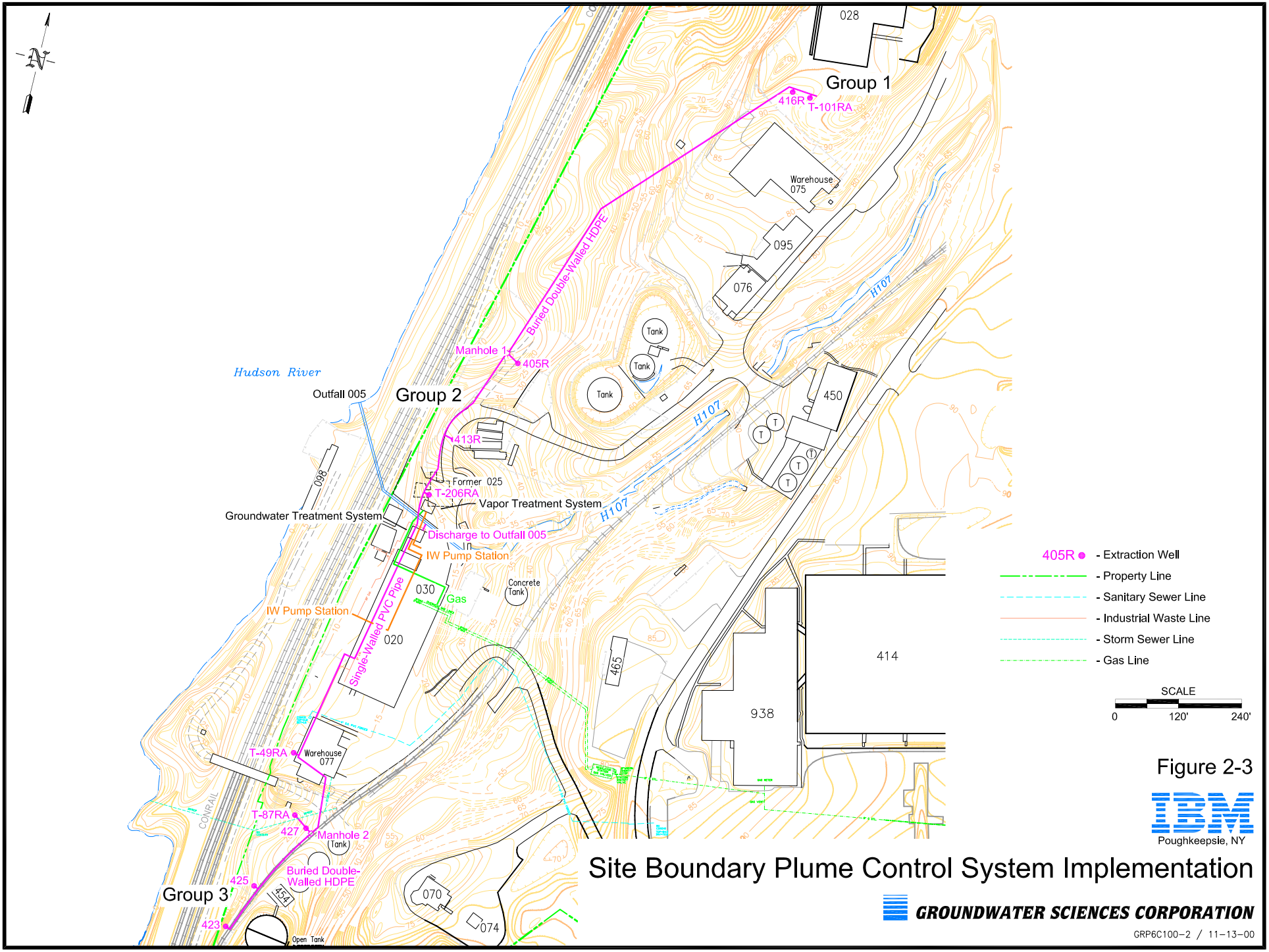

Figure 2-3

IBM
Poughkeepsie, NY

Site Boundary Plume Control System Implementation

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GRP6C100-2 / 11-13-00

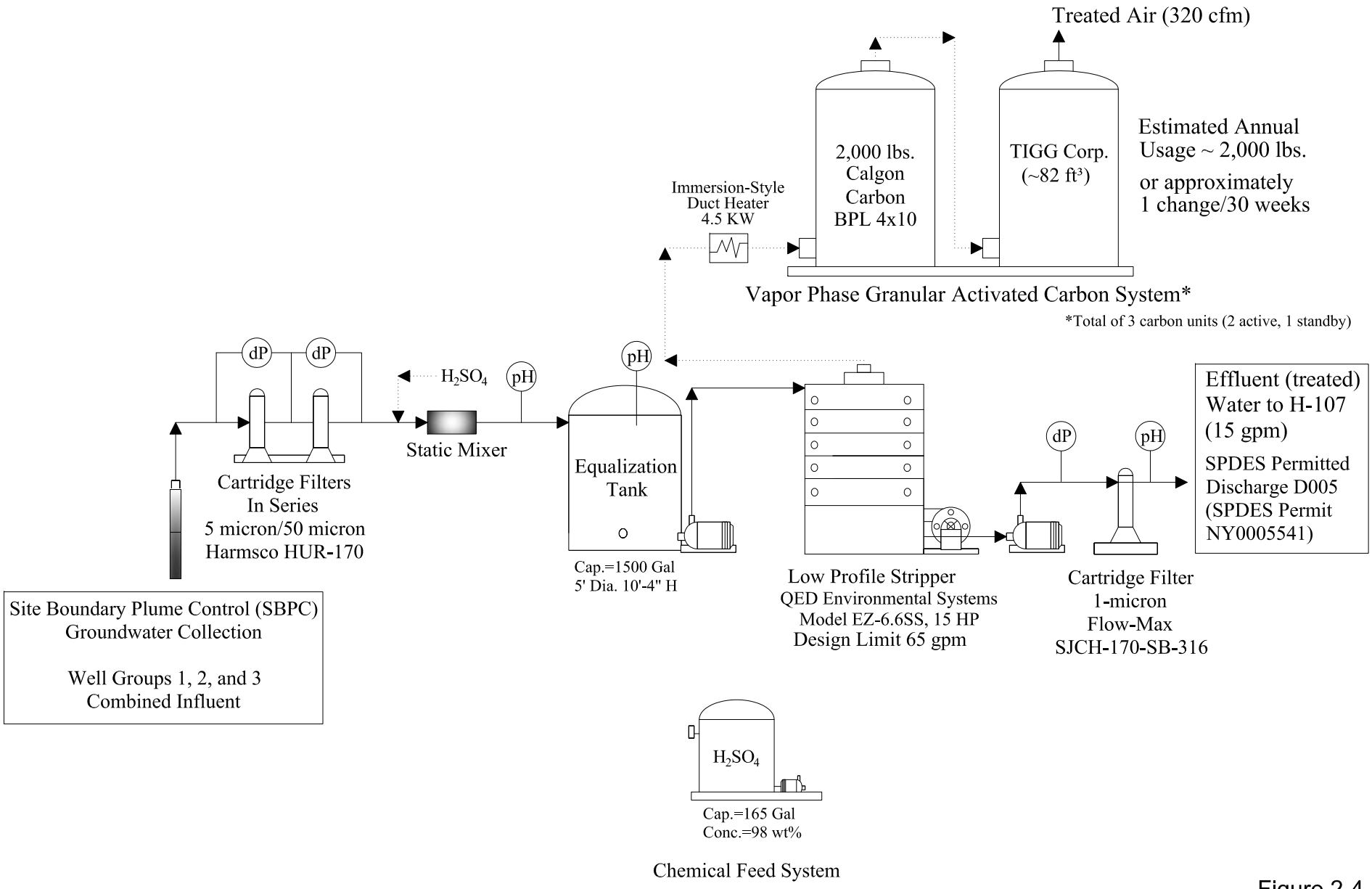

Figure 2-4

Site Boundary Plume Control (SBPC) Groundwater Collection and B030 Treatment System Flow Diagram

CMIFLOW8.DWG / 02-13-18

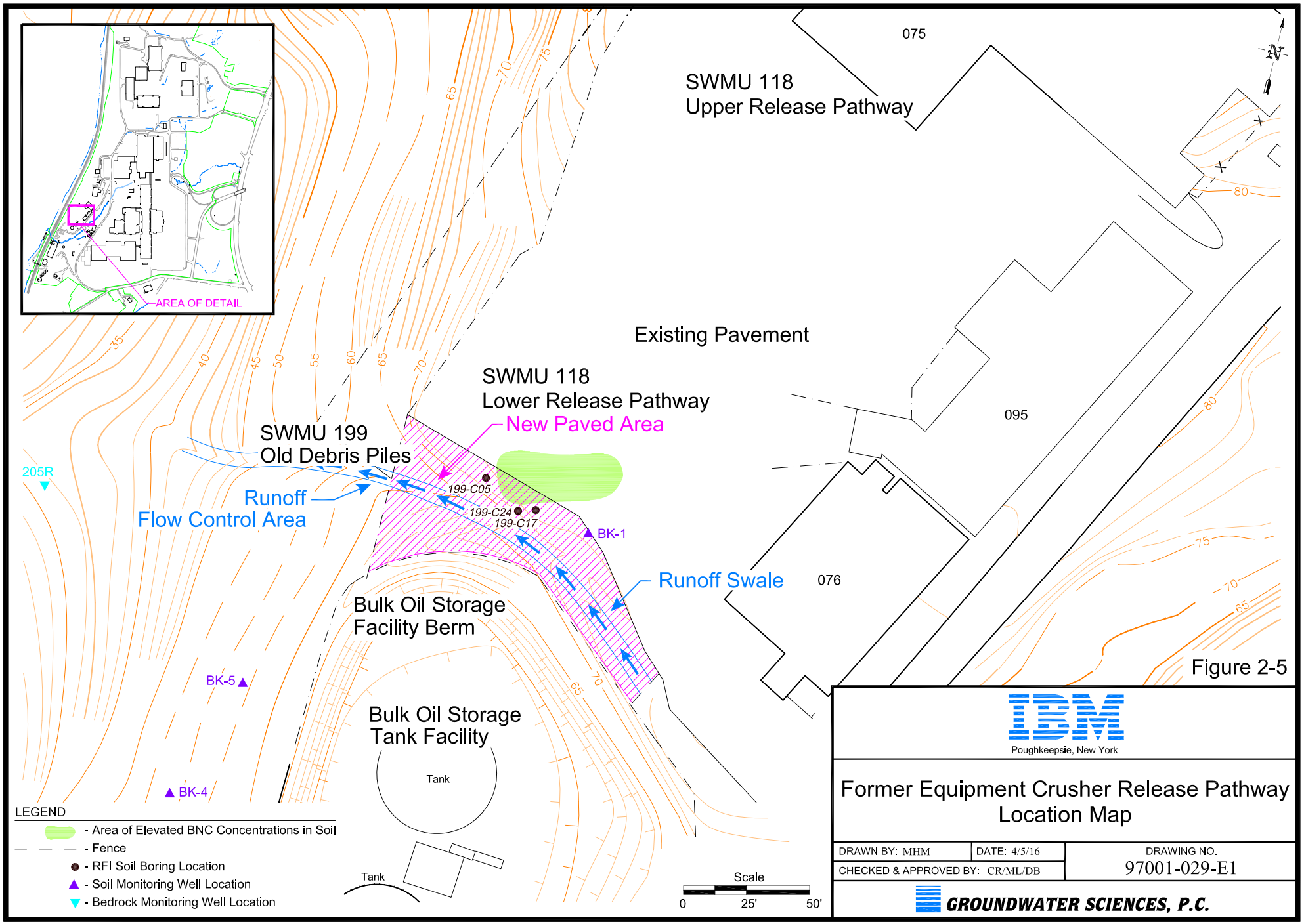

Figure 2-5

IBM
Poughkeepsie, New York

Former Equipment Crusher Release Pathway Location Map

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CHECKED & APPROVED BY: CR/ML/DB		

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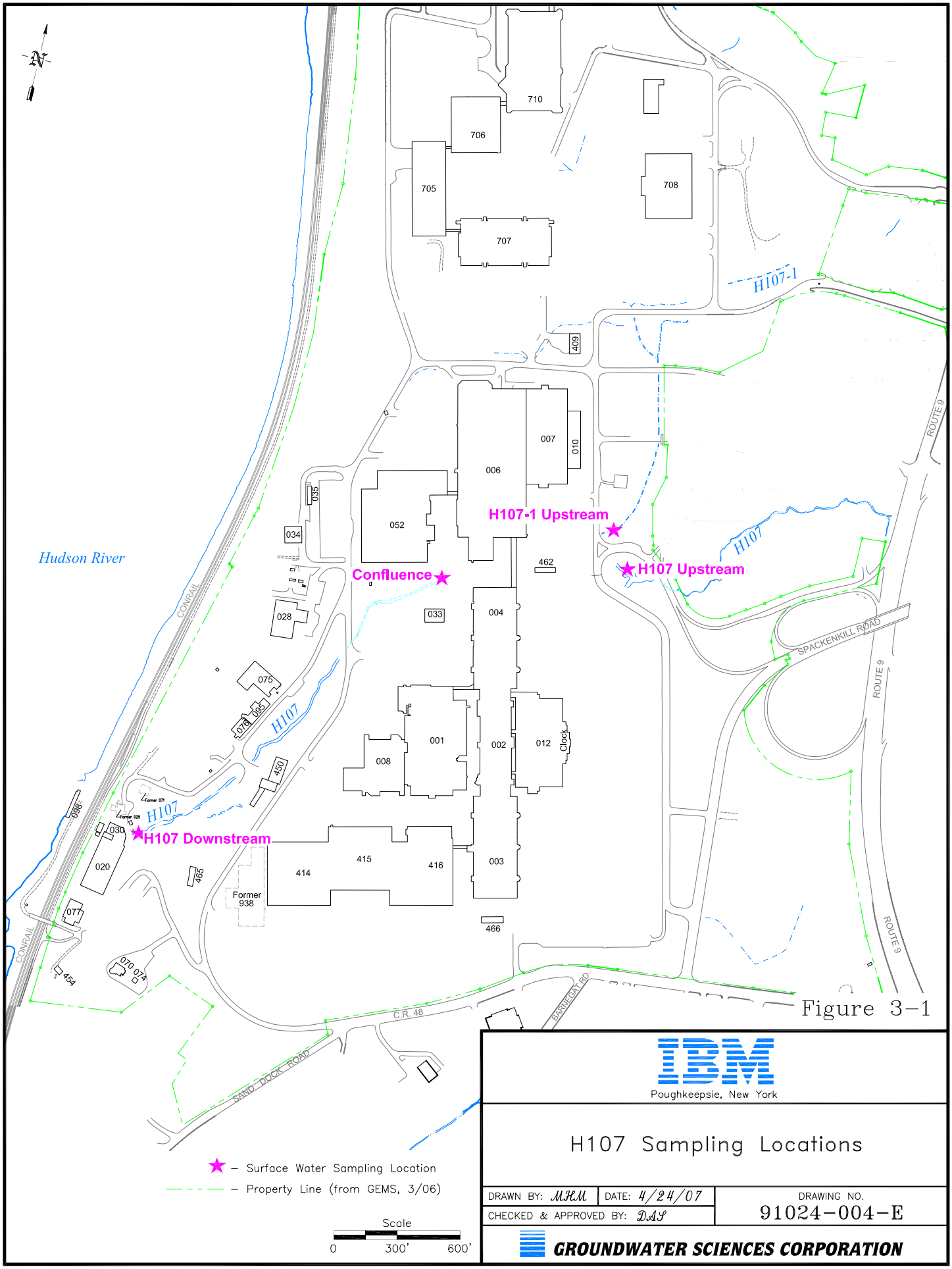

Figure 3-1

IBM
Poughkeepsie, New York

H107 Sampling Locations

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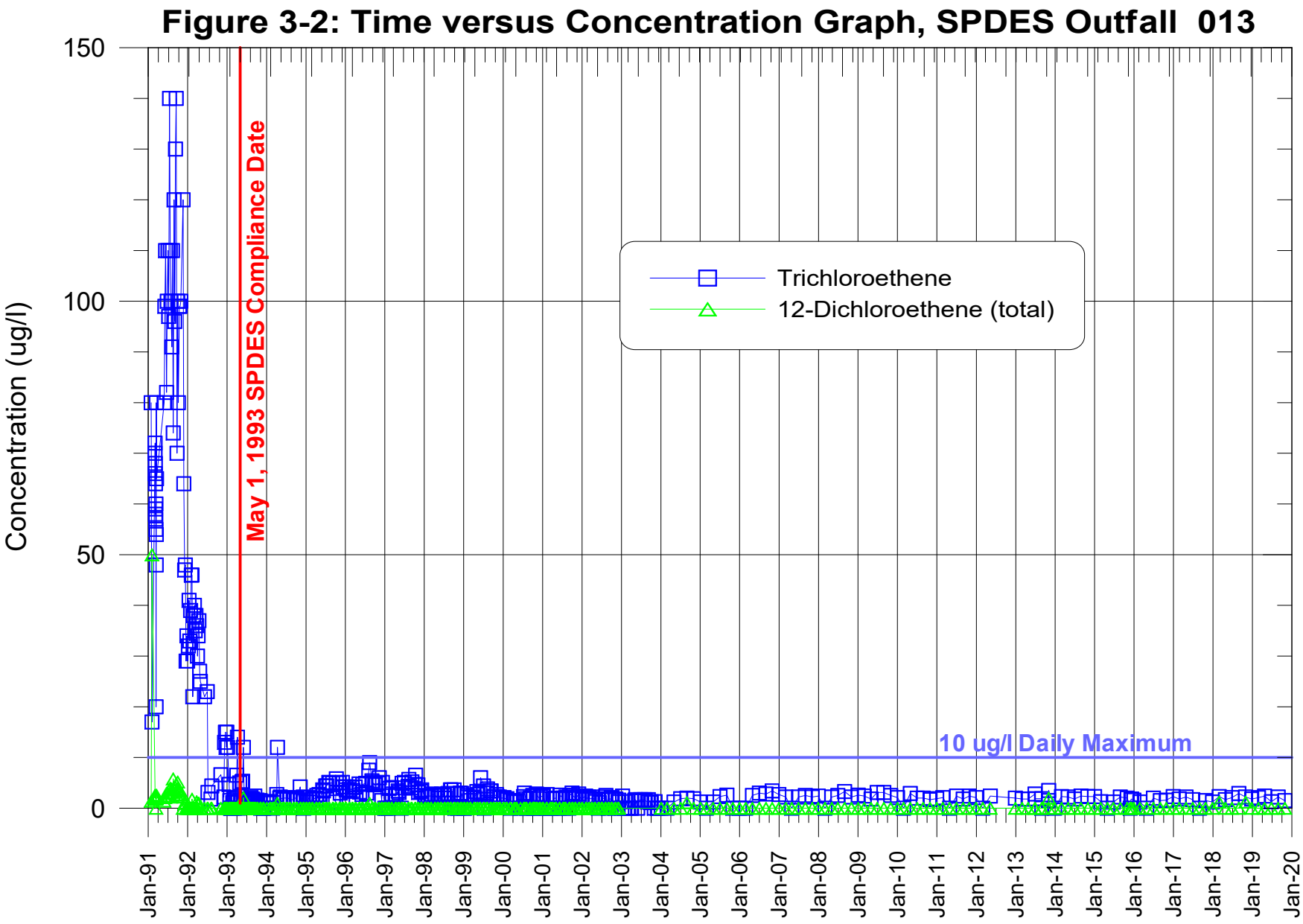
Figure 3-2: Time versus Concentration Graph, SPDES Outfall 013
Concentration (ug/l)
150
100
50
0
May 1, 1993 SPDES Compliance Date
Trichloroethene
12-Dichloroethene (total)
10 ug/l Daily Maximum
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
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Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20

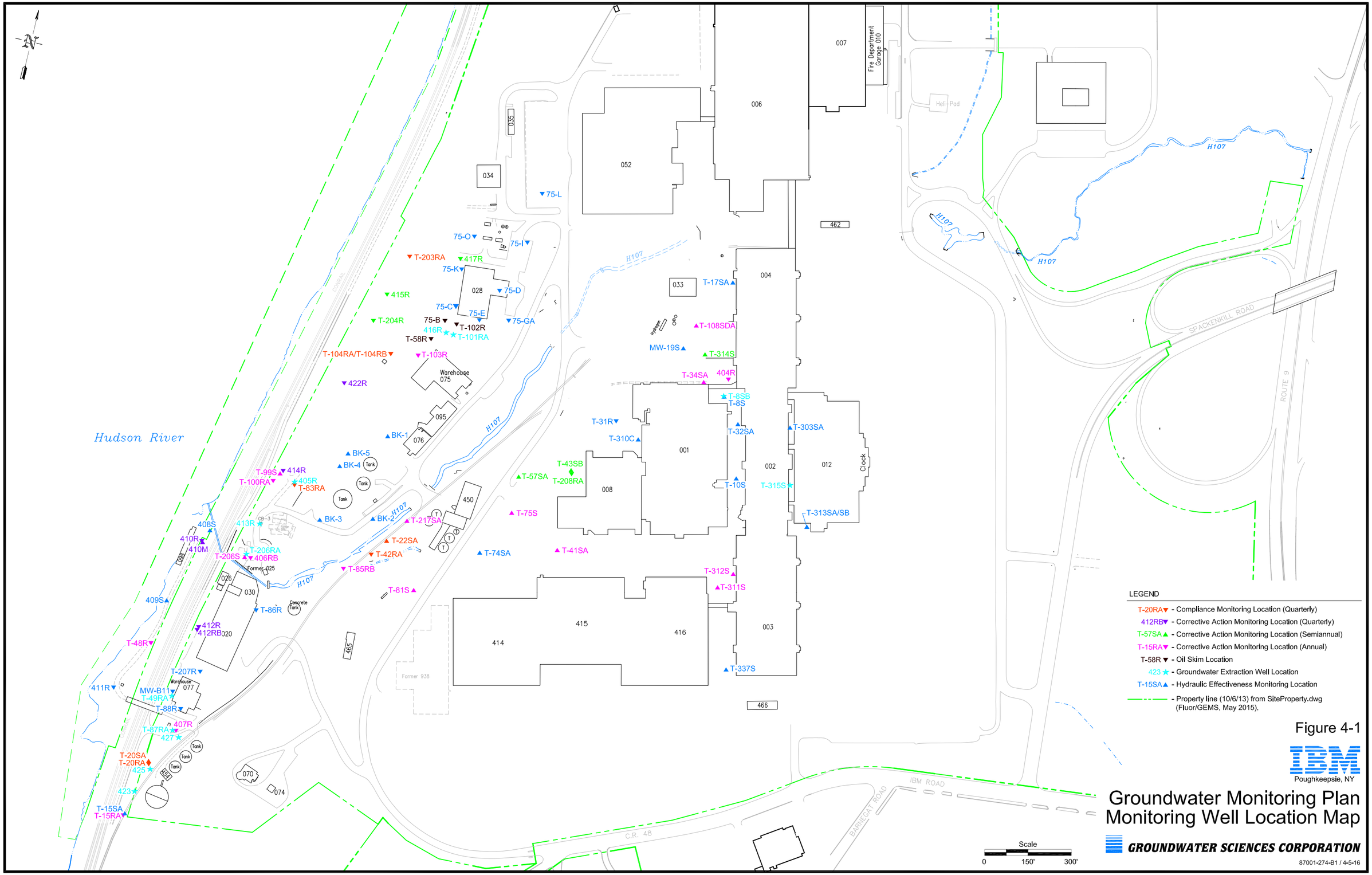

Figure 4-1

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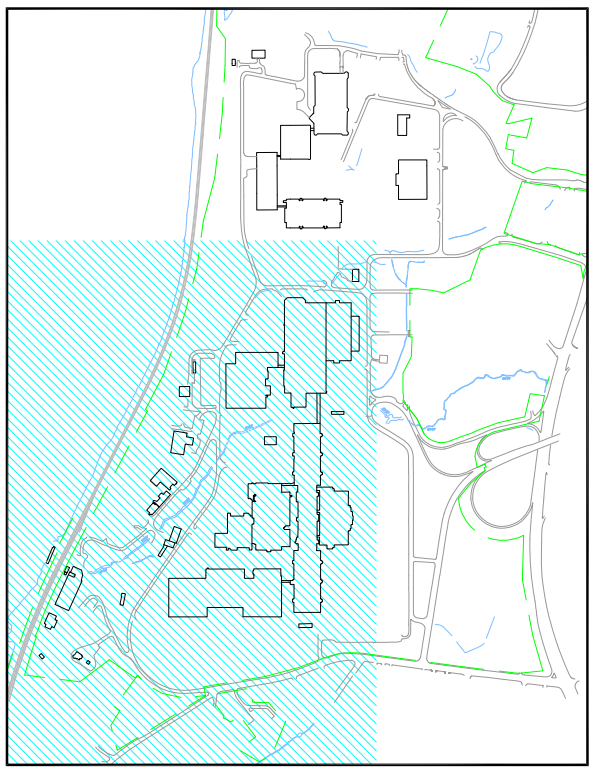
Poughkeepsie, NY

Groundwater Monitoring Plan
Monitoring Well Location Map

GROUNDWATER SCIENCES CORPORATION

87001-274-B1 / 4-5-16



Area of Detail (1"=1500')

Hudson River

Figure 4-2

★ – Groundwater Extraction Well

● – Soil Monitoring Well Location

– Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)

81.26 – Groundwater Elevation (feet amsl)

81 – Groundwater Elevation Contour (feet amsl)

– Direction of Groundwater Flow

– Groundwater Divide

– Area of no saturated soil

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

Scale 0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Soil Monitoring Wells
January 4, 2019 (First Quarter)

DRAWN BY: MHM	DATE: 09/23/19	DRAWING NO. 97001-050-M2
CHECKED & APPROVED BY: CSY		

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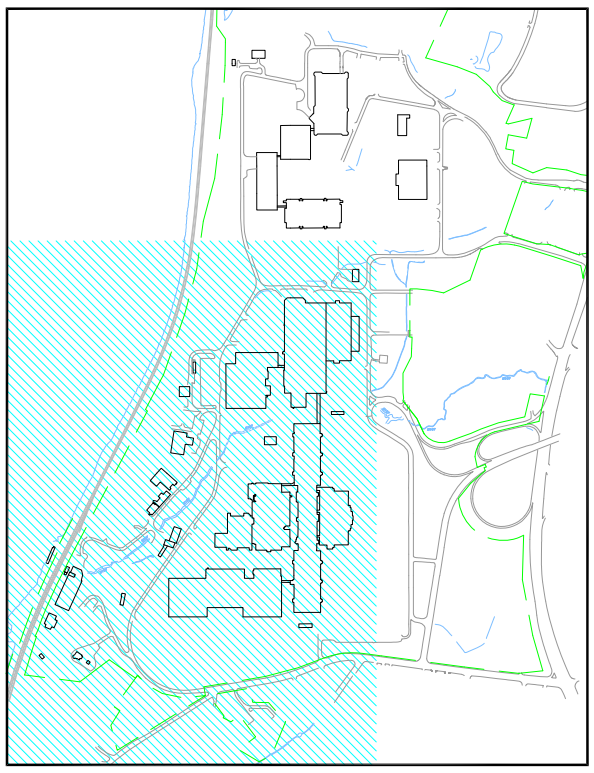

Area of Detail (1"=1500')

Group 1 Capture Zone

Group 2 Capture Zone

Group 3 Capture Zone

Hudson River

Fire Department Garage 010

Warehouse 075

Warehouse 077

Former 025

Former 938

Concrete Tank

CREDIT UNION

C.R. 48

SAND DOCK ROAD

BARNEGAT ROAD

Figure 4-3

- – Bedrock Monitoring Well Location
- ★ – Bedrock Extraction Well Location
- – Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- 80.11 – Groundwater Elevation (feet amsl)
- 56.69 – Groundwater Elevation Used in Contouring Group 1 Area
- 65 – Groundwater Elevation Contour (feet amsl)
- – Direction of Groundwater Flow
- – Groundwater Divide

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

Scale 0 150' 300'

IBM Poughkeepsie, New York

Groundwater Elevation Contour Map Bedrock Monitoring Wells January 4, 2019 (First Quarter)

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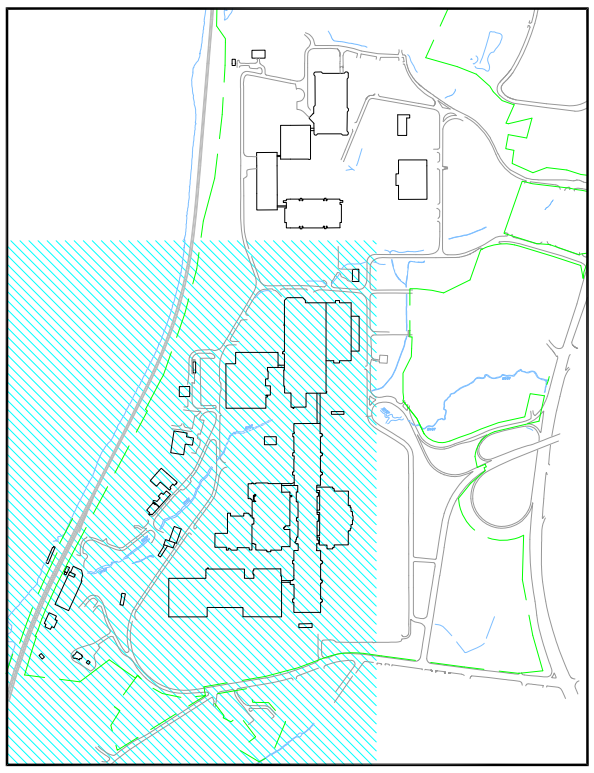

Area of Detail (1"=1500')

Hudson River

CONRAIL

Warehouse 075

Warehouse 077

Former 025

Former 938

Former Gas

Concrete Tank

Tank

Hydrogen

CREDIT UNION

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SAND DOCK ROAD

BARNEGAT ROAD

IBM

Fire Department Garage 010

Clock

H107

409 007 006 035 052 034 028 033 004 462 095 076 001 002 012 008 450 408S 410M 409S T-206S T-99S BK-4 BK-3 BK-2 T-217SA T-22SA T-81SA T-43SB T-57SA T-75S T-74SA T-41SA T-17SA T-108SDA MW-19S T-314S T-34SA T-8SB T-8S T-32SA T-303S T-310C T-10S T-315S T-313SA/SB T-312S T-311S T-337S 026 030 020 025 465 414 415 416 003 466 T-20SA T-15SA 070 074 455 081

Figure 4-4

★ – Groundwater Extraction Well

● – Soil Monitoring Well Location

– Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)

81.44 – Groundwater Elevation (feet amsl)

81 – Groundwater Elevation Contour (feet amsl)

– Direction of Groundwater Flow

– Groundwater Divide

– Area of no saturated soil

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

Scale 0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Soil Monitoring Wells
April 3, 2019 (Second Quarter)

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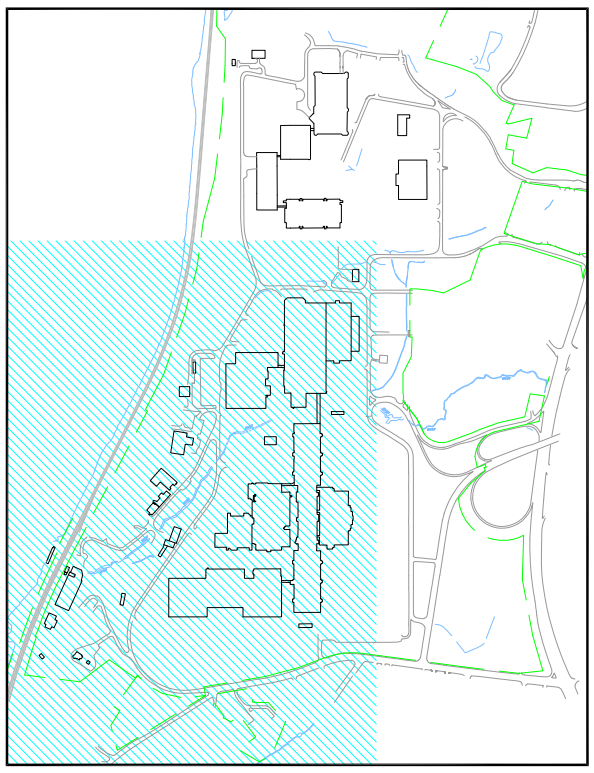
CHECKED & APPROVED BY: CSS		

GROUNDWATER SCIENCES CORPORATION



Area of Detail (1"=1500')

Group 1 Capture Zone

Group 2 Capture Zone

Group 3 Capture Zone

Hudson River

Warehouse 075

Former 025

Former 938

Tank

Concrete Tank

Hydrogen

Fire Department Garage 010

Clock

CREDIT UNION

C.R. 48

SAND DOCK ROAD

BARNEGAT ROAD

Figure 4-5

- – Bedrock Monitoring Well Location
- – Bedrock Extraction Well Location
- – Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- 44.90 – Groundwater Elevation (feet amsl)
- 53.91 – Groundwater Elevation Used in Contouring Group 1 Area
- 65 – Groundwater Elevation Contour (feet amsl)
- – Direction of Groundwater Flow
- – Groundwater Divide

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

Scale 0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Bedrock Monitoring Wells
April 3, 2019 (Second Quarter)

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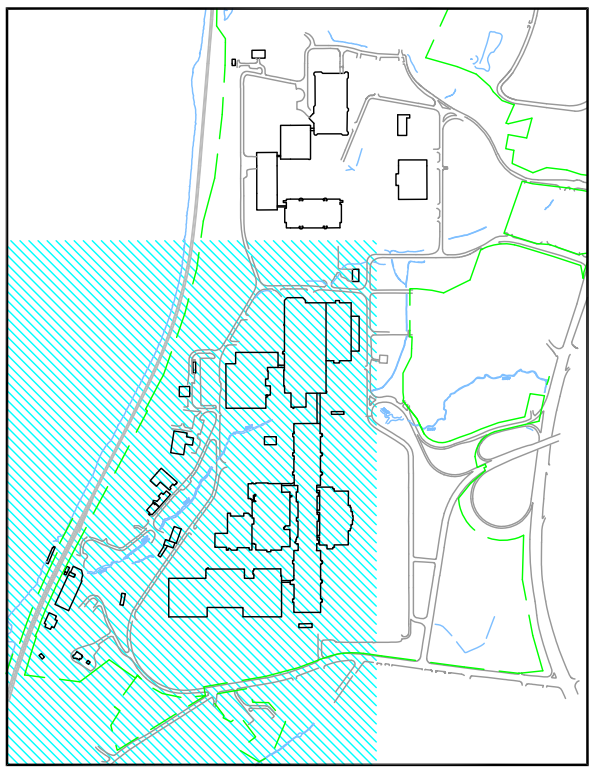
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION



Area of Detail (1"=1500')

Figure 4-6

★ – Groundwater Extraction Well

● – Soil Monitoring Well Location

– Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)

81.44 – Groundwater Elevation (feet amsl)

81 – Groundwater Elevation Contour (feet amsl)

– Direction of Groundwater Flow

– Groundwater Divide

– Area of no saturated soil

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

Scale 0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Soil Monitoring Wells
July 12, 2019 (Third Quarter)

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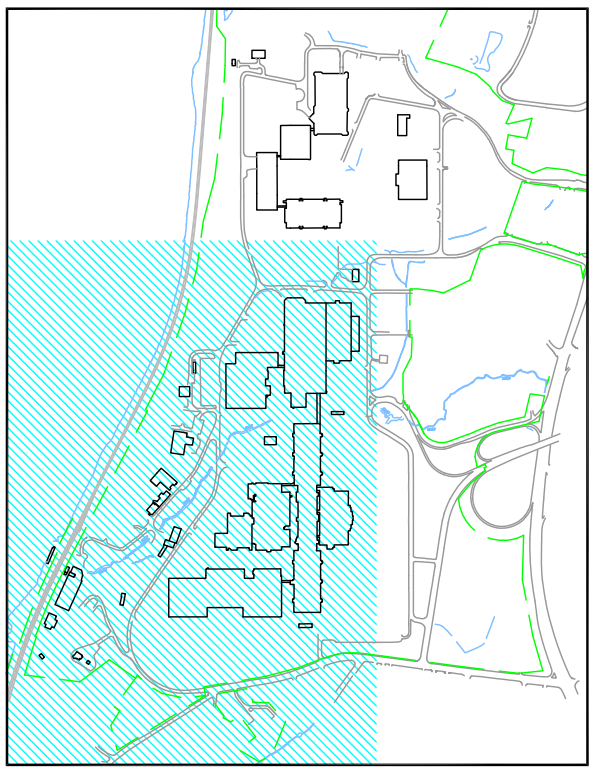
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION



Area of Detail (1"=1500')

Group 1 Capture Zone

Group 2 Capture Zone

Group 3 Capture Zone

Hudson River

Fire Department Garage 010

Warehouse 075

Warehouse 077

Former 025

Former 938

Concrete Tank

Tank

Hydrogen

CREDIT UNION

C.R. 48

SAND DOCK ROAD

BARNEGAT ROAD

IBM

Figure 4-7

- – Bedrock Monitoring Well Location
- – Bedrock Extraction Well Location
- – Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- 44.90 – Groundwater Elevation (feet amsl)
- 53.91 – Groundwater Elevation Used in Contouring Group 1 Area
- 65 – Groundwater Elevation Contour (feet amsl)
- – Direction of Groundwater Flow
- – Groundwater Divide

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

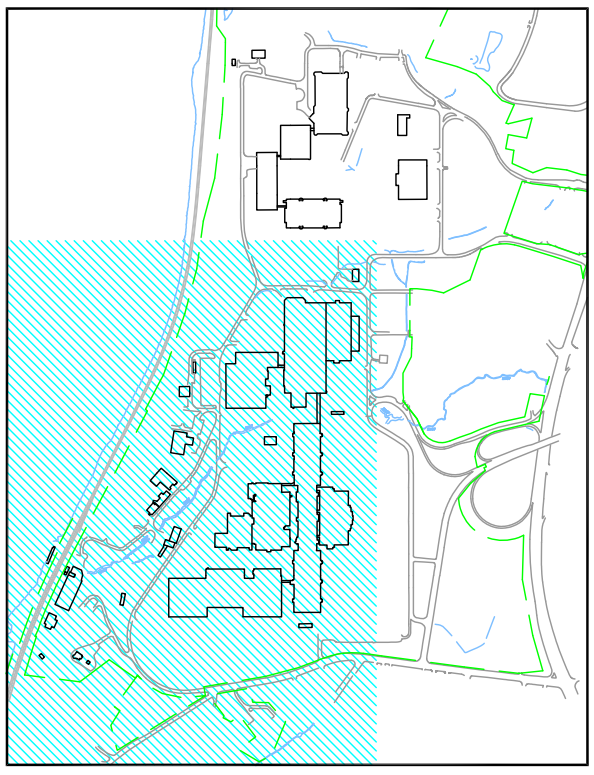
Scale
0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Bedrock Monitoring Wells
July 12, 2019 (Third Quarter)

DRAWN BY: dab	DATE: 03/20/20	DRAWING NO. 97001-053-B3
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION



Area of Detail (1"=1500')

Figure 4-8

★ – Groundwater Extraction Well

● – Soil Monitoring Well Location

– Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)

81.44 – Groundwater Elevation (feet amsl)

81 – Groundwater Elevation Contour (feet amsl)

– Direction of Groundwater Flow

– Groundwater Divide

– Area of no saturated soil

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

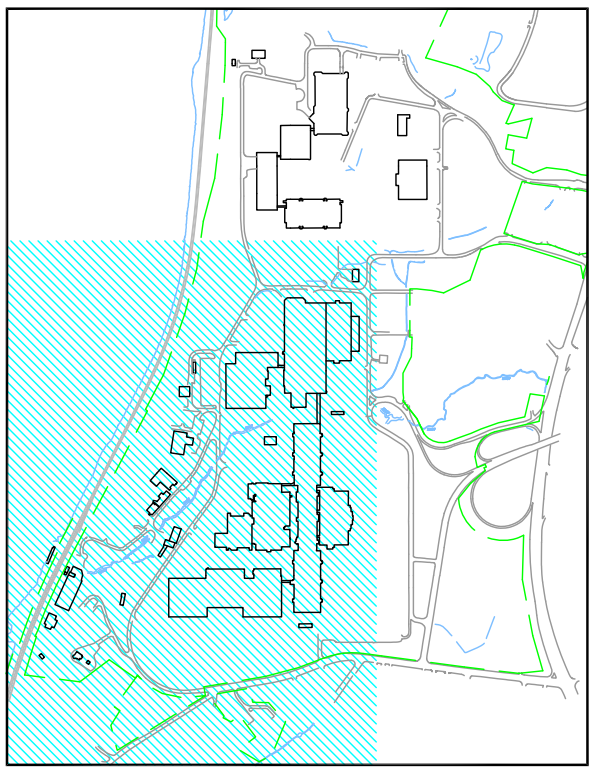
Scale 0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Soil Monitoring Wells
November 15, 2019 (Fourth Quarter)

DRAWN BY: dab	DATE: 03/20/20	DRAWING NO. 97001-052-C3
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION



Area of Detail (1"=1500')

Group 1 Capture Zone

Group 2 Capture Zone

Group 3 Capture Zone

Hudson River

Figure 4-9

- — Bedrock Monitoring Well Location
- — Bedrock Extraction Well Location
- — Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- 44.90 — Groundwater Elevation (feet amsl)
- 53.91 — Groundwater Elevation Used in Contouring Group 1 Area
- 65 — Groundwater Elevation Contour (feet amsl)
- — Direction of Groundwater Flow
- — Groundwater Divide

Well locations surveyed by Hayward & Pakan Associates, Poughkeepsie, NY.

Scale
0 150' 300'

IBM
Poughkeepsie, New York

Groundwater Elevation Contour Map
Bedrock Monitoring Wells
November 15, 2019 (Fourth Quarter)

DRAWN BY: dab	DATE: 03/20/20	DRAWING NO. 97001-053-C3
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION

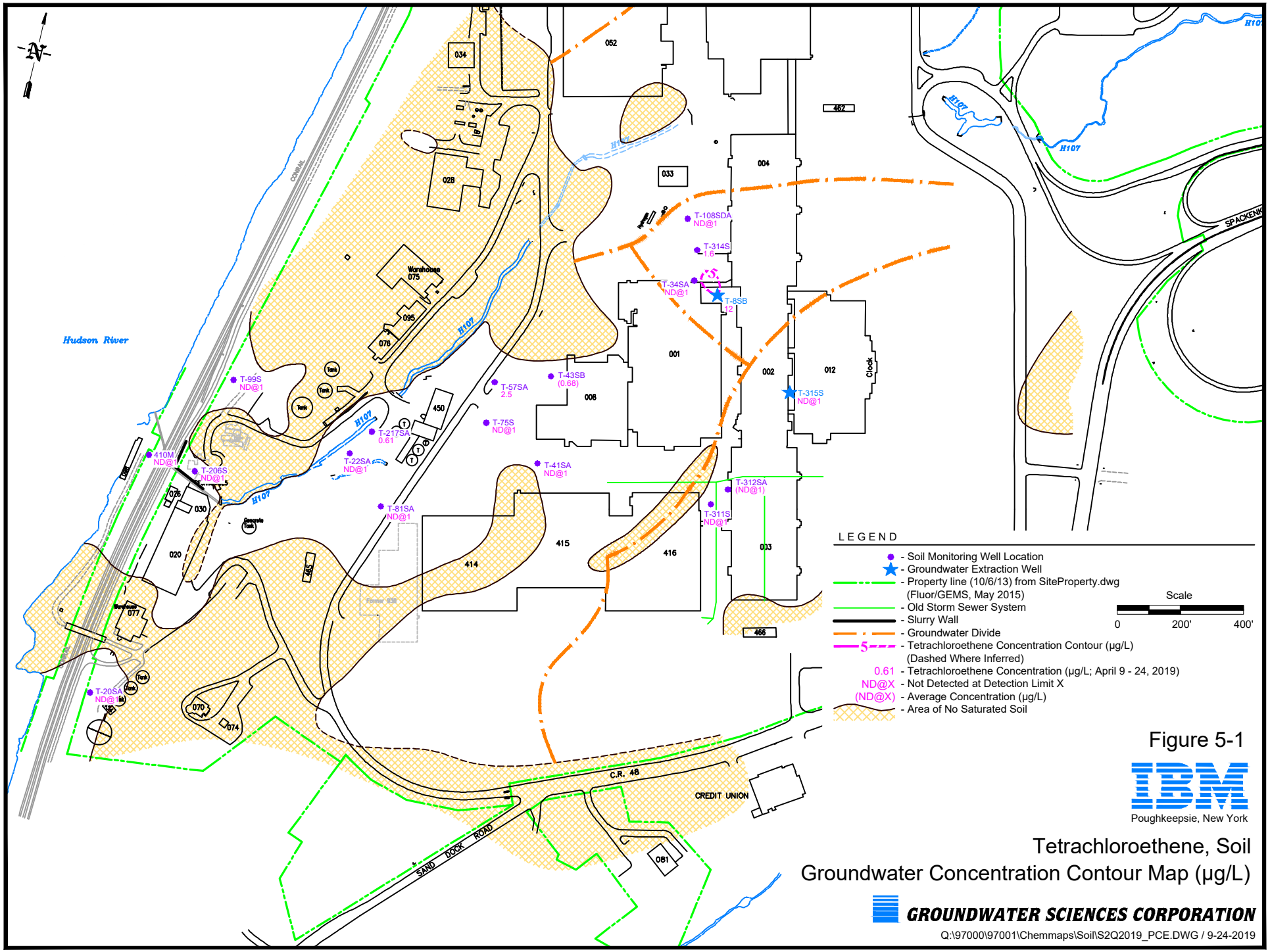


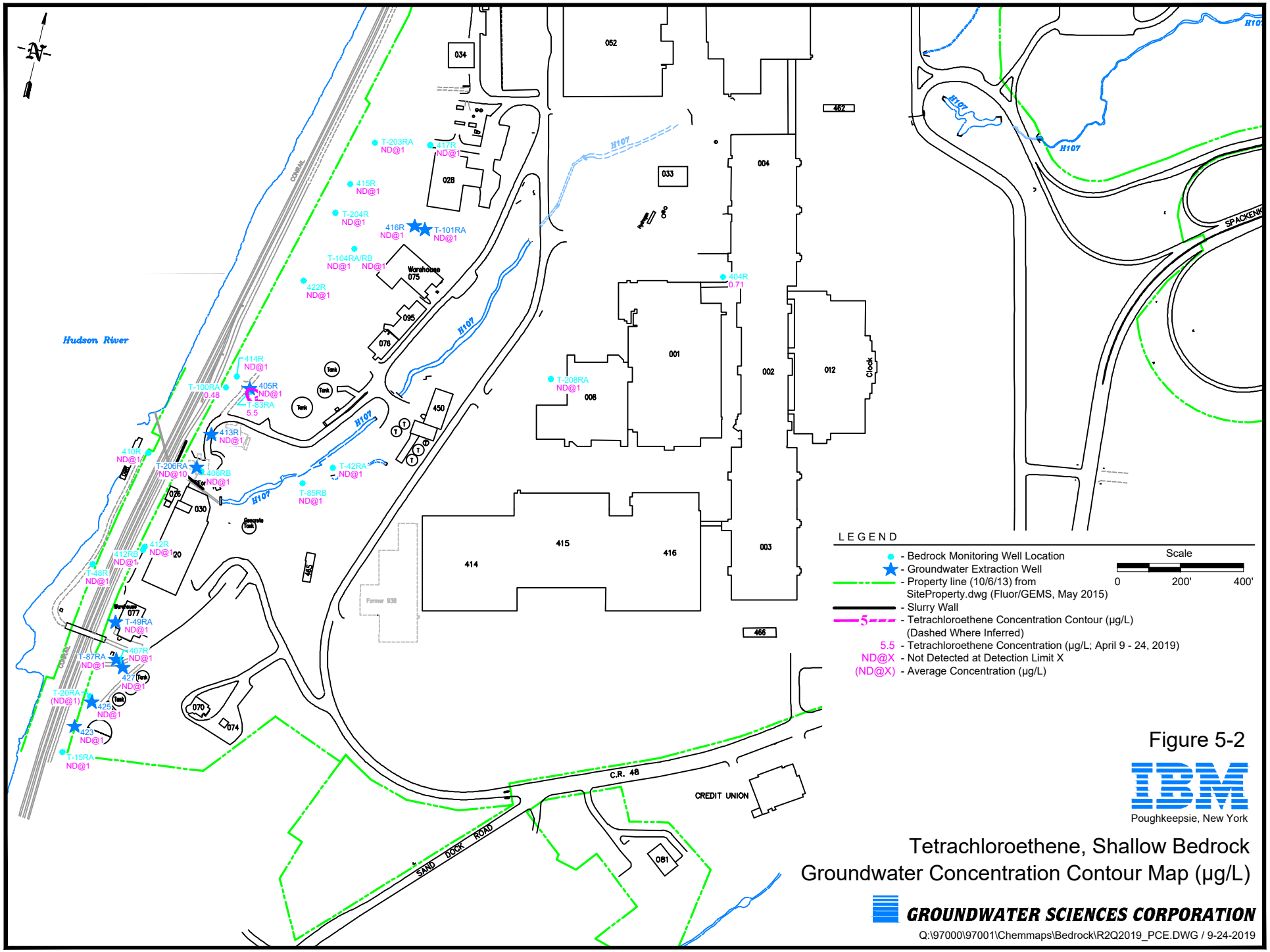
Figure 5-1

IBM
Poughkeepsie, New York

Tetrachloroethene, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_PCE.DWG / 9-24-2019



LEGEND

- Bedrock Monitoring Well Location
- Groundwater Extraction Well
- Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- Slurry Wall
- 5 - Tetrachloroethene Concentration Contour (µg/L) (Dashed Where Inferred)
- 5.5 - Tetrachloroethene Concentration (µg/L; April 9 - 24, 2019)
- ND@X - Not Detected at Detection Limit X
- (ND@X) - Average Concentration (µg/L)

Scale: 0 200' 400'

Figure 5-2

IBM

Poughkeepsie, New York

Tetrachloroethene, Shallow Bedrock
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_PCE.DWG / 9-24-2019

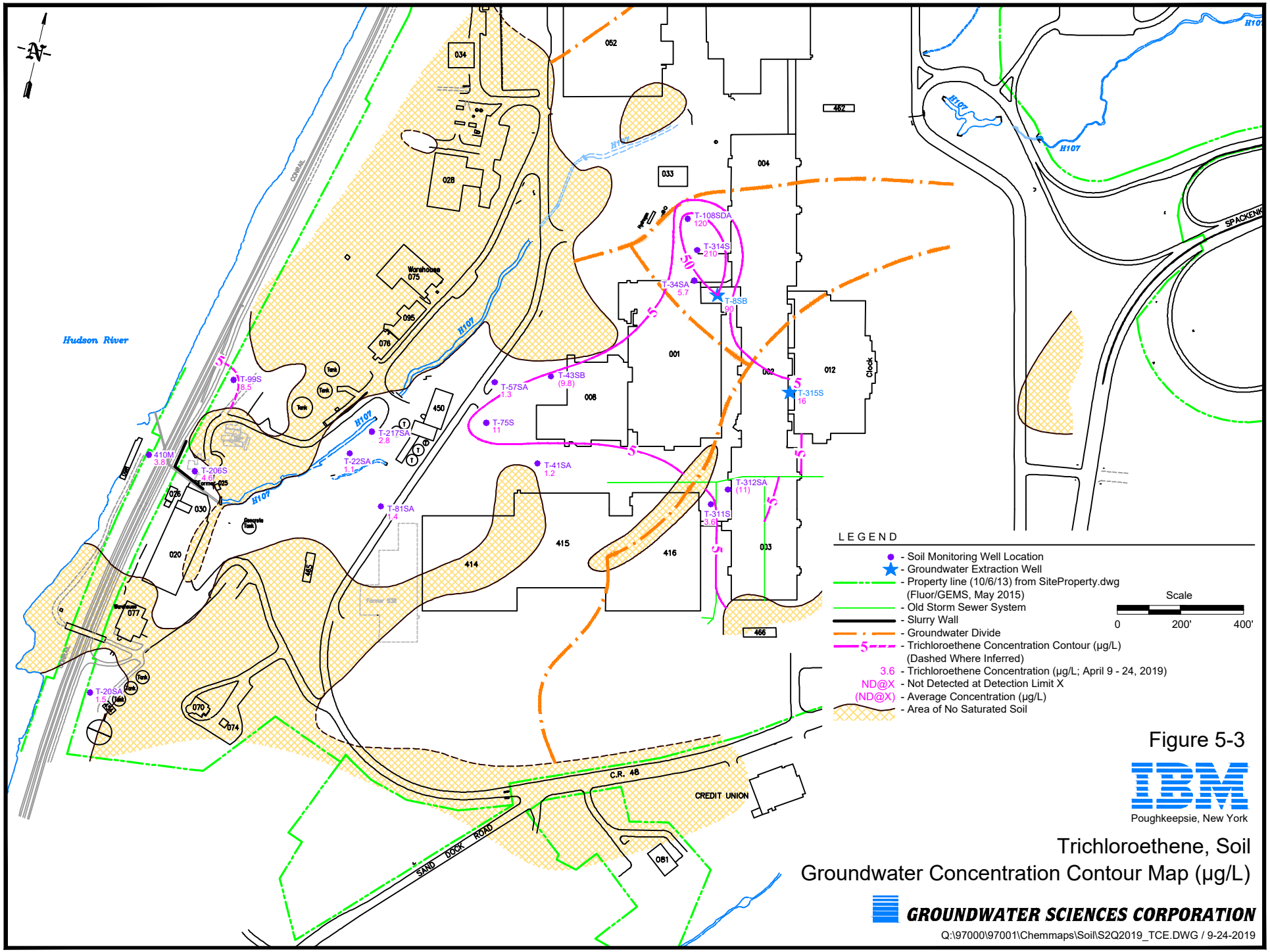


Figure 5-3

IBM

Poughkeepsie, New York

Trichloroethene, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_TCE.DWG / 9-24-2019

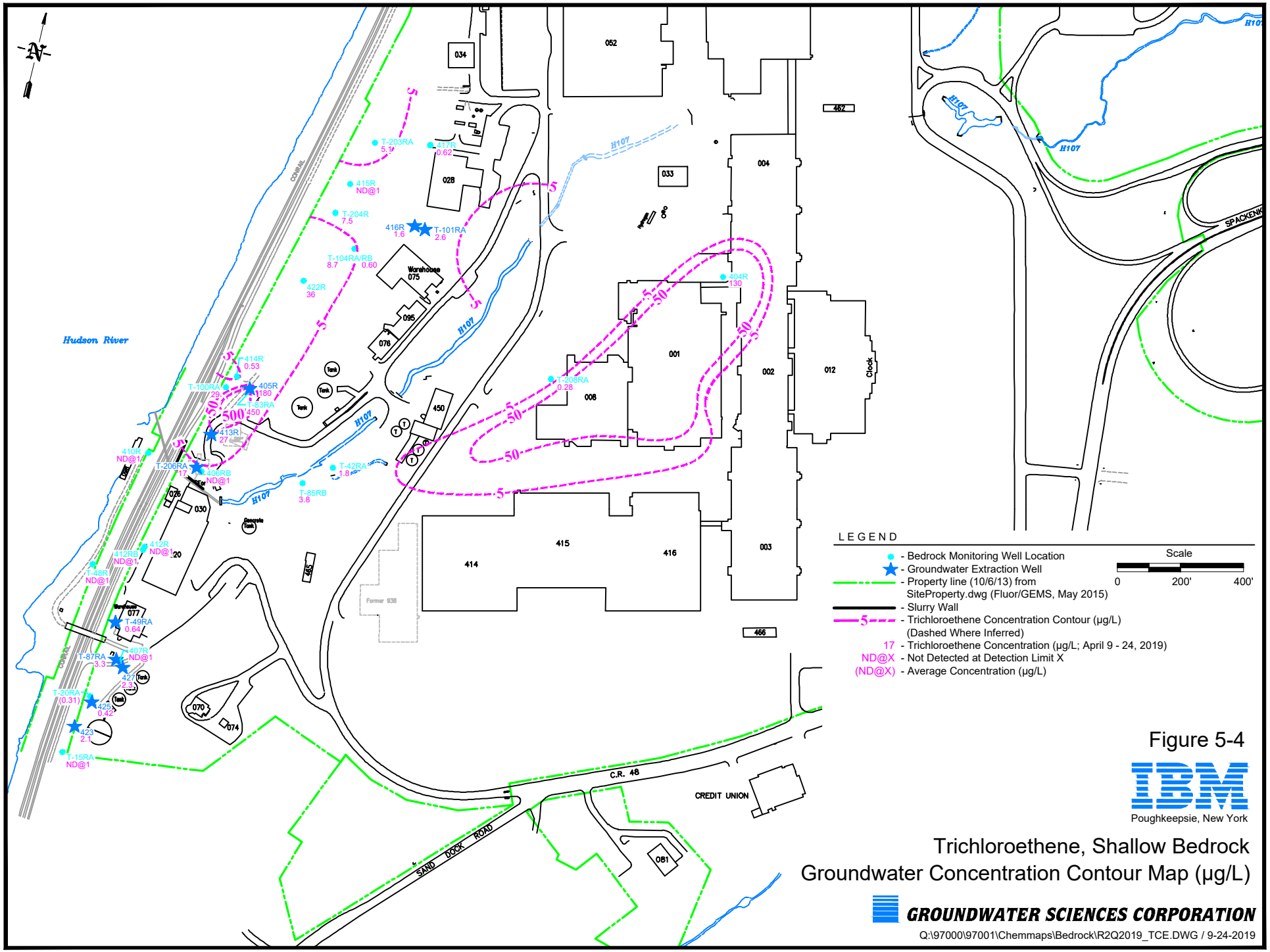


Figure 5-4

IBM

Poughkeepsie, New York

Trichloroethene, Shallow Bedrock
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_TCE.DWG / 9-24-2019

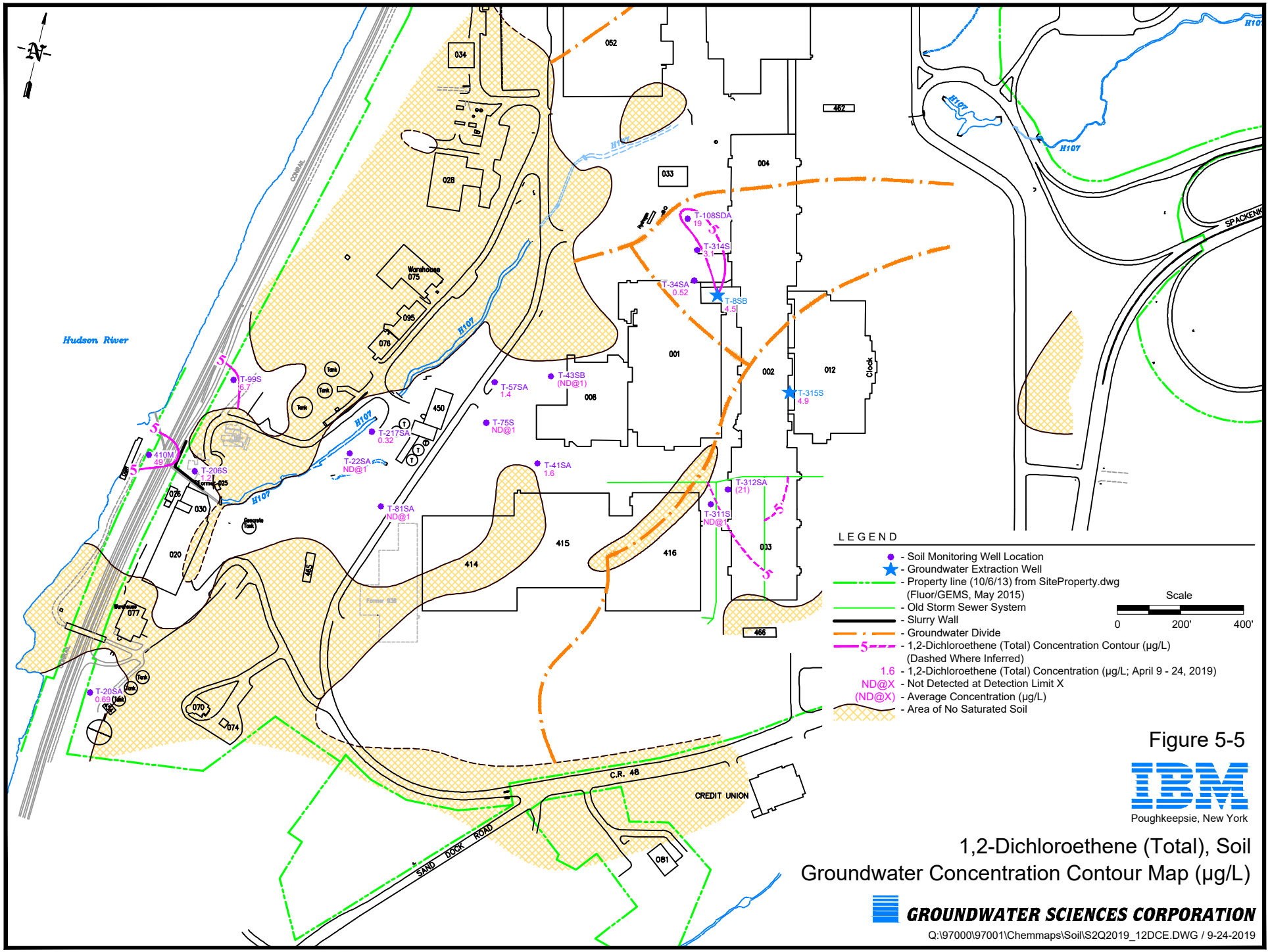


Figure 5-5

IBM

Poughkeepsie, New York

1,2-Dichloroethene (Total), Soil Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_12DCE.DWG / 9-24-2019

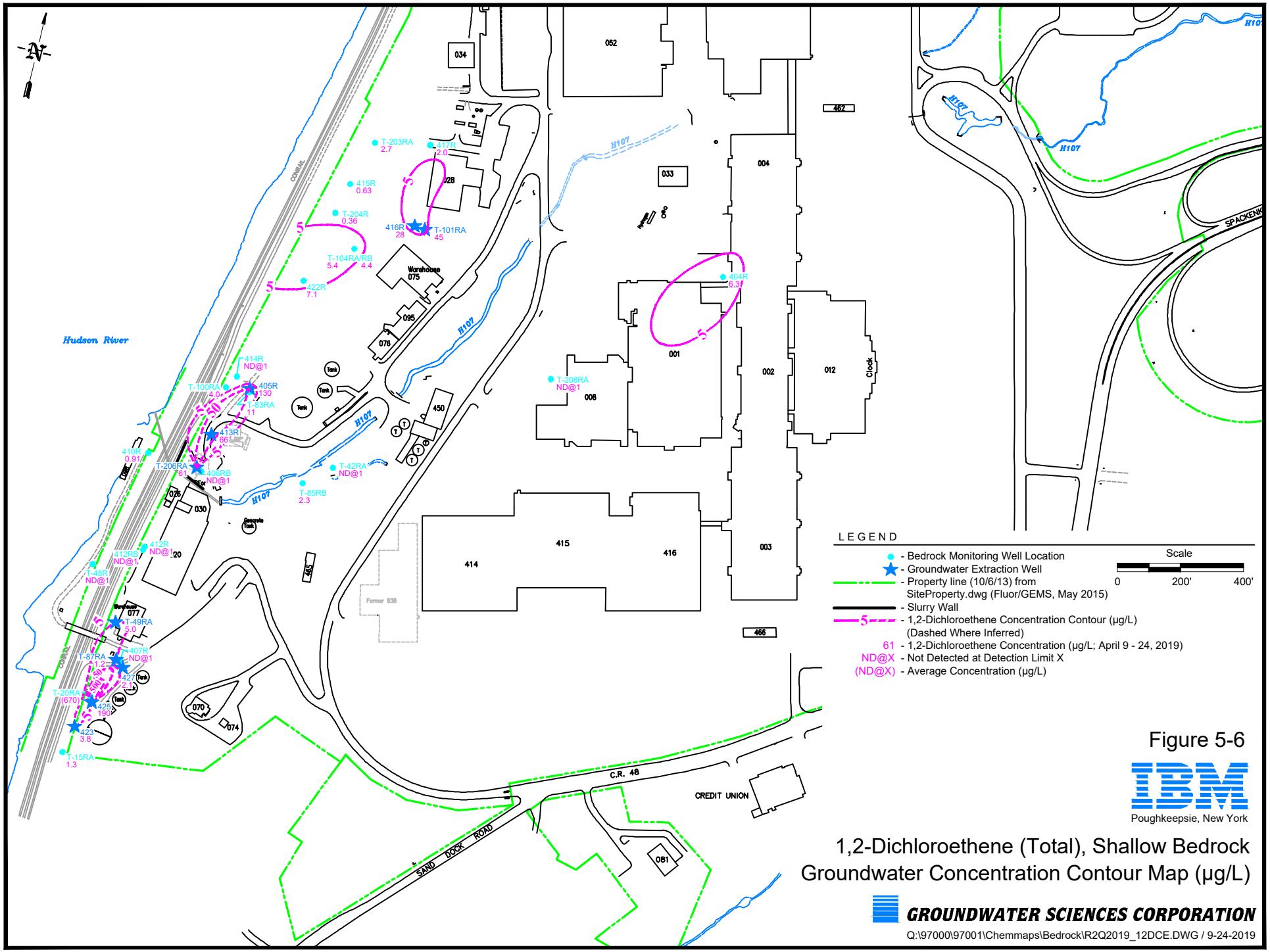


Figure 5-6

IBM

Poughkeepsie, New York

1,2-Dichloroethene (Total), Shallow Bedrock Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_12DCE.DWG / 9-24-2019

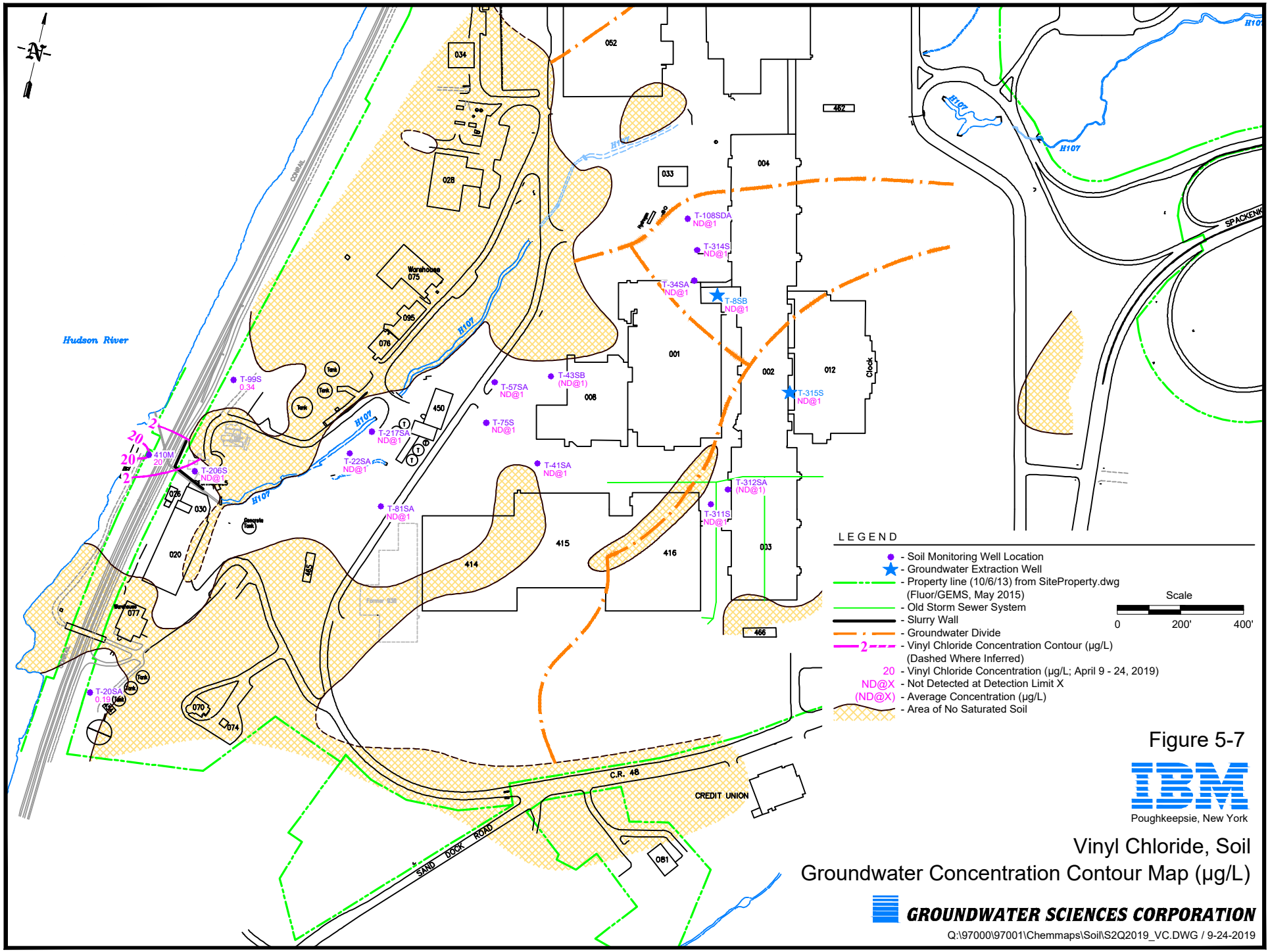


Figure 5-7

IBM

Poughkeepsie, New York

Vinyl Chloride, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_VC.DWG / 9-24-2019

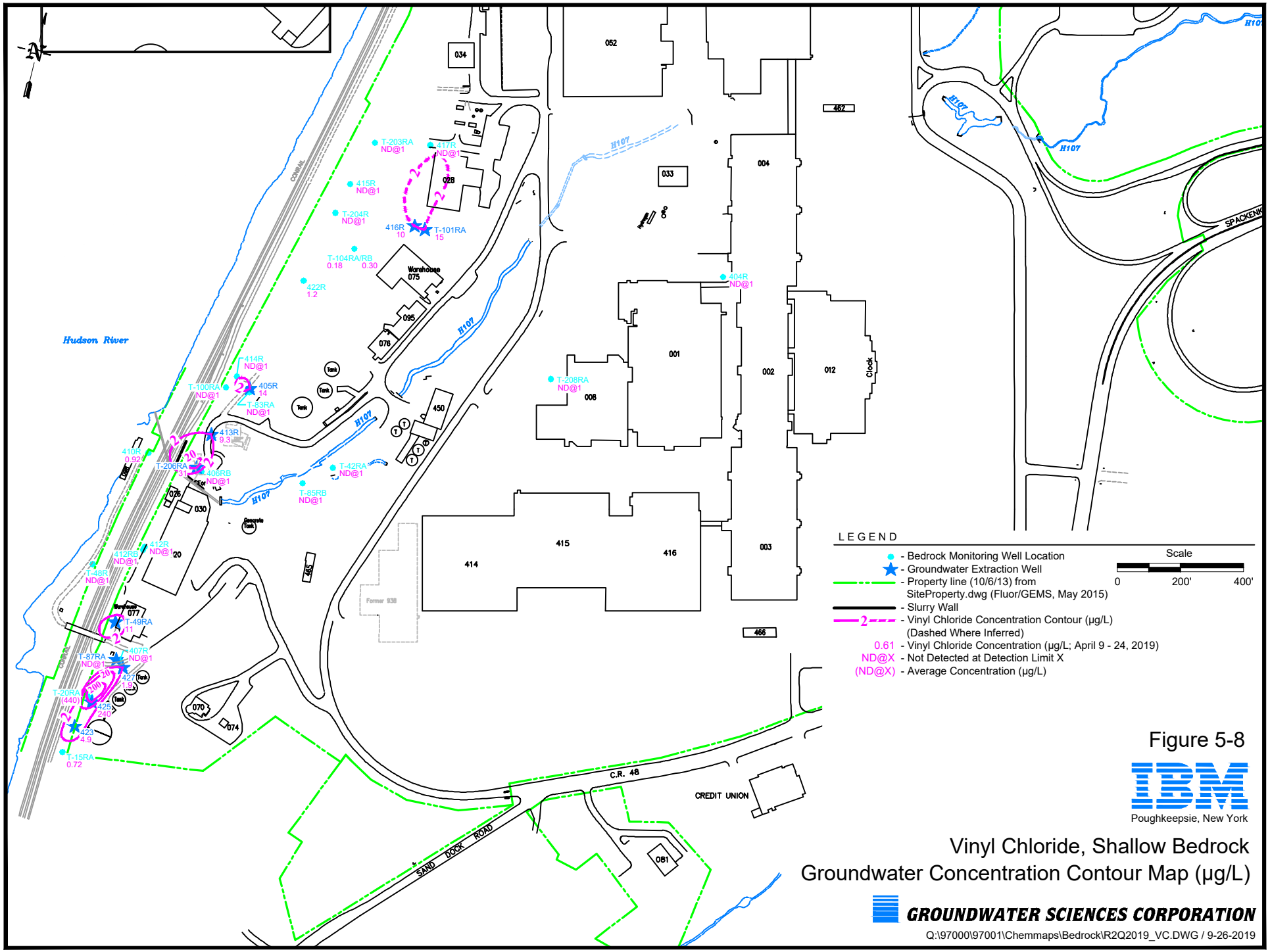


Figure 5-8

IBM

Poughkeepsie, New York

Vinyl Chloride, Shallow Bedrock
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_VC.DWG / 9-26-2019

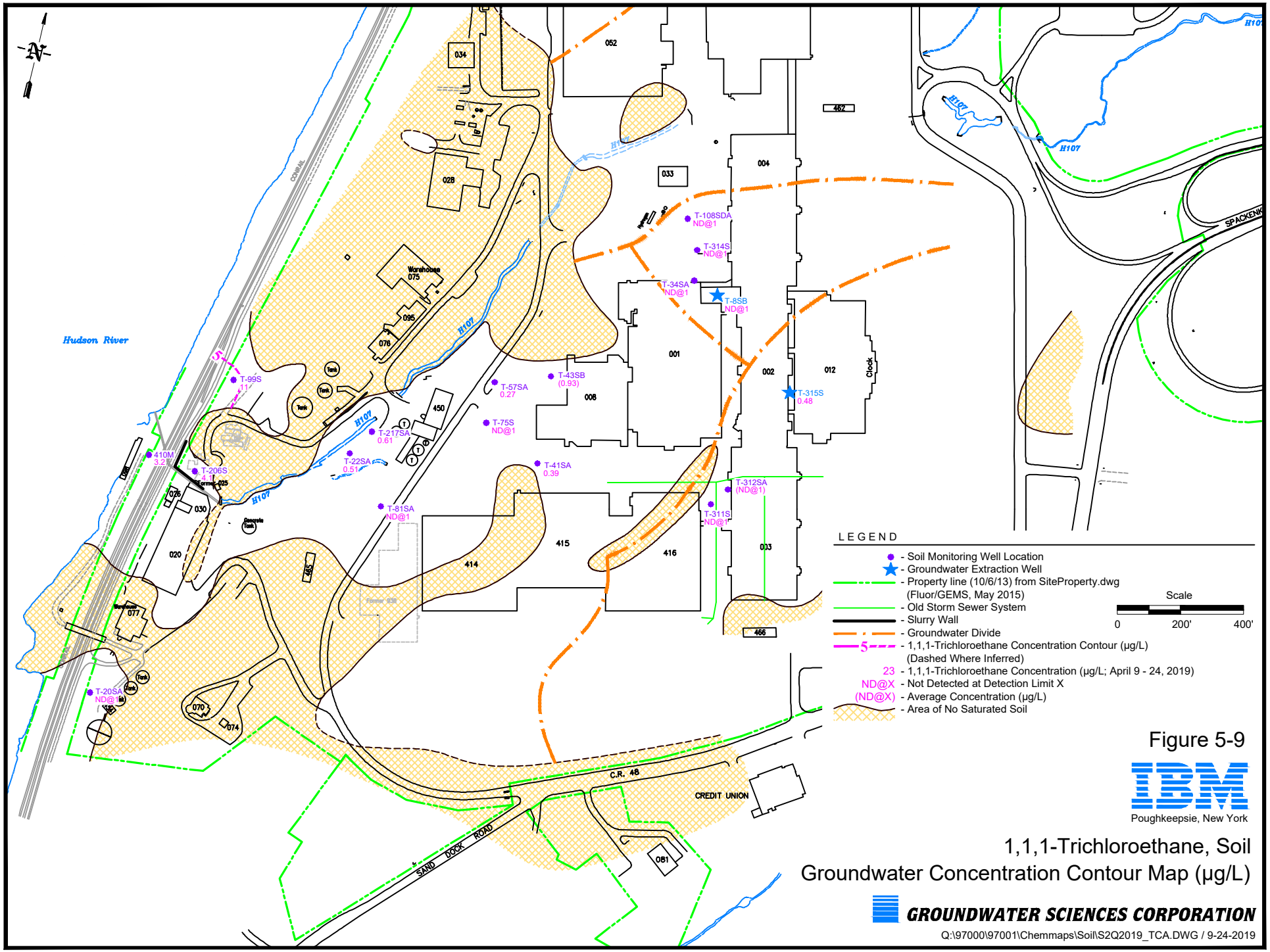


Figure 5-9

IBM

Poughkeepsie, New York

1,1,1-Trichloroethane, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_TCA.DWG / 9-24-2019

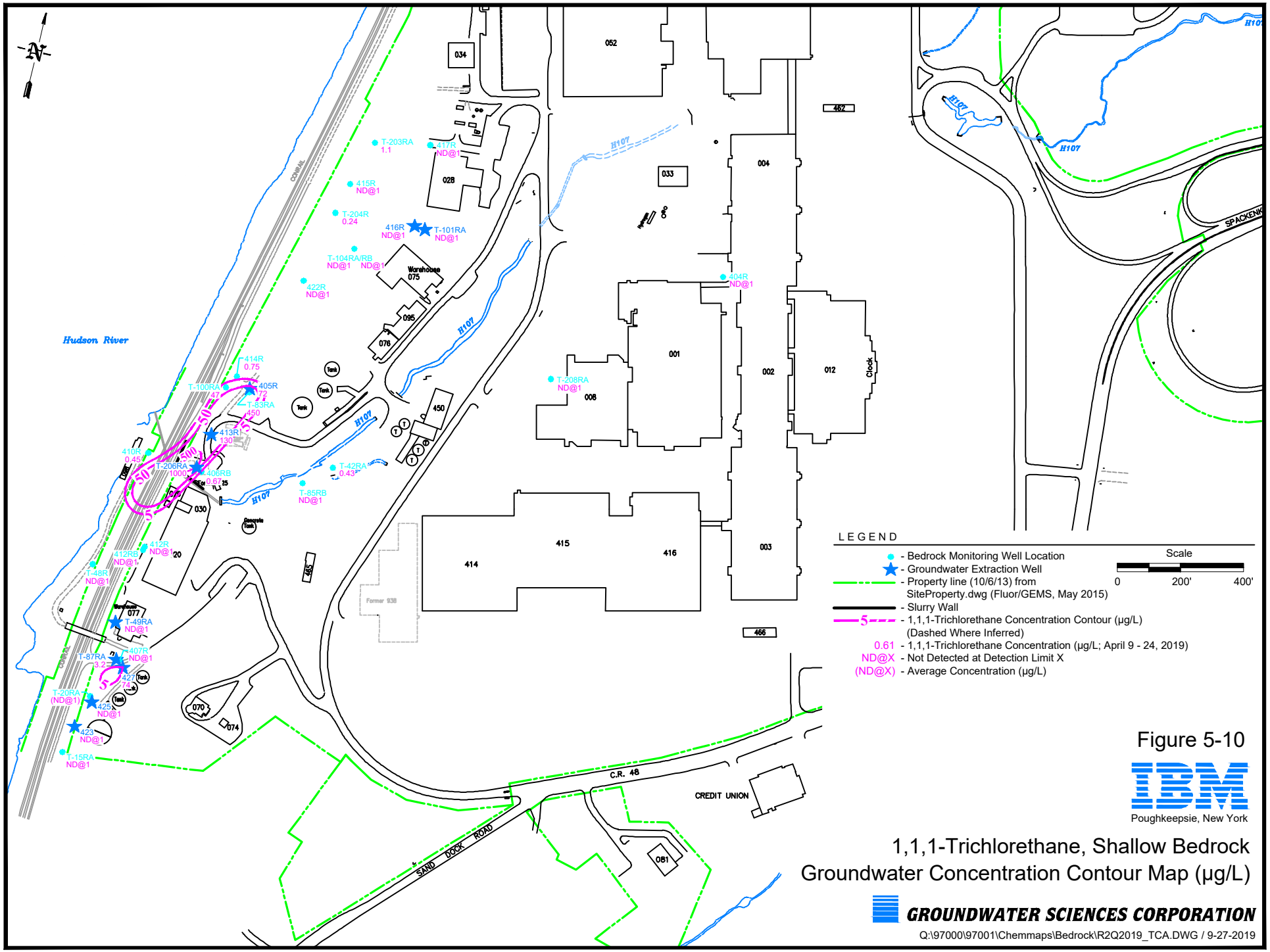


Figure 5-10

IBM

Poughkeepsie, New York

1,1,1-Trichlorethane, Shallow Bedrock Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_TCA.DWG / 9-27-2019

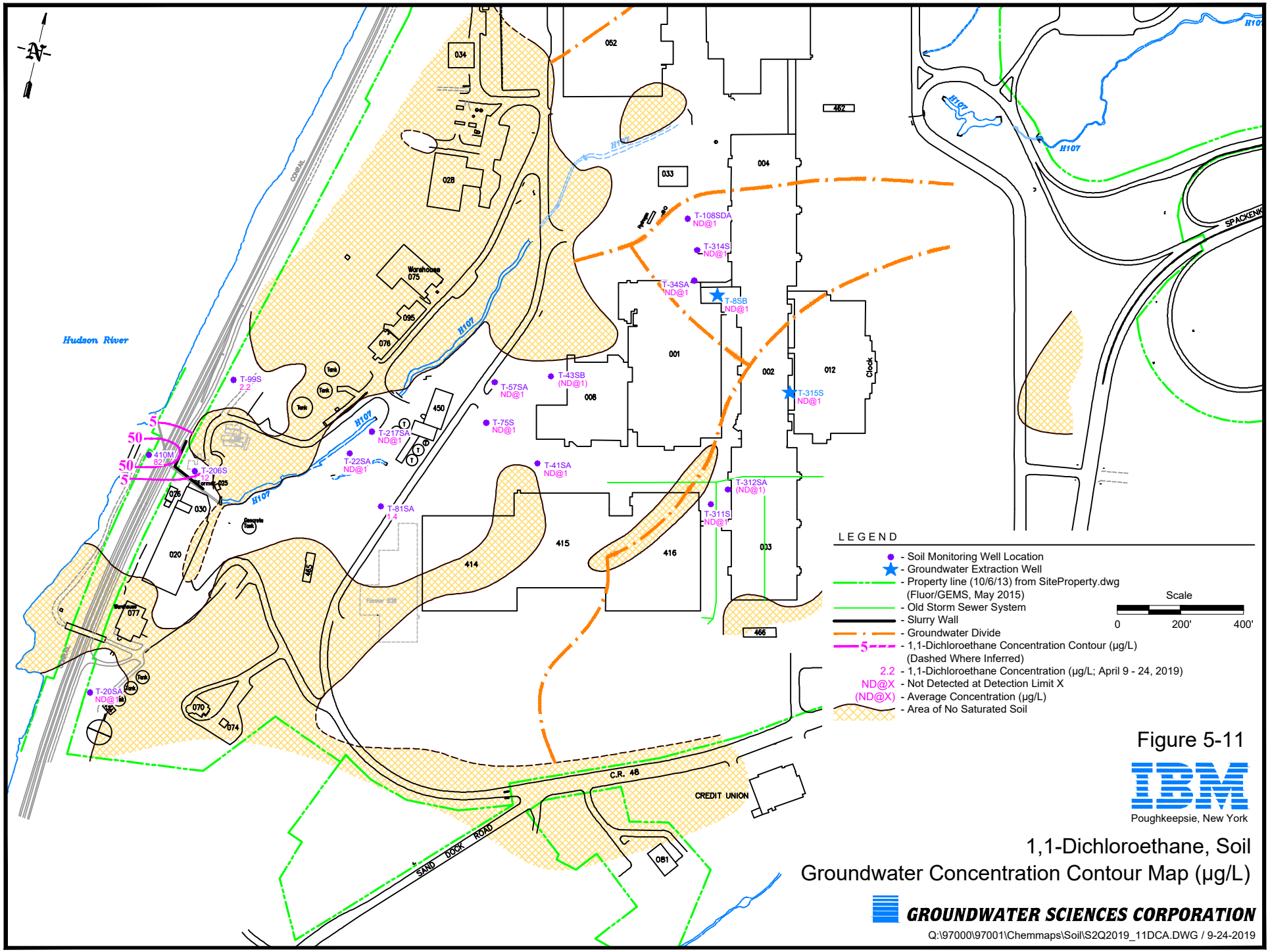


Figure 5-11

IBM

Poughkeepsie, New York

1,1-Dichloroethane, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_11DCA.DWG / 9-24-2019

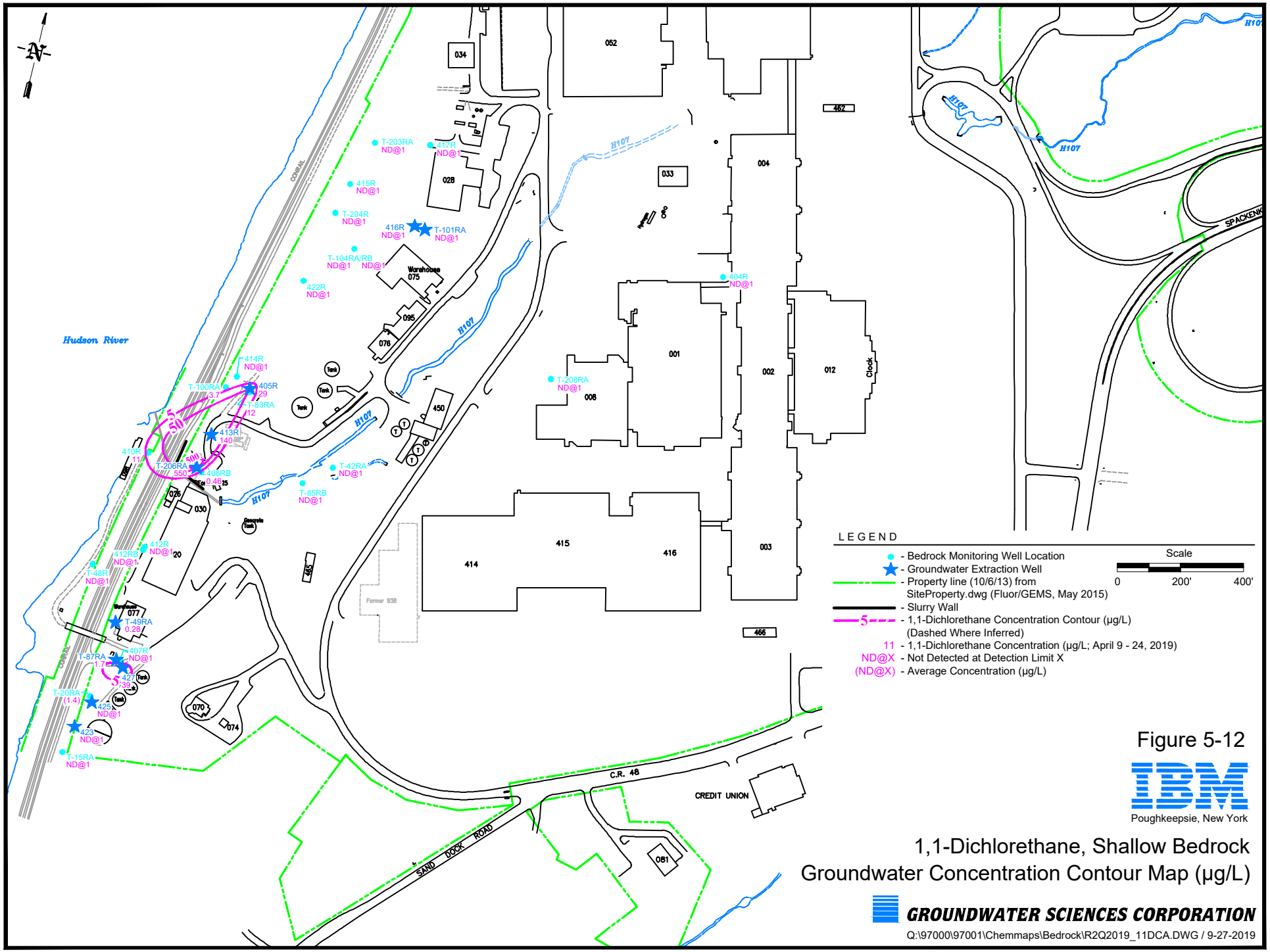


Figure 5-12

IBM
Poughkeepsie, New York

1,1-Dichlorethane, Shallow Bedrock
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_11DCA.DWG / 9-27-2019

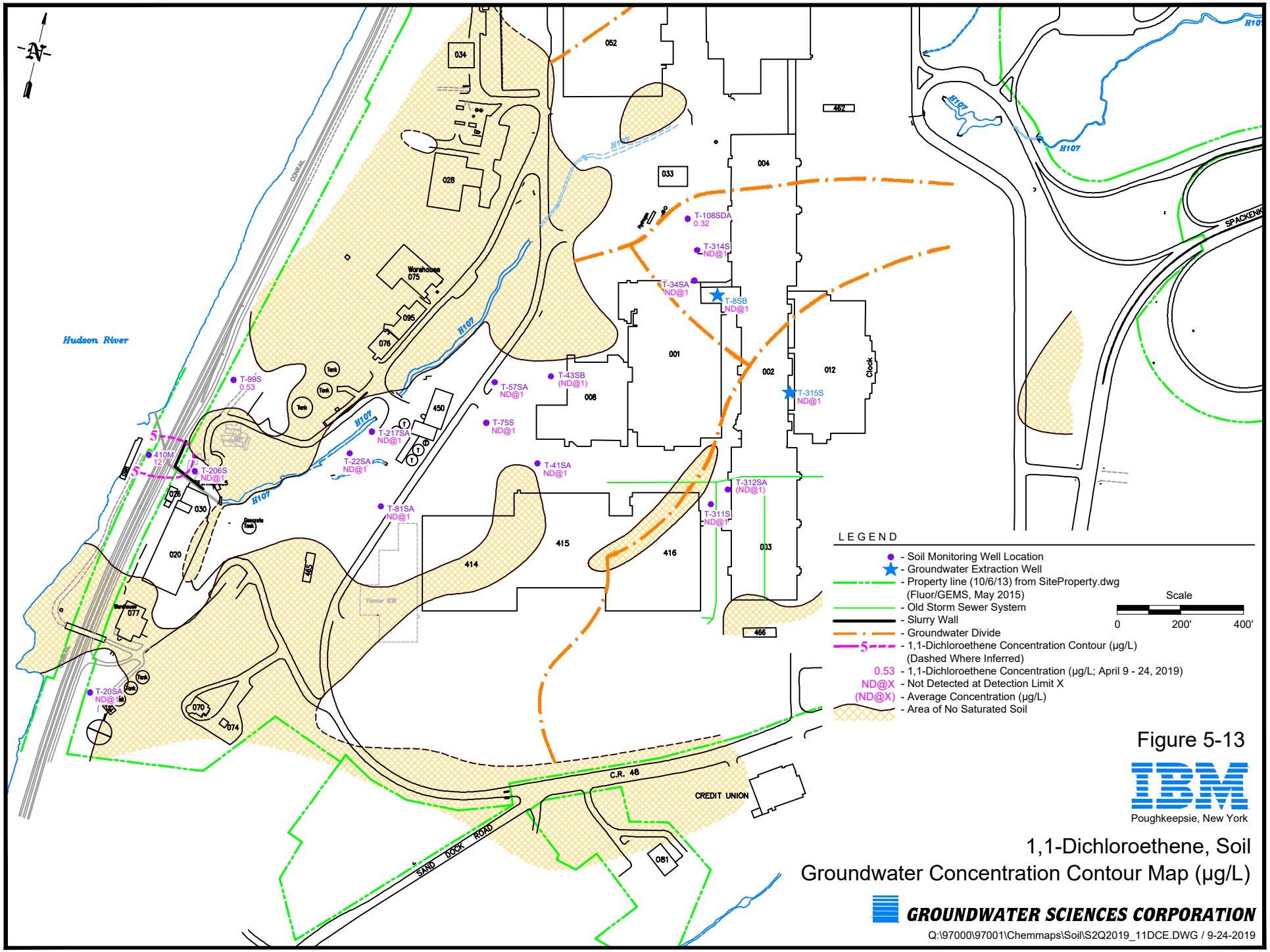


Figure 5-13

IBM

Poughkeepsie, New York

1,1-Dichloroethene, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_11DCE.DWG / 9-24-2019

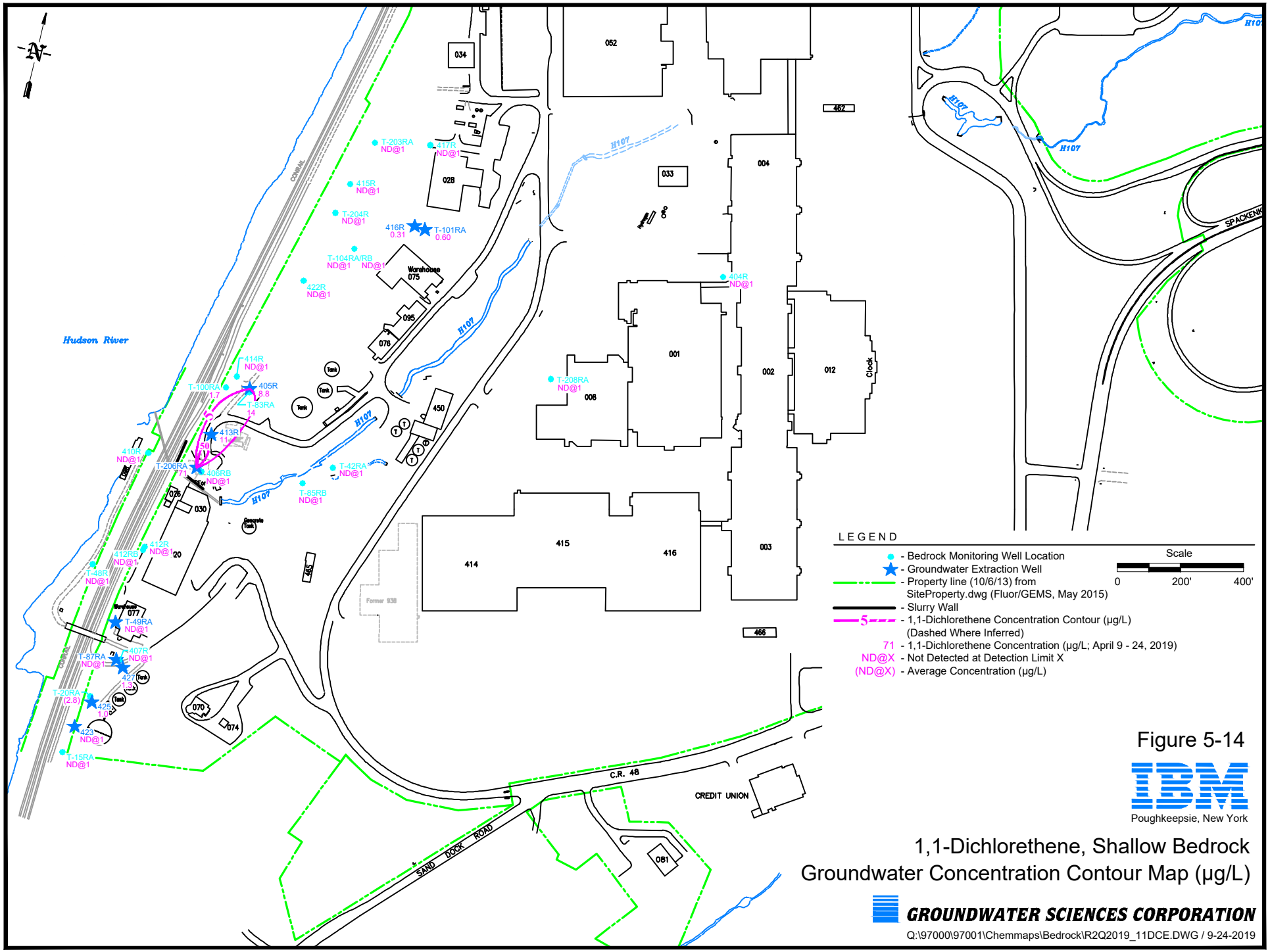


Figure 5-14

IBM

Poughkeepsie, New York

1,1-Dichlorethene, Shallow Bedrock
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_11DCE.DWG / 9-24-2019

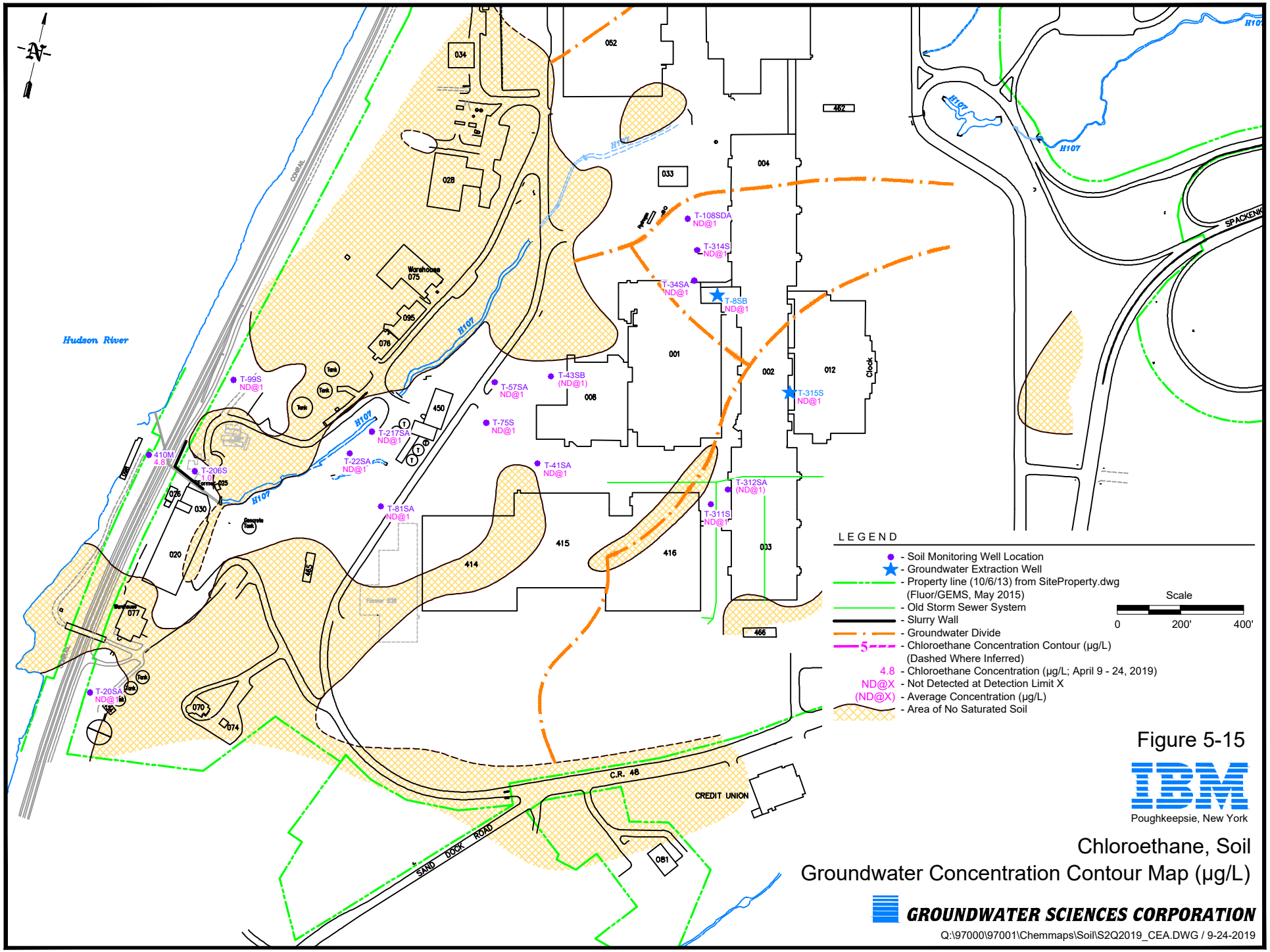


Figure 5-15

IBM

Poughkeepsie, New York

Chloroethane, Soil
Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_CEA.DWG / 9-24-2019

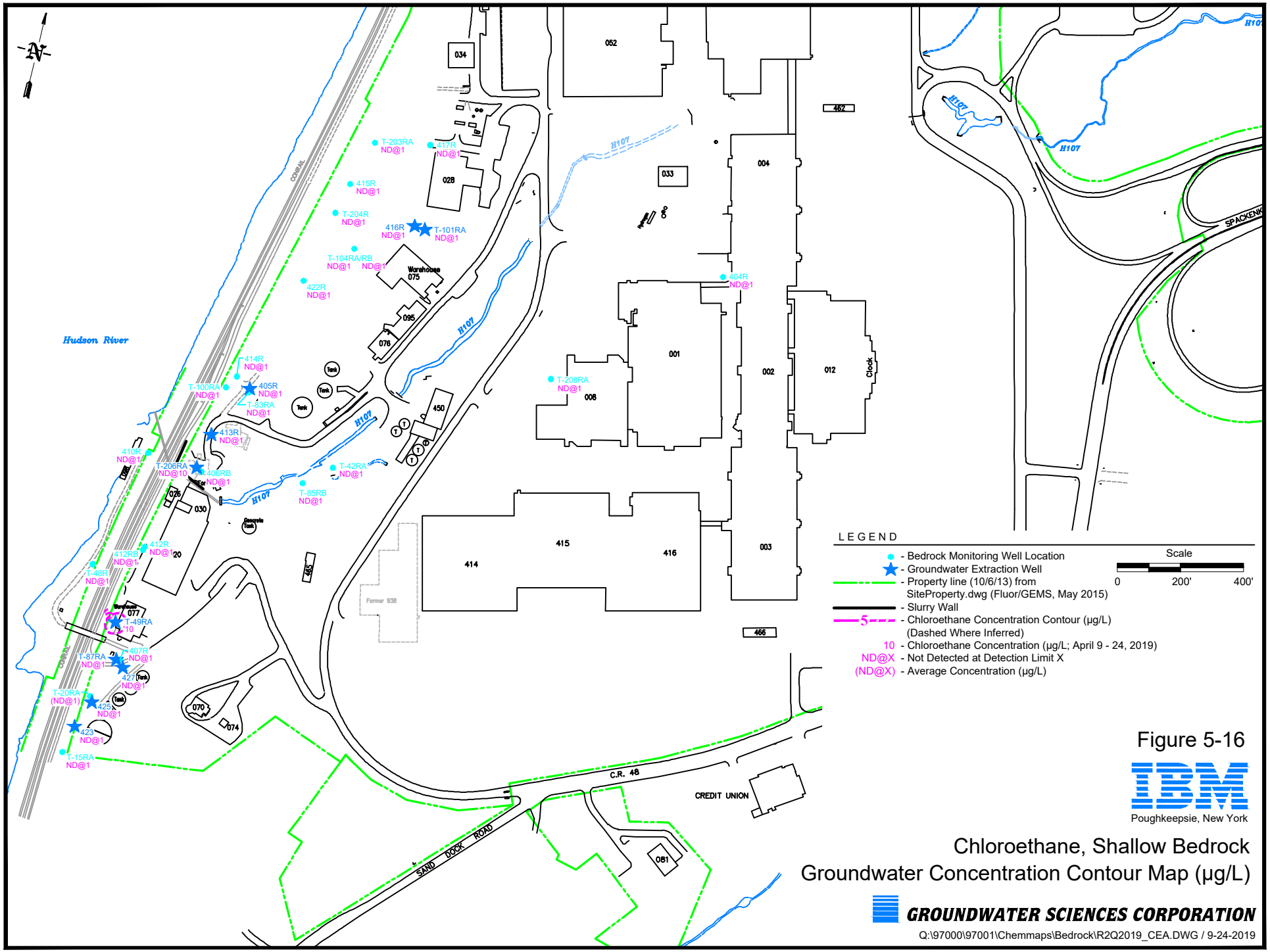


Figure 5-16

IBM

Poughkeepsie, New York

Chloroethane, Shallow Bedrock Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_CEA.DWG / 9-24-2019

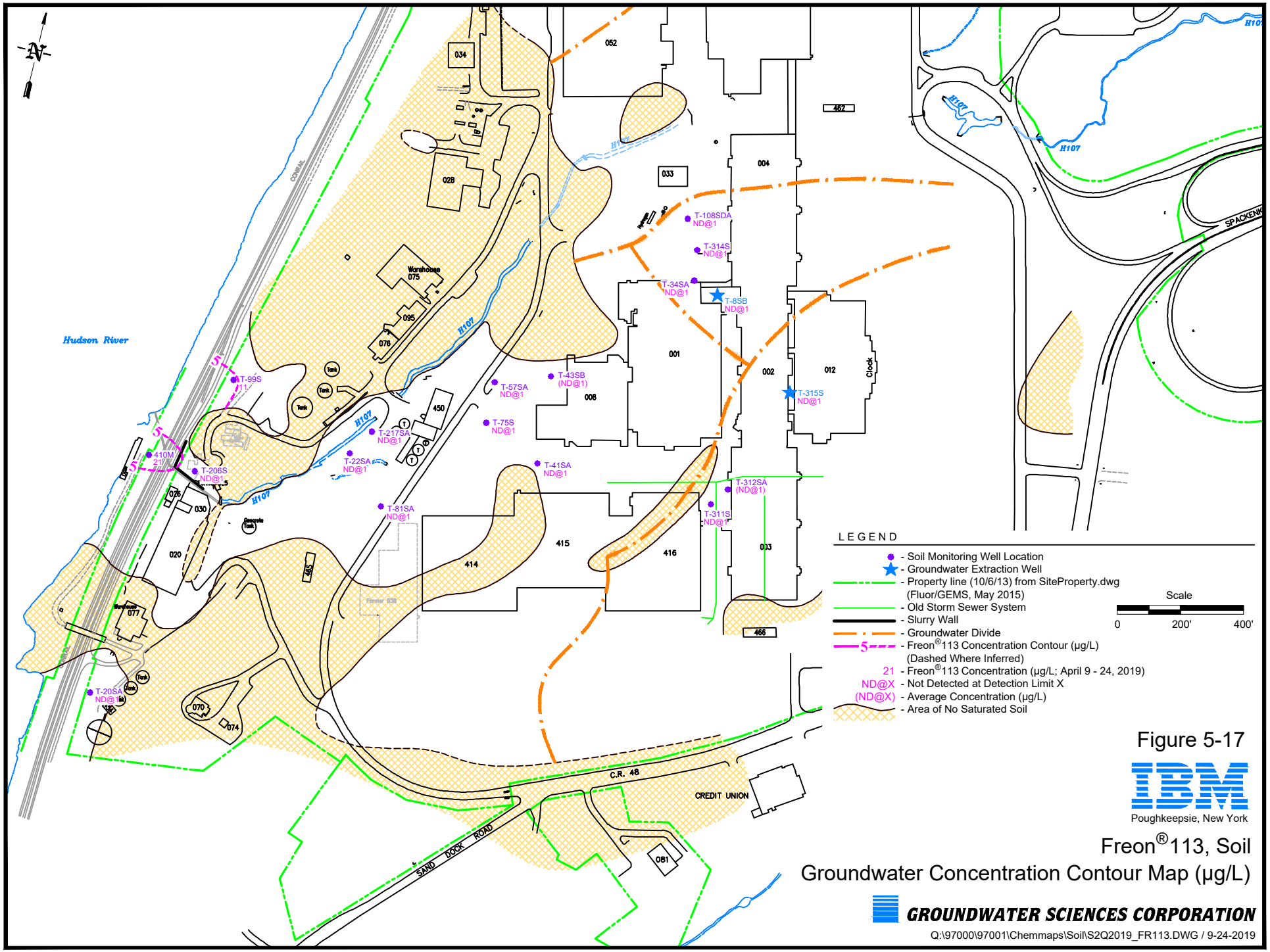


Figure 5-17

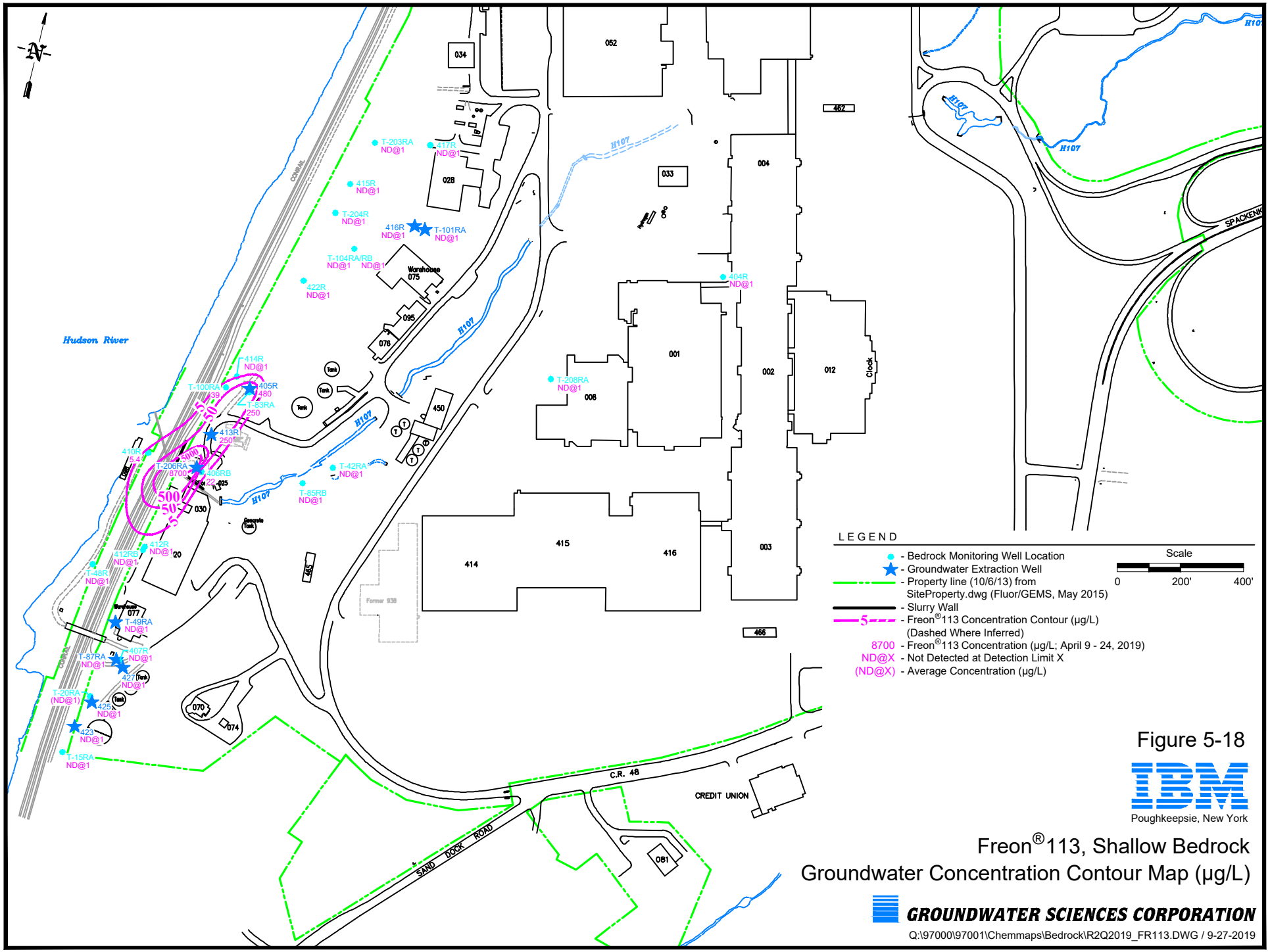
IBM

Poughkeepsie, New York

Freon®113, Soil Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_FR113.DWG / 9-24-2019



LEGEND

- Bedrock Monitoring Well Location
- Groundwater Extraction Well
- Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- Slurry Wall
- 5 - Freon®113 Concentration Contour (µg/L) (Dashed Where Inferred)
- 8700 - Freon®113 Concentration (µg/L; April 9 - 24, 2019)
- ND@X - Not Detected at Detection Limit X
- (ND@X) - Average Concentration (µg/L)

Scale: 0 200' 400'

Figure 5-18

IBM

Poughkeepsie, New York

Freon®113, Shallow Bedrock Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_FR113.DWG / 9-27-2019

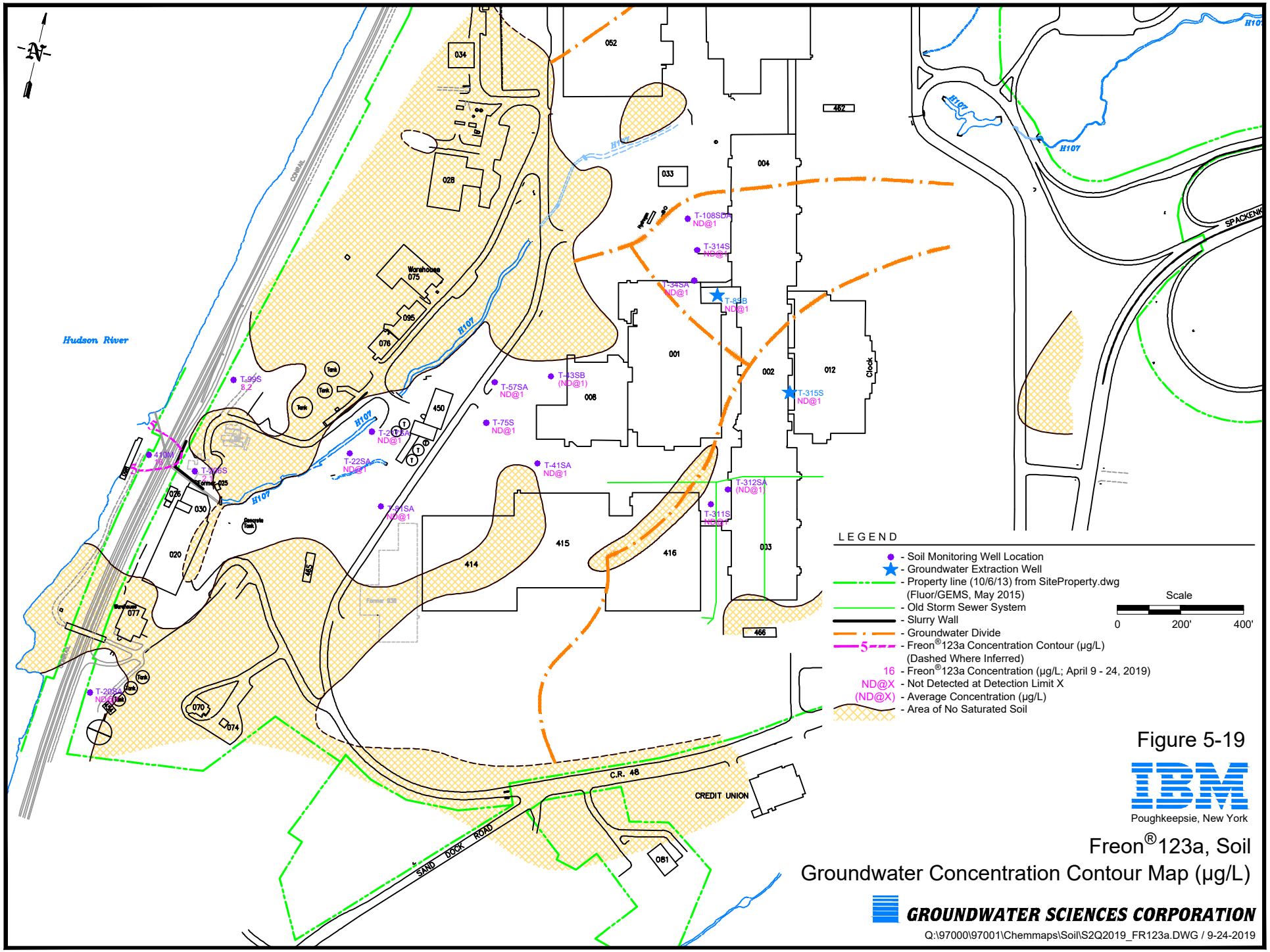


Figure 5-19

IBM

Poughkeepsie, New York

Freon®123a, Soil Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Soil\S2Q2019_FR123a.DWG / 9-24-2019

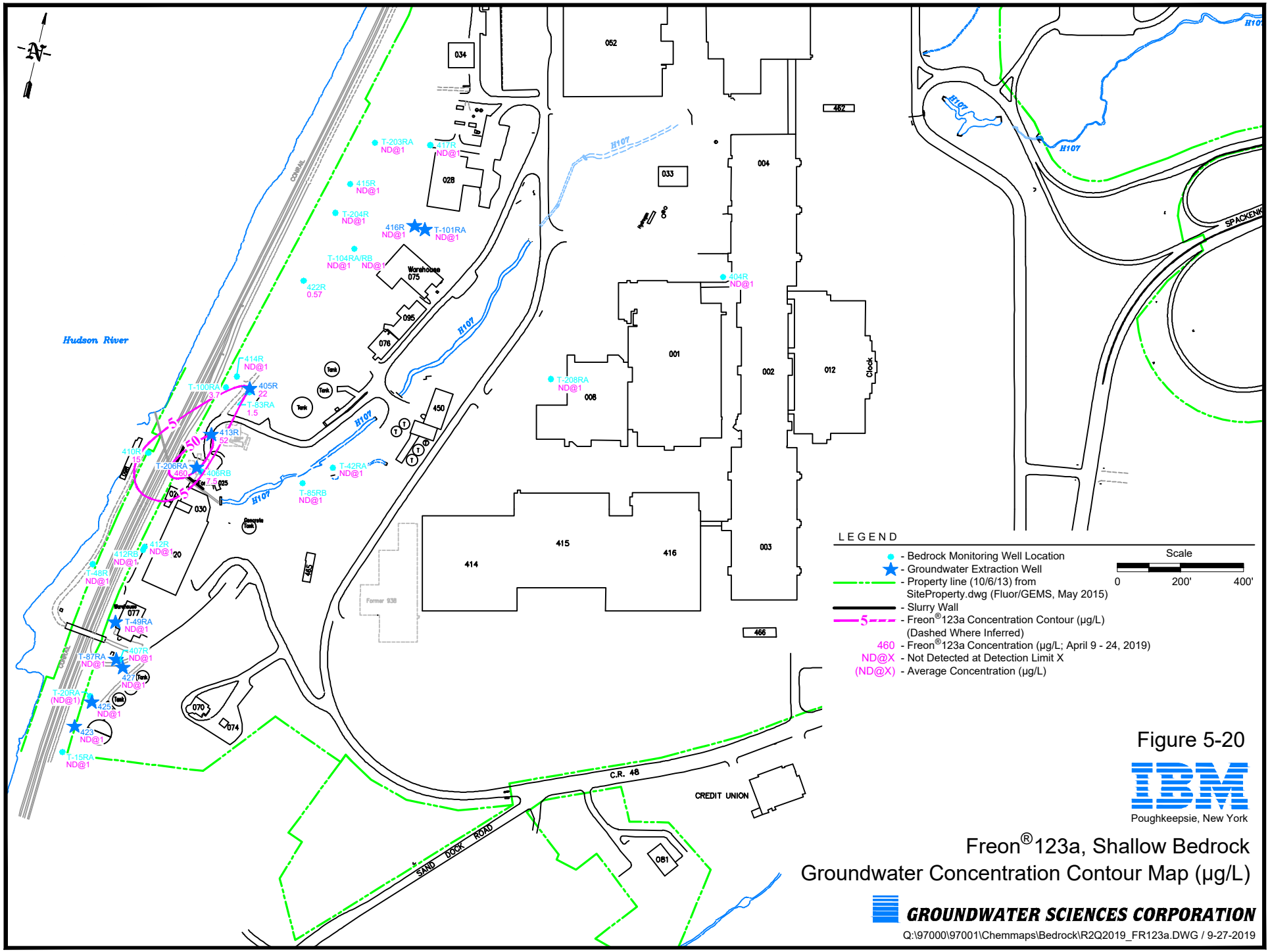


Figure 5-20

IBM

Poughkeepsie, New York

Freon®123a, Shallow Bedrock Groundwater Concentration Contour Map (µg/L)

GROUNDWATER SCIENCES CORPORATION

Q:\97000\97001\Chemmaps\Bedrock\R2Q2019_FR123a.DWG / 9-27-2019

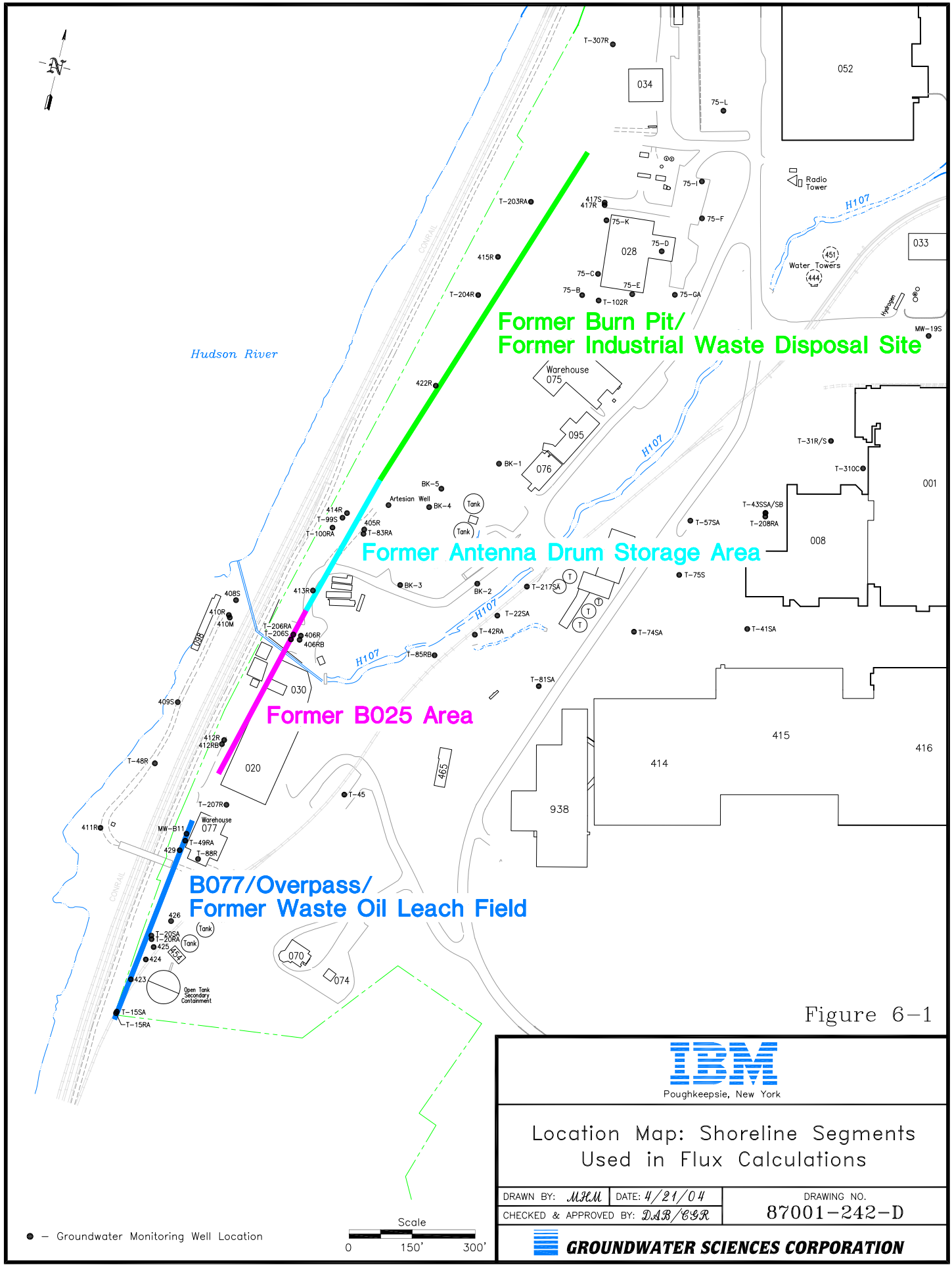


Figure 6-1

● – Groundwater Monitoring Well Location

Scale
0 150' 300'

IBM
Poughkeepsie, New York

Location Map: Shoreline Segments Used in Flux Calculations

DRAWN BY: MHM	DATE: 4/21/04	DRAWING NO. 87001-242-D
CHECKED & APPROVED BY: DAB/CGR		

GROUNDWATER SCIENCES CORPORATION

Plate 1

- Soil Monitoring Well
- Bedrock Monitoring Well
- Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- Topographical Contour (5' interval)

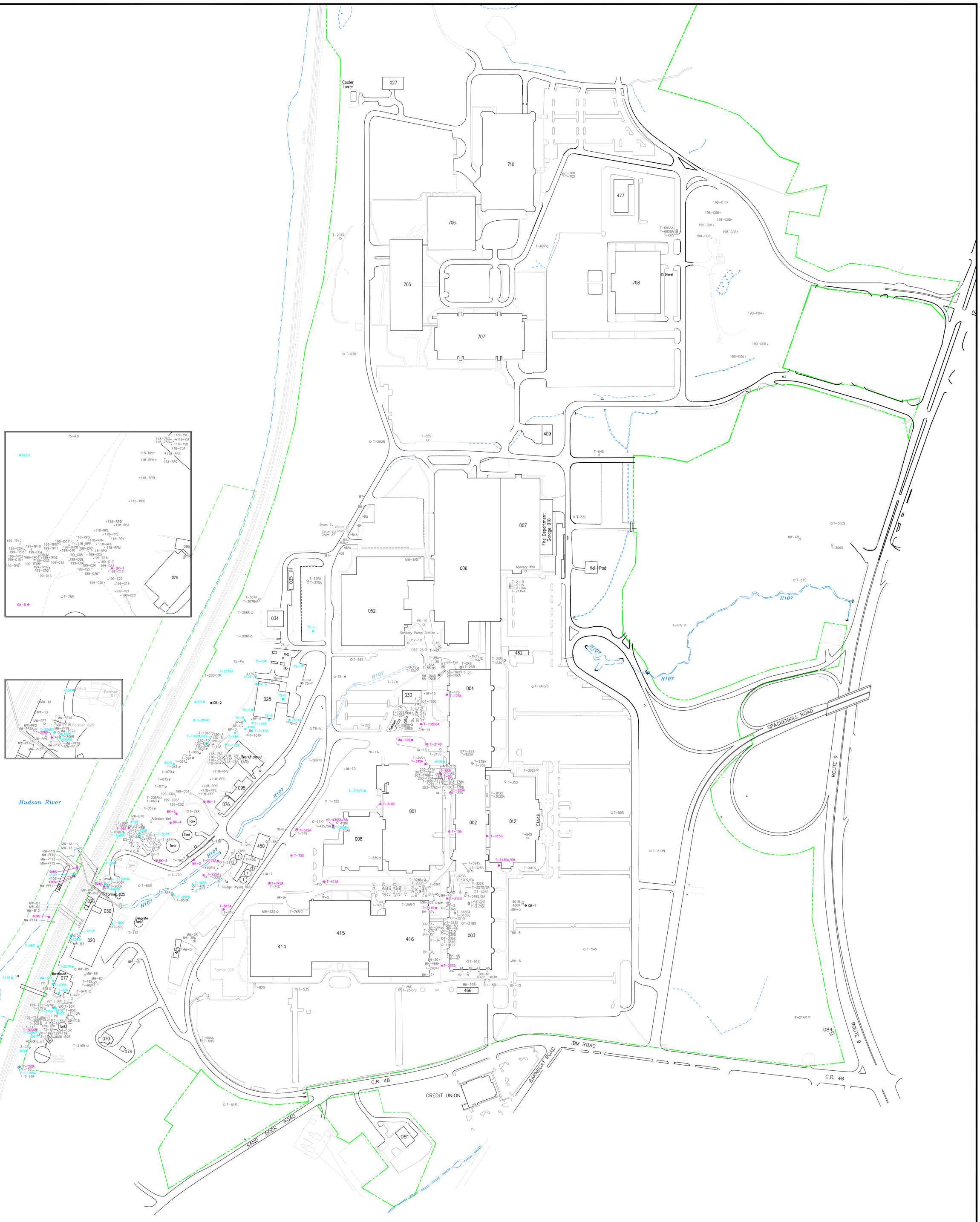
Scale
0 150' 300'

IBM
Poughkeepsie, NY

Topographic Map with Monitoring Well Locations

DRAWN BY: MHM	DATE: 4/5/16	DRAWING NO. 87001-TOPOC300-13
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION



Notes: 1) *All well locations, excluding exceptions below, surveyed by Spectra (Hayward & Pakan Associates), Poughkeepsie, New York.*

2) *Filled square symbol denotes monitoring well location not surveyed.*

- Soil Monitoring Well Location
- Bedrock Monitoring Well Location
- Decommissioned Monitoring Well Location
- Soil Sampling Point
- Fence
- Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)

Scale
0 140' 280'

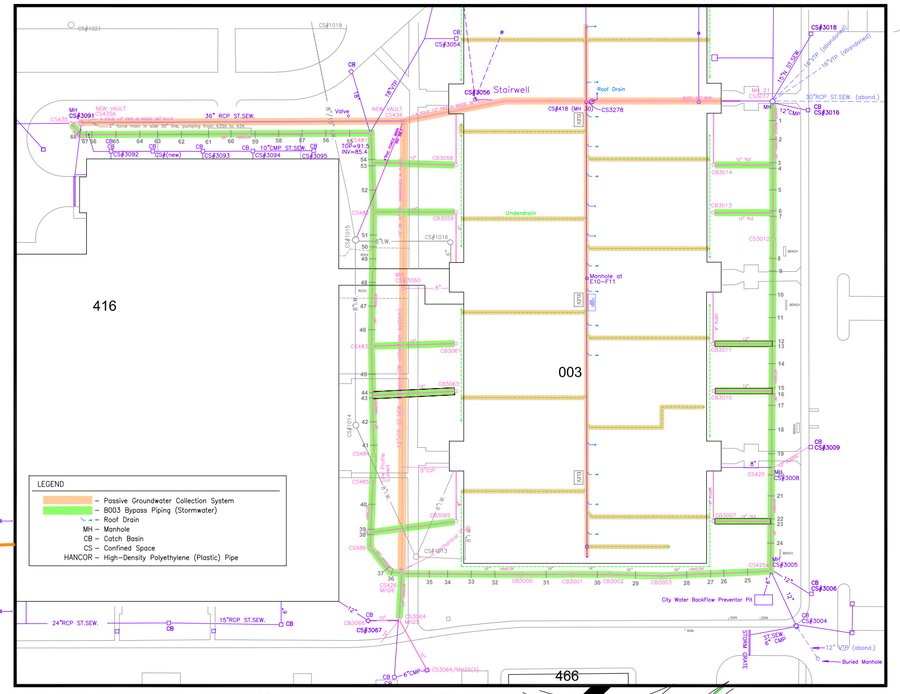
Plate 2

IBM
Poughkeepsie, NY

Monitoring Well and Soil Boring Location Map

DRAWN BY: MHM	DATE: 4/5/16	DRAWING NO. 87001-SITEC280
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION



Detail, B003 As-Built Survey, HANCOR HDPE Replacement Storm Sewer (2X/1"=90")

LEGEND

- Extraction Well Location
- Oil Skim Wells
- Storm Sewer Manhole Pump Station
- SPDES Discharge Monitoring Point
- Underdrains (schematic)
- Storm Sewer Lines (schematic)
- Passive Groundwater Collection System
- B003 Bypass Piping (Stormwater)
- Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)
- Groundwater Divide (10/7/15)

Plate 3

IBM
Poughkeepsie, NY

Groundwater Corrective Action Elements

DRAWN BY: MHM	DATE: 4/5/16	DRAWING NO. 91026-089-D1
CHECKED & APPROVED BY: CGR/CES/DAB		

GROUNDWATER SCIENCES CORPORATION

APPENDIX A:

CURRENT CONDITIONS REPORT FOR SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

Table A-1: Table II-1, Solid Waste Management Unit and Area of Concern Status

Plate A-1: Solid Waste Management Unit and Area of Concern Location Map

IBM CORPORATION POUGHKEEPSIE FACILITY

EPA I.D. NO. NYD080480734

CURRENT CONDITIONS REPORT FOR SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

Table A-1: Table II-1, Solid Waste Management Unit and Area of Concern Status

Plate A-1: Solid Waste Management Unit and Area of Concern Location Map

April 29, 2020

Table A-1: Table II-1, Solid Waste Management Unit and Area of Concern Status

CURRENT CONDITIONS REPORT
FOR SOLID WASTE MANAGEMENT UNITS AND
AREAS OF CONCERN

IBM Corporation Poughkeepsie Facility
EPA I.D. No. NYD080480734

Originally published as Table II-1 of the Site's RCRA Permit, the following table serves to update information in that table and contains known Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) located on-site and/or off-site. This table includes SWMU / AOC identifier, the Unit Name, RCRA Status and RCRA Determination.

Table II-1

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
1-3	none	Metal Mask Cleaning Waste Accumulation Drums (3)	RFA Report Approved 09/30/92 (A)	No Further Action
4-6	none	Metal Mask Developer Waste Accumulation Drums (3)	RFA Report Approved 09/30/92 (A)	No Further Action
7-8	none	Molybdenum Line Tanks (2)	RFA Report Approved 09/30/92 (A)	No Further Action
9	none	Molybdenum Line Etch Room Accumulation Drum	RFA Report Approved 09/30/92 (A)	No Further Action
10	none	Nickel Plating/Electroform Accumulation Drum	RFA Report Approved 09/30/92 (A)	No Further Action
11	none	Electroform Cleaning Waste Accumulation Drum	RFA Report Approved 09/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
12	none	Electroform Developer Waste Accumulation Drum	RFA Report Approved 09/30/92 (A)	No Further Action
13	42	Former B003 Ion Exchange System	RFA Report Approved 09/30/92 (RM)	No Further Action
14-24	none	Ion Exchange System	RFA Report Approved 09/30/92 (I)	No Further Action
25	89	Tin Immersion Area Spill Control Tank	RFA Report Approved 09/30/92 (A)	No Further Action
26	none	Glycerin/EDTA/Wastewater Storage Tank	RFA Report Approved 09/30/92 (A)	No Further Action
27	none	Glycerin/EDTA/Wastewater Transport Tank	RFA Report Approved 09/30/92 (A)	No Further Action
28	91	Hexavalent Chromium Treatment Tank	RFA Report Approved 09/30/92 (A)	No Further Action
29	none	Hexavalent Chromium Treatment Room Waste Accumulation Area	RFA Report Approved 09/30/92 (RM)	No Further Action
30	87	Metal Mask 90-Day Waste Storage	RFA Report Approved 09/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
31	88	Clark Board 90-Day Waste Storage Area	RFA Report Approved 09/30/92 (A)	No Further Action
33	12	Plating Waste/Organic Rinse Water Tank	RFA Report Approved 09/30/92 (RM)	No Further Action
34-35	27	Photographic Waste Tanks (2)	RFA Report Approved 09/30/92 (RM)	No Further Action
36	65	Air Stripper Waste Tank	RFA Report Approved 09/30/92 (RM)	No Further Action
37	66	Evaporator	RFA Report Approved 09/30/92 (RM)	No Further Action
39-45	26,85	Carbon Vessels (7) old carbon abatement room	RFA Report Approved 09/30/92 (I)	No Further Action
46	85	Condenser	RFA Report Approved 09/30/92 (I)	No Further Action
47	85	Separator	RFA Report Approved 09/30/92 (I)	No Further Action
48	5	Freon Waste Tank #23	RFA Report Approved 09/30/92 (I)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
49	none	Carbon Abatement Waste Storage Area	RFA Report Approved 09/30/92 (I)	No Further Action
50-51	85	Waste Xylene Tanks #21 and #22	RFA Report Approved 09/30/92 (I, RR)	No Further Action
52	85	Drum Fill Station	RFA Report Approved 09/30/92 (I)	No Further Action
53	none	Waste Xylene Transport Tank	RFA Report Approved 09/30/92 (RM)	No Further Action
54	17	Pollution Abatement Transfer Tank #13A	RFA Report Approved 09/30/92 (A)	No Further Action
55	none	Surge Tank	RFA Report Approved 09/30/92 (A)	No Further Action
56	6	Water/IPA Tank #26	RFA Report Approved 09/30/92 (RM)	No Further Action
57	13	Plating Waste/General Industrial Waste Tank	RFA Report Approved 09/30/92 (RM)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
58	14	Waste Ammonium Persulfate Tank	RFA-SV (Soil) Report Approved 07/24/98 (RM)	No Further Action
60	43	Building 004 Ion Exchange Units	RFA Report Approved 09/30/92 (RM)	No Further Action
61	none	Core Area #1	RFA Report Approved 08/30/92 (RM)	No Further Action
62	none	Core Area #2	RFA Report Approved 08/30/92 (RM)	No Further Action
63	none	Core Area #2 Waste Storage Cabinet	RFA Report Approved 09/30/92 (RM)	No Further Action
64	none	Core Encapsulation Area	RFA Report Approved 08/30/92 (RM)	No Further Action
66	17	Former Pollution Abatement Transport Tank #13A	RFA Report Approved 08/30/92 (RM)	No Further Action
67-75	none	Tool Room Grinding Machine Tanks (9)	RFA Report Approved 08/30/92 (RM)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
79	none	Core Area A	RFA Report Approved 08/30/92 (RM)	No Further Action
80	none	Core Area A Waste Storage Cabinet	RFA Report Approved 08/30/92 (RM)	No Further Action
81	none	Core Area B	RFA Report Approved 08/30/92 (RM)	No Further Action
82	none	Core Area C	RFA Report Approved 08/30/92 (A)	No Further Action
83	none	Core Area D	RFA Report Approved 08/30/92 (A)	No Further Action
84	none	Core Area D Waste Storage Cabinet	RFA Report Approved 08/30/92 (A)	No Further Action
85	none	Core Area E	RFA Report Approved 08/30/92 (A)	No Further Action
86	none	B690 90-Day Waste Storage Area	RFA Report Approved 08/30/92 (A)	No Further Action
87-88	51	B690 Stills (2)	RFA Report Approved 08/30/92 (RM)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
93	90	BCSF Truck Loading Area and Spill Tank	RFA Report Approved 08/30/92 (A)	No Further Action
94	90	BCSF Waste IPA Tank	RFA Report Approved 08/30/92 (A, RR)	No Further Action
95	90	BCSF Waste Xylene Tank	RFA Report Approved 08/30/92 (A, RR)	No Further Action
96	90	BCSF Waste Glycerin/EDTA/Water Tank	RFA Report Approved 08/30/92 (A)	No Further Action
97	none	BCSF Carbon Canister System	RFA Report Approved 08/30/92 (A)	No Further Action
98	none	Truck Crib Sump	RFA-SV (Soil) Report Approved 04/23/98 (A)	No Further Action
99	none	Waste Oil Accumulation Drum	RFA Report Approved 08/30/92 (A)	No Further Action
100	none	Safety Kleen Tank	RFA Report Approved 08/30/92 (RM)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
101	none	Oily Debris Container	RFA Report Approved 08/30/92 (A)	No Further Action
102	84	B028 General and Non-Regulated Waste Storage Room	RFA Report Approved 08/30/92 (A, RR)	No Further Action
103	84	B028 Caustic Waste Storage Room	RFA Report Approved 08/30/92 (A, RR)	No Further Action
104	84	B028 Acid Waste Storage Room	RFA Report Approved 08/30/92 (A, RR)	No Further Action
105	84	B028 Oxidizer Waste Storage Room	RFA Report Approved 08/30/92 (A, RR)	No Further Action
106	84	B028 Flammable Waste Storage Room	RFA Report Approved 08/30/92 (A, RR)	No Further Action
107	84	B028 Solvent Dispense Room	RFA Report Approved 08/30/92 (A, RR)	No Further Action
108-109	none	Flo-Back^{R} Parts Washers (2)	RFA Report Approved 08/30/92 (I)	No Further Action
110	84	Empty Drum & Miscellaneous Waste Storage Room	RFA Report Approved 08/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
111	84	B028 Loading Dock	RFA Report Approved 08/30/92 (A)	No Further Action
112	84	Former Steam Clean Room	RFA Report Approved 08/30/92 (I)	No Further Action
115	19	Former Waste Disposal Site	RFA Report Approved 08/30/92 (RM)	No Further Action
116	19B	Former Burn Pit	RFA Report Approved 08/30/92 (RM)	No Further Action
117	74	Salvage Yard T-58 Drum Storage Area	RFA Report Approved 08/30/92 (RM)	No Further Action
118	18	Former Equipment Crusher	RFI completed ICM (Soil) implemented (Asphalt Cap) Approved 02/26/2001 (RM)	No Further Action with Institutional Control
119	75	T-58 Groundwater Recovery Tank	RFA Report Approved 08/30/92 (RM)	No Further Action
120	none	Former Fire Training Area	RFA-SV (Soil) Report Approved 07/24/98 (RM)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
121	none	Former B075 Septic Tank Area	RFA Report Approved 08/30/92 (I)	No Further Action
122-124	20	Fuel Blending B020 Boilers (3)	RFA Report Approved 08/30/92 (I)	No Further Action
125	86	B030 90-Day Waste Storage Area	RFA Report Approved 08/30/92 (A)	No Further Action
126	none	Boiler Feed Chemical Delivery Containment Pad	RFA Report Approved 08/30/92 (A)	No Further Action
127	21	Former Antenna Drum Storage Area	RFI (Soil) Report Approved 03/04/98 (I)	No Further Action
128	95	B077 Container Storage Area	RFA Report Approved 08/30/92 (I)	No Further Action
129	22	Former Waste Oil Leach Field	RFA-SV (Soil) Report Approved 07/24/1998 (I)	No Further Action
130-132	none	IWTP Effluent Holding Tanks (3)	RFA Report Approved 08/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
133	none	IWTP Effluent Spill Containment Tank	RFA Report Approved 08/30/92 (A)	No Further Action
134	76	Former Effluent Stabilization Pond	RFA Report Approved 08/30/92 (RM, RR)	No Further Action
135-136	28, 29	Equalization Tanks (2)	RFA Report Approved 08/30/92 (A)	No Further Action
137	none	First Stage Splitter Box	RFA Report Approved 08/30/92 (A)	No Further Action
138-139	none	First Stage Primary Mix Flash Tanks (2)	RFA Report Approved 08/30/92 (A)	No Further Action
140-141	none	First Stage Secondary Flash Mix Tanks (2)	RFA Report Approved 08/30/92 (A)	No Further Action
142-143	none	Solids Contact Clarifiers (2)	RFA Report Approved 08/30/92 (A)	No Further Action
144	none	Second Stage Splitter Box	RFA Report Approved 08/30/92 (A)	No Further Action
145-146	none	Second Stage Primary Flash Tanks (2)	RFA Report Approved 08/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
147-148	none	Second Stage Second. Flash Mix Tanks (2)	RFA Report Approved 08/30/92 (A)	No Further Action
149-150	none	Flocculation Tanks (2)	RFA Report Approved 08/30/92 (A)	No Further Action
151-152	none	Lamella Separators (2)	RFA Report Approved 08/30/92 (A)	No Further Action
153	none	Sand Filter Splitter Box	RFA Report Approved 08/30/92 (A)	No Further Action
154-157	none	Sand Filters (4)	RFA Report Approved 08/30/92 (A)	No Further Action
158	none	Air Stripper Splitter Box	RFA Report Approved 08/30/92 (A)	No Further Action
159-160	none	Air Stripper Towers (2)	RFA Report Approved 08/30/92 (A)	No Further Action
161	none	Stripping Tower Effluent Sump	RFA Report Approved 08/30/92 (A)	No Further Action
162	none	Carbon Prefilter Tank	RFA Report Approved 08/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
163-165	none	Carbon Absorber Vessels (3)	RFA Report Approved 08/30/92 (A)	No Further Action
166	none	Spent Carbon Holding Tank	RFA Report Approved 08/30/92 (A)	No Further Action
167	none	Carbon System Backwash Tank	RFA Report Approved 08/30/92 (A)	No Further Action
168	none	Final pH Adjustment Tank	RFA Report Approved 08/30/92 (A)	No Further Action
169	none	Ferric Sludge Thickener	RFA Report Approved 08/30/92 (A)	No Further Action
170	none	Ferric Sludge Holding Tank	RFA Report Approved 08/30/92 (A)	No Further Action
171	none	Alum Sludge Thickener	RFA Report Approved 08/30/92 (A)	No Further Action
172	none	Alum Sludge Holding Tank	RFA Report Approved 08/30/92 (A)	No Further Action
173	none	Rotary Vacuum Filter	RFA Report Approved 08/30/92 (A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
174	none	B450 Sludge Storage Area	RFA Report Approved 08/30/92 (A)	No Further Action
175	none	B450 Sump	RFA Report Approved 08/30/92 (A)	No Further Action
176	none	IWTP Piping	RFA Report Approved 08/30/92 (A)	No Further Action
181-182	none	Sludge Tanks (2)	RFA Report Approved 08/30/92 (RM)	No Further Action
183	none	Spent Carbon Blowcase Tank	RFA Report Approved 08/30/92 (RM)	No Further Action
184	none	Old IWTP Sump Pit	RFA Report Approved 08/30/92 (RM)	No Further Action
185	52	B450 Demolition Landfill	RFA Report Approved 08/30/92 (I)	No Further Action
186	78, 50	Building 025	RFA Report Approved 08/30/92 (RM)	No Further Action
187-189*				

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
190	96	Miscellaneous Waste Storage Area	RFA-SV (Soil) Report Approved 07/24/98 (A)	No Further Action
191	none	Asbestos Waste Storage Area	RFA Report Approved 08/30/92 (A)	No Further Action
192	83	North Construction Debris Landfill	RFA Report Approved 08/30/92 (A)	No Further Action
193	62	Current Industrial Wastewater Drainage System & Pump Stations	RFA Report Approved 08/30/92 (A)	No Further Action
194	54	Former Industrial Wastewater Drainage System	RFA Report Approved 08/30/92 (I)	No Further Action
195	none	Stormwater Sewer System	RFA Report Approved 08/30/92 (A)	No Further Action
196*				
197	53	South Site Demolition Landfill	RFA Report Approved 08/30/92 (I)	No Further Action
198	97	Old Debris Piles Adjacent to SWMU 190	RFA-SV Report Approved 07/24/98	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
199	98	Old Debris Piles Northwest of Bulk Oil Storage	RFI (Soil) Completed ICM Implemented (Asphalt Cap) Approved 02/26/2001	No Further Action with Institutional Control
200	none	New Carbon Abatement System	(RM)	No Further Action
201	23, 48	Building 003	RFI Complete (Groundwater) (A)	See the Site-wide groundwater Corrective Measure Implementation
202	24, 48	Building 004	RFI Complete (Groundwater) (A)	See the Site-wide groundwater Corrective Measure Implementation
203	76, 77, 78	Building 001 Alcove Tanks	RFA-SV (Soil) Report Approved 07/24/98 (RM)	No Further Action
204	69, 70, 71, 25	BAT Tank Farm	(RM)	No Further Action
205	177-180	Former Sludge Drying Area	(RM)	No Further Action
206	none	Existing Cyanide Treatment System	(A)	No Further Action
207	none	B028 Above ground Spill Containment Tanks (2)	(A)	No Further Action
208	none	BCSF Spare Tanks (2)	(A)	No Further Action

SWMU	IBM No.	Unit Name	RCRA Status	RCRA Determination
209		Tanks Outside Building 028	RFA-SV (Soil) Report Approved 07/24/98	No Further Action

A = Active I = Inactive RM = Removed RR = RCRA-Regulated
N.A. = Not Applicable
*SWMU designations 187, 188, 189 and 196 have been removed. These units handled domestic sewage exclusively and are therefore not classified as SWMUs. SWMU numbering has not been revised in order to retain continuity with the numbering in the RCRA Facility Assessment Report dated August 1992.

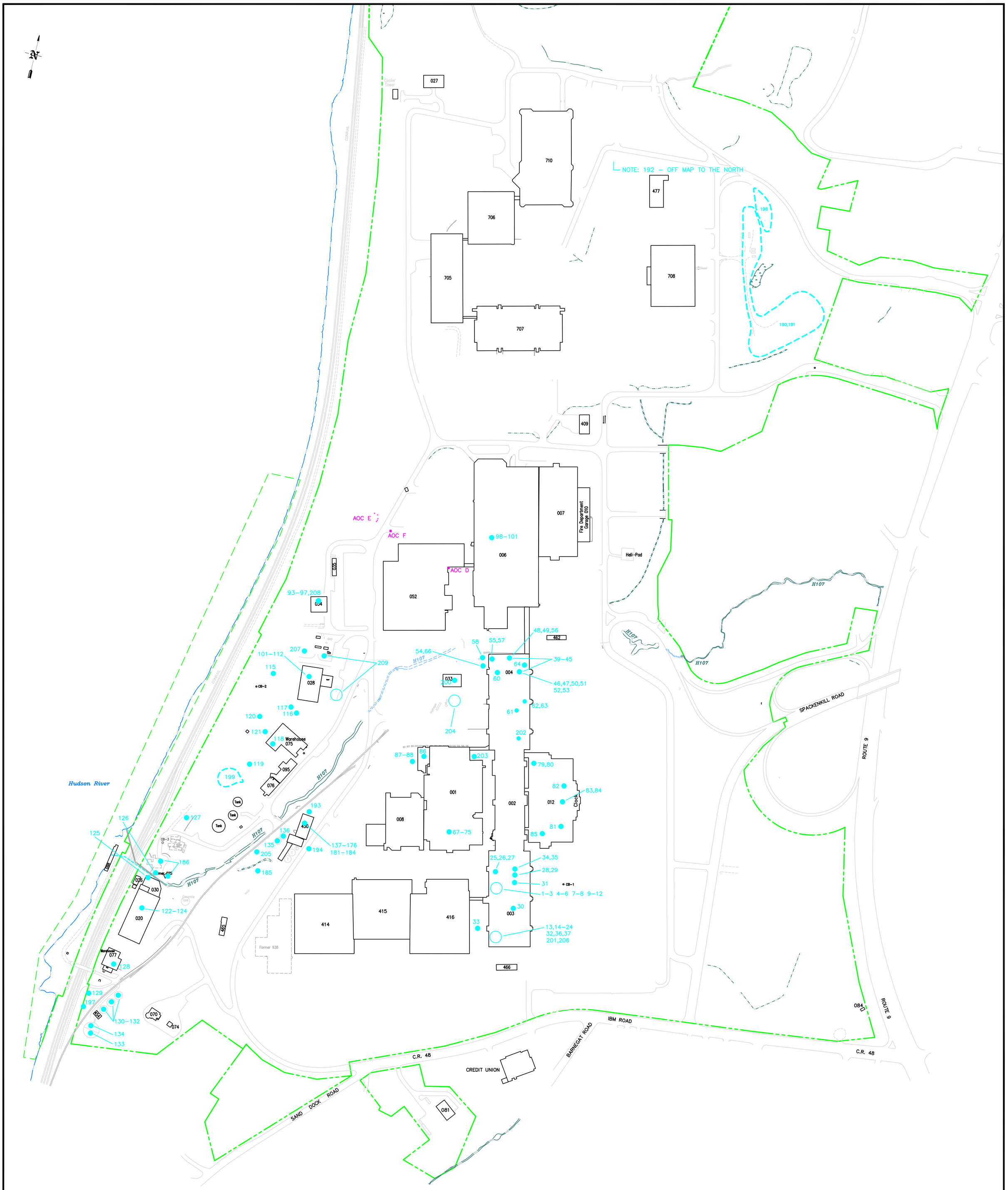
AOCs	IBM No.	Unit Name	RCRA Status	RCRA Determination
AOC A	none	Spring Brook Sediments	RFA-SV Workplan Approved 05/1997	No Further Action
AOC A	none	Adjacent Hudson River Sediments	RFA-SV Workplan Approved 05/1997	No Further Action
AOC B	none	IBM Poughkeepsie Main Plant Site (Site-Wide Groundwater)	CMI (Groundwater Collection & Treatment) Approved 08/07/2007	Final Corrective Measure to address the presence of contaminated groundwater
AOC D	none	B052 Drum	Assessment conducted, Transmittal of Results to NYSDEC (12/22/2009) (RM)	NYSDEC Response (9/23/2015): No Further Action required and may be classified as Removed.

AOCs	IBM No.	Unit Name	RCRA Status	RCRA Determination
AOC E	none	Perimeter Road Drum Area	Assessment conducted, Transmittal of Results to NYSDEC (12/20/2011) NYSDEC Response (2/8/2012): Contingent on IBM completing the soil cover of the base of the Drum C excavation, No Further Action is required with a classification of Removed.	No Further Action is required with a classification of Removed.

AOCs	IBM No.	Unit Name	RCRA Status	RCRA Determination
AOC F	none	B052 NW Parking Lot & Roadway	Assessment conducted, Transmittal of Results to NYSDEC (7/18/2013). Additional field work conducted (9/3/2013); letter report summarizing findings and an action plan to address this area was submitted (9/24/2013). Final letter report (2/24/2014) submitted requesting No Further Action.	NYSDEC Response (7/15/2015): No Further Action Required.

Plate A-1: Solid Waste Management Unit and Area of Concern Location Map

April 29, 2020



Areas of Concern

AOC	Unit Name
AOC A	Spring Brook Sediments Adjacent Hudson River Sediments
AOC B	IBM Poughkeepsie Main Plant Site (Site Wide Groundwater)
AOC D	B052 Drum
AOC E	Perimeter Road Drum Area
AOC F	B052 NW Parking Lot Area

– Property line (10/6/13) from SiteProperty.dwg (Fluor/GEMS, May 2015)

– Solid Waste Management Unit (SWMU)

– Area of Concern (AOC); see inset table

NOTE: 195 – STORMWATER SEWER SYSTEM THROUGHOUT FACILITY

SWMU placement based on "Solid Waste Management Units", prepared by LMS/GSC (LMS_001.DWG; 11/88, last revised 10/05)

Scale 0 150' 300'

Plate A–1

IBM
Poughkeepsie, NY

Solid Waste Management Units and Areas of Concern Location Map

DRAWN BY: MJM | DATE: 4/5/16

CHECKED & APPROVED BY: DAB

DRAWING NO. 87016-LMS-002-B1

GROUNDWATER SCIENCES CORPORATION

APPENDIX B:

GROUNDWATER COLLECTION SYSTEMS AND GROUNDWATER EXTRACTION DATA

B-1: Passive Groundwater Collection System Monitoring Report

B-2: Groundwater Extraction Systems Flow Data Summaries

B-3: Groundwater Extraction Well Monitoring Data Report

B-4: SBPC Combined Influent Monitoring Data Report

B-1: Passive Groundwater Collection System Monitoring Report

IBM Poughkeepsie Main Plant Site
Passive Groundwater Collection System
January 1, 2019 - December 31, 2019

Sample Location		CS 0198	CS 0198	CS 0198	CS 0198	CS 0434	CS 0434
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/29/2019	04/24/2019	07/19/2019	10/23/2019	01/29/2019	04/24/2019
Laboratory Sample I.D.		420148684-5	420152756-8	420157254-11	420162278-10	420148684-2	420152756-2
Sample Comment Codes							
Parameter	**Units**						
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
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	0.84 J	0.67 J	0.73 J	0.58 J	1.6	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	0.30 J	ND@1	ND@1	98 D	120 D
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	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

IBM Poughkeepsie Main Plant Site
Passive Groundwater Collection System
January 1, 2019 - December 31, 2019

Sample Location		CS 0198	CS 0198	CS 0198	CS 0198	CS 0434	CS 0434
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/29/2019	04/24/2019	07/19/2019	10/23/2019	01/29/2019	04/24/2019
Laboratory Sample I.D.		420148684-5	420152756-8	420157254-11	420162278-10	420148684-2	420152756-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	9.6	7.9	9.0	11	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
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	0.44 J	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	6.6	5.1	4.1	4.5	300 D	460 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	0.31 J	0.45 J

IBM Poughkeepsie Main Plant Site
Passive Groundwater Collection System
January 1, 2019 - December 31, 2019

Sample Location		CS 0434	CS 0434	CS 0435	CS 0435	CS 0435	CS 0435
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/19/2019	10/18/2019	01/29/2019	04/24/2019	07/19/2019	10/18/2019
Laboratory Sample I.D.		420157254-7	420162118-2	420148684-3	420152756-3	420157254-8	420162118-3
Sample Comment Codes							
Parameter	**Units**						
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
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	1.4	ND@1	1.3	2.1	1.5	0.90 J
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	1.0	ND@1
1,1-DICHLOROETHYLENE	ug/l	0.27 J	0.30 J	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	150 D	120 D	1.2	33 D	28	0.82 J
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	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

IBM Poughkeepsie Main Plant Site
Passive Groundwater Collection System
January 1, 2019 - December 31, 2019

Sample Location		CS 0434	CS 0434	CS 0435	CS 0435	CS 0435	CS 0435
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/19/2019	10/18/2019	01/29/2019	04/24/2019	07/19/2019	10/18/2019
Laboratory Sample I.D.		420157254-7	420162118-2	420148684-3	420152756-3	420157254-8	420162118-3
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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
METHYLENE CHLORIDE	ug/l	ND@1	0.29 J	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	0.54 J	1.4	0.43 J	0.52 J
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	370 D	370 D	4.8	110 D	53 D	3.2
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	0.67 J	0.44 J	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Passive Groundwater Collection System
January 1, 2019 - December 31, 2019

Explanation of Reporting Conventions and Key to Comment Codes

Reporting Conventions

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

Code	Explanation
D	Compound identified at a secondary dilution factor (Organics)
J	Estimated value - compound meets identification criteria, but result is less than the reporting limit

B-2: Groundwater Extraction Systems Flow Data Summaries

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 198 Pumping Record

Date	Totalizer Reading CS 198	Total Pumped (gal) Since 1/2001
12/20/2018	85,203,723	94,274,369
1/3/2019	85,840,358	94,911,004
2/15/2019	87,752,017	96,822,663
3/22/2019	89,054,470	98,125,116
4/9/2019	89,872,837	98,943,483
5/2/2019	90,918,226	99,988,872
6/4/2019	92,486,498	101,557,144
7/2/2019	93,728,504	102,799,150
8/31/2019	96,141,971	105,212,617
9/6/2019	96,322,326	105,392,972
10/9/2019	97,347,269	106,417,915
11/8/2019	98,495,378	107,566,024
12/24/2019	100,448,870	109,519,516
1/7/2020	101,043,486	110,114,132

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
1/1/2019	-	-	
1/2/2019	94,628,486	225,348,819	
1/3/2019	94,683,485	225,403,818	
1/4/2019	94,734,945	225,455,278	
1/5/2019	-	-	
1/6/2019	-	-	
1/7/2019	94,893,140	225,613,473	
1/8/2019	94,946,117	225,666,450	
1/9/2019	95,000,686	225,721,019	
1/10/2019	95,054,426	225,774,759	
1/11/2019	95,106,500	225,826,833	
1/12/2019	-	-	
1/13/2019	-	-	
1/14/2019	95,255,413	225,975,746	
1/15/2019	95,309,200	226,029,533	
1/16/2019	95,353,870	226,074,203	
1/17/2019	95,397,863	226,118,196	
1/18/2019	95,445,690	226,166,023	
1/19/2019	-	-	
1/20/2019	-	-	
1/21/2019	95,581,645	226,301,978	
1/22/2019	95,623,188	226,343,521	
1/23/2019	95,666,332	226,386,665	
1/24/2019	95,713,901	226,434,234	
1/25/2019	95,770,092	226,490,425	
1/26/2019	-	-	
1/27/2019	-	-	
1/28/2019	95,923,566	226,643,899	
1/29/2019	95,984,735	226,705,068	
1/30/2019	95,997,375	226,717,708	
1/31/2019	96,067,320	226,787,653	
2/1/2019	96,114,215	226,834,548	
2/2/2019	-	-	
2/3/2019	-	-	
2/4/2019	96,248,390	226,968,723	
2/5/2019	96,292,381	227,012,714	
2/6/2019	96,335,002	227,055,335	
2/7/2019	96,377,964	227,098,297	
2/8/2019	96,424,617	227,144,950	
2/9/2019	-	-	
2/10/2019	-	-	
2/11/2019	96,571,702	227,292,035	
2/12/2019	96,618,175	227,338,508	
2/13/2019	96,676,428	227,396,761	
2/14/2019	96,716,680	227,437,013	
2/15/2019	96,764,764	227,485,097	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
2/16/2019	-	-	
2/17/2019	-	-	
2/18/2019	96,908,187	227,628,520	
2/19/2019	96,956,157	227,676,490	
2/20/2019	97,001,705	227,722,038	
2/21/2019	97,050,850	227,771,183	
2/22/2019	97,101,888	227,822,221	
2/23/2019	-	-	
2/24/2019	-	-	
2/25/2019	97,257,261	227,977,594	
2/26/2019	97,308,263	228,028,596	
2/27/2019	97,353,000	228,073,333	
2/28/2019	97,403,059	228,123,392	
3/1/2019	97,457,237	228,177,570	
3/2/2019	-	-	
3/3/2019	-	-	
3/4/2019	97,598,667	228,319,000	
3/5/2019	-	-	
3/6/2019	-	-	
3/7/2019	97,744,045	228,464,378	
3/8/2019	97,790,393	228,510,726	
3/9/2019	-	-	
3/10/2019	-	-	
3/11/2019	97,929,134	228,649,467	
3/12/2019	97,975,416	228,695,749	
3/13/2019	98,020,305	228,740,638	
3/14/2019	98,071,775	228,792,108	
3/15/2019	98,110,141	228,830,474	
3/16/2019	-	-	
3/17/2019	-	-	
3/18/2019	98,250,036	228,970,369	
3/19/2019	98,292,055	229,012,388	
3/20/2019	98,338,880	229,059,213	
3/21/2019	98,383,312	229,103,645	
3/22/2019	98,433,418	229,153,751	
3/23/2019	-	-	
3/24/2019	-	-	
3/25/2019	98,563,337	229,283,670	
3/26/2019	98,608,379	229,328,712	
3/27/2019	98,652,559	229,372,892	Clean probes
3/28/2019	98,693,809	229,414,142	
3/29/2019	98,736,343	229,456,676	
3/30/2019	-	-	
3/31/2019	98,823,749	229,544,082	Totalizer estimated.
4/1/2019	98,869,915	229,590,248	
4/2/2019	98,921,613	229,641,946	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
4/3/2019	98,957,796	229,678,129	
4/4/2019	-	-	
4/5/2019	99,042,034	229,762,367	
4/6/2019	-	-	
4/7/2019	-	-	
4/8/2019	99,173,221	229,893,554	
4/9/2019	99,217,109	229,937,442	
4/10/2019	99,260,845	229,981,178	
4/11/2019	99,306,278	230,026,611	
4/12/2019	99,352,064	230,072,397	
4/13/2019	-	-	
4/14/2019	-	-	
4/15/2019	99,489,574	230,209,907	
4/16/2019	99,534,034	230,254,367	
4/17/2019	99,577,293	230,297,626	
4/18/2019	99,621,276	230,341,609	
4/19/2019	99,667,415	230,387,748	
4/20/2019	-	-	
4/21/2019	-	-	
4/22/2019	99,802,474	230,522,807	
4/23/2019	99,848,461	230,568,794	
4/24/2019	99,895,038	230,615,371	
4/25/2019	99,941,720	230,662,053	
4/26/2019	99,984,540	230,704,873	
4/27/2019	-	-	
4/28/2019	-	-	
4/29/2019	100,123,775	230,844,108	
4/30/2019	100,171,065	230,891,398	
5/1/2019	100,222,492	230,942,825	
5/2/2019	100,274,968	230,995,301	
5/3/2019	100,322,854	231,043,187	
5/4/2019	-	-	
5/5/2019	-	-	
5/6/2019	100,476,741	231,197,074	
5/7/2019	100,527,822	231,248,155	
5/8/2019	100,577,473	231,297,806	
5/9/2019	100,633,263	231,353,596	
5/10/2019	100,683,701	231,404,034	
5/11/2019	-	-	
5/12/2019	-	-	
5/13/2019	100,836,145	231,556,478	
5/14/2019	-	-	
5/15/2019	100,932,967	231,653,300	
5/16/2019	-	-	
5/17/2019	101,019,859	231,740,192	
5/18/2019	-	-	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
5/19/2019	-	-	
5/20/2019	101,177,608	231,897,941	
5/21/2019	101,232,469	231,952,802	
5/22/2019	101,277,542	231,997,875	
5/23/2019	101,328,825	232,049,158	
5/24/2019	101,383,686	232,104,019	
5/25/2019	-	-	
5/26/2019	-	-	
5/27/2019	-	-	
5/28/2019	101,556,825	232,277,158	
5/29/2019	101,603,662	232,323,995	
5/30/2019	101,651,895	232,372,228	
5/31/2019	101,698,708	232,419,041	
6/1/2019	-	-	
6/2/2019	-	-	
6/3/2019	101,837,551	232,557,884	
6/4/2019	101,881,575	232,601,908	
6/5/2019	101,926,887	232,647,220	
6/6/2019	101,973,283	232,693,616	
6/7/2019	102,016,317	232,736,650	
6/8/2019	-	-	
6/9/2019	-	-	
6/10/2019	102,144,742	232,865,075	
6/11/2019	102,188,372	232,908,705	
6/12/2019	102,233,386	232,953,719	
6/13/2019	102,273,917	232,994,250	
6/14/2019	102,319,157	233,039,490	
6/15/2019	-	-	
6/16/2019	-	-	
6/17/2019	102,445,173	233,165,506	
6/18/2019	102,493,143	233,213,476	
6/19/2019	102,534,425	233,254,758	
6/20/2019	102,583,062	233,303,395	
6/21/2019	102,617,204	233,337,537	
6/22/2019	-	-	
6/23/2019	-	-	
6/24/2019	102,762,067	233,482,400	
6/25/2019	102,804,613	233,524,946	
6/26/2019	102,851,116	233,571,449	
6/27/2019	102,901,780	233,622,113	
6/28/2019	102,994,052	233,714,385	
6/29/2019	-	-	
6/30/2019	103,040,607	233,760,940	Totalizer estimated.
7/1/2019	103,086,364	233,806,697	
7/2/2019	103,134,286	233,854,619	
7/3/2019	103,176,236	233,896,569	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
7/4/2019	-	-	
7/5/2019	103,250,527	233,970,860	
7/6/2019	-	-	
7/7/2019	-	-	
7/8/2019	103,374,457	234,094,790	
7/9/2019	103,409,600	234,129,933	
7/10/2019	103,447,246	234,167,579	
7/11/2019	103,486,430	234,206,763	
7/12/2019	103,525,221	234,245,554	
7/13/2019	-	-	
7/14/2019	-	-	
7/15/2019	103,637,862	234,358,195	
7/16/2019	103,674,602	234,394,935	
7/17/2019	103,714,621	234,434,954	
7/18/2019	103,751,921	234,472,254	
7/19/2019	103,788,316	234,508,649	
7/20/2019	-	-	
7/21/2019	-	-	
7/22/2019	103,903,603	234,623,936	
7/23/2019	103,940,141	234,660,474	
7/24/2019	103,982,198	234,702,531	
7/25/2019	104,019,856	234,740,189	
7/26/2019	104,052,950	234,773,283	
7/27/2019	-	-	
7/28/2019	-	-	
7/29/2019	104,165,816	234,886,149	
7/30/2019	104,204,010	234,924,343	
7/31/2019	104,240,417	234,960,750	
8/1/2019	104,280,352	235,000,685	
8/2/2019	104,315,161	235,035,494	
8/3/2019	-	-	
8/4/2019	-	-	
8/5/2019	104,435,813	235,156,146	
8/6/2019	104,477,393	235,197,726	
8/7/2019	104,522,073	235,242,406	
8/8/2019	104,567,313	235,287,646	
8/9/2019	104,609,656	235,329,989	
8/10/2019	-	-	
8/11/2019	-	-	
8/12/2019	104,726,135	235,446,468	
8/13/2019	104,766,237	235,486,570	
8/14/2019	104,811,072	235,531,405	
8/15/2019	104,857,341	235,577,674	
8/16/2019	104,890,763	235,611,096	
8/17/2019	-	-	
8/18/2019	-	-	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
8/19/2019	105,014,860	235,735,193	
8/20/2019	105,059,778	235,780,111	
8/21/2019	105,096,220	235,816,553	
8/22/2019	105,136,823	235,857,156	
8/23/2019	105,175,292	235,895,625	
8/24/2019	-	-	
8/25/2019	-	-	
8/26/2019	105,280,041	236,000,374	
8/27/2019	105,318,927	236,039,260	
8/28/2019	105,357,766	236,078,099	
8/29/2019	105,394,768	236,115,101	
8/30/2019	105,427,169	236,147,502	
8/31/2019	105,458,238	236,178,571	Totalizer estimated.
9/1/2019	-	-	
9/2/2019	-	-	
9/3/2019	105,555,987	236,276,320	
9/4/2019	105,589,067	236,309,400	
9/5/2019	105,619,597	236,339,930	
9/6/2019	105,653,667	236,374,000	
9/7/2019	-	-	
9/8/2019	-	-	
9/9/2019	105,724,835	236,445,168	
9/10/2019	105,771,470	236,491,803	
9/11/2019	105,800,010	236,520,343	
9/12/2019	105,827,772	236,548,105	
9/13/2019	105,858,445	236,578,778	
9/14/2019	-	-	
9/15/2019	-	-	
9/16/2019	105,943,950	236,664,283	
9/17/2019	105,971,598	236,691,931	
9/18/2019	106,001,424	236,721,757	
9/19/2019	106,024,682	236,745,015	
9/20/2019	106,051,850	236,772,183	
9/21/2019	-	-	
9/22/2019	-	-	
9/23/2019	106,130,528	236,850,861	
9/24/2019	106,157,422	236,877,755	
9/25/2019	106,183,266	236,903,599	
9/26/2019	106,207,871	236,928,204	
9/27/2019	106,240,057	236,960,390	
9/28/2019	-	-	
9/29/2019	-	-	
9/30/2019	106,304,895	237,025,228	
10/1/2019	106,333,804	237,054,137	
10/2/2019	106,361,889	237,082,222	
10/3/2019	106,383,967	237,104,300	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
10/4/2019	106,411,051	237,131,384	
10/5/2019	-	-	
10/6/2019	-	-	
10/7/2019	106,481,480	237,201,813	
10/8/2019	106,506,085	237,226,418	
10/9/2019	106,530,980	237,251,313	
10/10/2019	106,559,014	237,279,347	
10/11/2019	106,581,068	237,301,401	
10/12/2019	-	-	
10/13/2019	-	-	
10/14/2019	106,654,179	237,374,512	
10/15/2019	106,675,922	237,396,255	
10/16/2019	106,699,740	237,420,073	
10/17/2019	106,755,495	237,475,828	
10/18/2019	-	-	
10/19/2019	-	-	
10/20/2019	-	-	
10/21/2019	106,836,080	237,556,413	
10/22/2019	106,862,664	237,582,997	
10/23/2019	106,888,651	237,608,984	
10/24/2019	106,913,256	237,633,589	
10/25/2019	106,938,576	237,658,909	
10/26/2019	-	-	
10/27/2019	-	-	
10/28/2019	107,028,257	237,748,590	
10/29/2019	107,057,467	237,777,800	
10/30/2019	107,081,818	237,802,151	
10/31/2019	107,117,998	237,838,331	
11/1/2019	107,147,097	237,867,430	
11/2/2019	-	-	
11/3/2019	-	-	
11/4/2019	107,250,368	237,970,701	
11/5/2019	107,284,486	238,004,819	
11/6/2019	107,331,775	238,052,108	
11/7/2019	107,352,030	238,072,363	
11/8/2019	107,387,292	238,107,625	
11/9/2019	-	-	
11/10/2019	-	-	
11/11/2019	107,484,328	238,204,661	
11/12/2019	107,517,600	238,237,933	
11/13/2019	107,550,084	238,270,417	
11/14/2019	107,581,400	238,301,733	
11/15/2019	107,615,065	238,335,398	
11/16/2019	-	-	
11/17/2019	-	-	
11/18/2019	107,704,627	238,424,960	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 434 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
11/19/2019	107,738,256	238,458,589	
11/20/2019	107,776,951	238,497,284	
11/21/2019	107,810,080	238,530,413	
11/22/2019	107,844,400	238,564,733	
11/23/2019	-	-	
11/24/2019	-	-	
11/25/2019	107,978,856	238,699,189	
11/26/2019	108,009,826	238,730,159	
11/27/2019	108,055,246	238,775,579	
11/28/2019	-	-	
11/29/2019	-	-	
11/30/2019	108,178,973	238,899,306	Totalizer estimated.
12/1/2019	-	-	
12/2/2019	108,254,170	238,974,503	
12/3/2019	108,293,819	239,014,152	
12/4/2019	108,331,418	239,051,751	
12/5/2019	108,373,737	239,094,070	
12/6/2019	108,413,827	239,134,160	
12/7/2019	-	-	
12/8/2019	-	-	
12/9/2019	108,530,974	239,251,307	
12/10/2019	108,577,322	239,297,655	
12/11/2019	108,619,332	239,339,665	
12/12/2019	108,671,784	239,392,117	
12/13/2019	108,721,899	239,442,232	
12/14/2019	-	-	
12/15/2019	-	-	
12/16/2019	108,884,525	239,604,858	
12/17/2019	108,937,704	239,658,037	
12/18/2019	108,993,303	239,713,636	
12/19/2019	109,040,355	239,760,688	
12/20/2019	109,090,530	239,810,863	
12/21/2019	-	-	
12/22/2019	-	-	
12/23/2019	109,239,625	239,959,958	
12/24/2019	109,282,016	240,002,349	
12/25/2019	-	-	
12/26/2019	109,370,077	240,090,410	
12/27/2019	109,414,458	240,134,791	
12/28/2019	-	-	
12/29/2019	-	-	
12/30/2019	109,547,257	240,267,590	
12/31/2019	109,588,837	240,309,170	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
1/1/2019	-	-	
1/2/2019	7,346,736	9,650,617	
1/3/2019	7,347,270	9,651,151	
1/4/2019	7,347,796	9,651,677	
1/5/2019	-	-	
1/6/2019	-	-	
1/7/2019	7,350,194	9,654,075	
1/8/2019	7,350,707	9,654,588	
1/9/2019	7,351,560	9,655,441	
1/10/2019	7,352,094	9,655,975	
1/11/2019	7,352,466	9,656,347	
1/12/2019	-	-	
1/13/2019	-	-	
1/14/2019	7,353,458	9,657,339	
1/15/2019	7,353,768	9,657,649	
1/16/2019	7,354,032	9,657,913	
1/17/2019	7,354,286	9,658,167	
1/18/2019	7,354,527	9,658,408	
1/19/2019	-	-	
1/20/2019	-	-	
1/21/2019	7,355,341	9,659,222	
1/22/2019	7,355,552	9,659,433	
1/23/2019	7,355,796	9,659,677	
1/24/2019	7,356,184	9,660,065	
1/25/2019	7,357,388	9,661,269	
1/26/2019	-	-	
1/27/2019	-	-	
1/28/2019	7,358,689	9,662,570	
1/29/2019	7,359,065	9,662,946	
1/30/2019	7,359,300	9,663,181	
1/31/2019	7,359,620	9,663,501	
2/1/2019	7,359,877	9,663,758	
2/2/2019	-	-	
2/3/2019	-	-	
2/4/2019	7,360,836	9,664,717	
2/5/2019	7,361,364	9,665,245	
2/6/2019	7,361,823	9,665,704	
2/7/2019	7,362,395	9,666,276	
2/8/2019	7,363,019	9,666,900	
2/9/2019	-	-	
2/10/2019	-	-	
2/11/2019	7,364,314	9,668,195	
2/12/2019	7,364,586	9,668,467	
2/13/2019	7,364,839	9,668,720	
2/14/2019	7,365,302	9,669,183	
2/15/2019	7,366,483	9,670,364	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
2/16/2019	-	-	
2/17/2019	-	-	
2/18/2019	7,368,052	9,671,933	
2/19/2019	7,368,402	9,672,283	
2/20/2019	7,368,819	9,672,700	
2/21/2019	7,369,288	9,673,169	
2/22/2019	7,370,155	9,674,036	
2/23/2019	-	-	
2/24/2019	-	-	
2/25/2019	7,371,881	9,675,762	
2/26/2019	7,372,516	9,676,397	
2/27/2019	7,372,876	9,676,757	
2/28/2019	7,373,240	9,677,121	
3/1/2019	7,373,627	9,677,508	
3/2/2019	-	-	
3/3/2019	-	-	
3/4/2019	7,374,798	9,678,679	
3/5/2019	-	-	
3/6/2019	-	-	
3/7/2019	7,376,595	9,680,476	
3/8/2019	7,376,948	9,680,829	
3/9/2019	-	-	
3/10/2019	-	-	
3/11/2019	7,377,909	9,681,790	
3/12/2019	7,378,141	9,682,022	
3/13/2019	7,378,339	9,682,220	
3/14/2019	7,378,552	9,682,433	
3/15/2019	7,378,699	9,682,580	
3/16/2019	-	-	
3/17/2019	-	-	
3/18/2019	7,379,271	9,683,152	
3/19/2019	7,379,434	9,683,315	
3/20/2019	7,379,611	9,683,492	
3/21/2019	7,379,775	9,683,656	
3/22/2019	7,380,689	9,684,570	
3/23/2019	-	-	
3/24/2019	-	-	
3/25/2019	7,381,561	9,685,442	
3/26/2019	7,381,747	9,685,628	
3/27/2019	7,381,905	9,685,786	Clean probes
3/28/2019	7,382,320	9,686,201	
3/29/2019	7,382,448	9,686,329	
3/30/2019	-	-	
3/31/2019	7,382,800	9,686,681	
4/1/2019	7,383,199	9,687,080	
4/2/2019	7,383,409	9,687,290	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
4/3/2019	7,383,561	9,687,442	
4/4/2019	-	-	
4/5/2019	7,383,920	9,687,801	
4/6/2019	-	-	
4/7/2019	-	-	
4/8/2019	7,385,541	9,689,422	
4/9/2019	7,385,890	9,689,771	
4/10/2019	7,386,314	9,690,195	
4/11/2019	7,386,635	9,690,516	
4/12/2019	7,386,981	9,690,862	
4/13/2019	-	-	
4/14/2019	-	-	
4/15/2019	7,389,396	9,693,277	
4/16/2019	7,390,321	9,694,202	
4/17/2019	7,390,714	9,694,595	
4/18/2019	7,390,951	9,694,832	
4/19/2019	7,391,246	9,695,127	
4/20/2019	-	-	
4/21/2019	-	-	
4/22/2019	7,392,477	9,696,358	
4/23/2019	7,392,796	9,696,677	
4/24/2019	7,393,266	9,697,147	
4/25/2019	7,393,655	9,697,536	
4/26/2019	7,394,081	9,697,962	
4/27/2019	-	-	
4/28/2019	-	-	
4/29/2019	7,396,944	9,700,825	
4/30/2019	7,397,702	9,701,583	
5/1/2019	7,398,998	9,702,879	
5/2/2019	7,400,167	9,704,048	
5/3/2019	7,401,506	9,705,387	
5/4/2019	-	-	
5/5/2019	-	-	
5/6/2019	7,406,563	9,710,444	
5/7/2019	7,407,960	9,711,841	
5/8/2019	7,409,459	9,713,340	
5/9/2019	7,410,882	9,714,763	
5/10/2019	7,412,142	9,716,023	
5/11/2019	-	-	
5/12/2019	-	-	
5/13/2019	7,451,421	9,755,302	
5/14/2019	-	-	
5/15/2019	7,513,786	9,817,667	
5/16/2019	-	-	
5/17/2019	7,521,455	9,825,336	
5/18/2019	-	-	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
5/19/2019	-	-	
5/20/2019	7,524,808	9,828,689	
5/21/2019	7,525,276	9,829,157	
5/22/2019	7,525,548	9,829,429	
5/23/2019	7,525,941	9,829,822	
5/24/2019	7,526,452	9,830,333	
5/25/2019	-	-	
5/26/2019	-	-	
5/27/2019	-	-	
5/28/2019	7,527,536	9,831,417	
5/29/2019	7,528,094	9,831,975	
5/30/2019	7,528,623	9,832,504	
5/31/2019	7,529,011	9,832,892	
6/1/2019	-	-	
6/2/2019	-	-	
6/3/2019	7,529,819	9,833,700	
6/4/2019	7,530,074	9,833,955	
6/5/2019	7,530,331	9,834,212	
6/6/2019	7,530,660	9,834,541	
6/7/2019	7,530,999	9,834,880	
6/8/2019	-	-	
6/9/2019	-	-	
6/10/2019	7,531,737	9,835,618	
6/11/2019	7,532,313	9,836,194	
6/12/2019	7,532,865	9,836,746	
6/13/2019	7,533,080	9,836,961	
6/14/2019	7,533,647	9,837,528	
6/15/2019	-	-	
6/16/2019	-	-	
6/17/2019	7,534,856	9,838,737	
6/18/2019	7,535,449	9,839,330	
6/19/2019	7,536,096	9,839,977	
6/20/2019	7,536,366	9,840,247	
6/21/2019	7,536,649	9,840,530	
6/22/2019	-	-	
6/23/2019	-	-	
6/24/2019	7,537,977	9,841,858	
6/25/2019	7,538,386	9,842,267	
6/26/2019	7,539,351	9,843,232	
6/27/2019	7,539,869	9,843,750	
6/28/2019	7,540,130	9,844,011	
6/29/2019	-	-	
6/30/2019	7,540,809	9,844,690	
7/1/2019	7,541,627	9,845,508	
7/2/2019	7,541,872	9,845,753	
7/3/2019	7,542,171	9,846,052	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer	Total	Comments
	Reading	Pumped (gal)	
		Since 1/1998	
7/4/2019	-	-	
7/5/2019	7,542,958	9,846,839	
7/6/2019	-	-	
7/7/2019	-	-	
7/8/2019	7,545,014	9,848,895	
7/9/2019	-	-	
7/10/2019	7,545,516	9,849,397	
7/11/2019	7,546,254	9,850,135	
7/12/2019	7,547,126	9,851,007	
7/13/2019	-	-	
7/14/2019	-	-	
7/15/2019	7,549,202	9,853,083	
7/16/2019	7,549,862	9,853,743	
7/17/2019	7,550,971	9,854,852	
7/18/2019	7,552,083	9,855,964	
7/19/2019	7,552,751	9,856,632	
7/20/2019	-	-	No water
7/21/2019	-	-	
7/22/2019	-	-	
7/23/2019	-	-	
7/24/2019	-	-	
7/25/2019	-	-	
7/26/2019	-	-	
7/27/2019	-	-	
7/28/2019	-	-	
7/29/2019	7,552,983	9,856,864	
7/30/2019	7,553,475	9,857,356	
7/31/2019	7,553,709	9,857,590	
8/1/2019	7,554,755	9,858,636	
8/2/2019	7,554,949	9,858,830	
8/3/2019	-	-	
8/4/2019	-	-	
8/5/2019	7,555,745	9,859,626	
8/6/2019	7,555,902	9,859,783	
8/7/2019	7,556,474	9,860,355	
8/8/2019	-	-	Low flow
8/9/2019	-	-	Low flow
8/10/2019	-	-	
8/11/2019	-	-	
8/12/2019	7,557,074	9,860,955	
8/13/2019	7,557,280	9,861,161	
8/14/2019	7,557,662	9,861,543	
8/15/2019	7,558,161	9,862,042	
8/16/2019	7,558,480	9,862,361	
8/17/2019	-	-	
8/18/2019	-	-	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer	Total	Comments
	Reading	Pumped (gal)	
		Since 1/1998	
8/19/2019	7,559,274	9,863,155	
8/20/2019	-	-	No water
8/21/2019	7,559,319	9,863,200	
8/22/2019	-	-	No water
8/23/2019	-	-	Changed probes
8/24/2019	-	-	No flow
8/25/2019	-	-	No flow
8/26/2019	-	-	
8/27/2019	7,559,461	9,863,342	
8/28/2019	7,559,694	9,863,575	
8/29/2019	7,560,169	9,864,050	No flow
8/30/2019	7,560,294	9,864,175	
8/31/2019	7,560,400	9,864,281	Totalizer estimated.
9/1/2019	-	-	
9/2/2019	-	-	
9/3/2019	7,561,006	9,864,887	
9/4/2019	7,561,149	9,865,030	
9/5/2019	7,561,273	9,865,154	
9/6/2019	7,561,429	9,865,310	
9/7/2019	-	-	
9/8/2019	-	-	
9/9/2019	7,562,318	9,866,199	
9/10/2019	7,562,464	9,866,345	
9/11/2019	7,562,589	9,866,470	
9/12/2019	7,562,726	9,866,607	
9/13/2019	7,563,064	9,866,945	
9/14/2019	-	-	
9/15/2019	-	-	
9/16/2019	7,563,817	9,867,698	
9/17/2019	7,563,985	9,867,866	
9/18/2019	7,564,126	9,868,007	
9/19/2019	7,564,244	9,868,125	
9/20/2019	7,564,376	9,868,257	
9/21/2019	-	-	
9/22/2019	-	-	
9/23/2019	7,564,715	9,868,596	
9/24/2019	7,564,836	9,868,717	
9/25/2019	7,564,944	9,868,825	
9/26/2019	7,565,056	9,868,937	
9/27/2019	7,565,521	9,869,402	
9/28/2019	-	-	
9/29/2019	-	-	
9/30/2019	7,565,961	9,869,842	
10/1/2019	7,566,109	9,869,990	
10/2/2019	7,566,241	9,870,122	
10/3/2019	7,566,345	9,870,226	

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer Reading	Total Pumped (gal) Since 1/1998	Comments
10/4/2019	7,567,182	9,871,063	
10/5/2019	-	-	
10/6/2019	-	-	
10/7/2019	7,567,692	9,871,573	
10/8/2019	7,568,401	9,872,282	
10/9/2019	7,568,839	9,872,720	
10/10/2019	7,569,333	9,873,214	
10/11/2019	7,569,577	9,873,458	
10/12/2019	-	-	
10/13/2019	-	-	
10/14/2019	7,569,932	9,873,813	
10/15/2019	7,570,044	9,873,925	
10/16/2019	7,570,160	9,874,041	
10/17/2019	7,571,073	9,874,954	
10/18/2019	-	-	
10/19/2019	-	-	
10/20/2019			
10/21/2019	7,571,621	9,875,502	
10/22/2019	7,571,803	9,875,684	
10/23/2019	7,572,261	9,876,142	
10/24/2019	7,572,520	9,876,401	
10/25/2019	7,572,691	9,876,572	
10/26/2019	-	-	
10/27/2019	-	-	
10/28/2019	7,573,759	9,877,640	
10/29/2019	7,573,805	9,877,686	
10/30/2019	7,573,856	9,877,737	
10/31/2019	7,574,107	9,877,988	
11/1/2019	7,574,351	9,878,232	
11/2/2019	-	-	
11/3/2019	-	-	
11/4/2019	7,574,458	9,878,339	
11/5/2019	7,574,529	9,878,410	
11/6/2019	7,574,712	9,878,593	
11/7/2019	7,574,884	9,878,765	
11/8/2019	7,575,555	9,879,436	
11/9/2019	-	-	
11/10/2019	-	-	
11/11/2019	7,576,139	9,880,020	
11/12/2019	7,576,289	9,880,170	
11/13/2019	7,576,673	9,880,554	
11/14/2019	7,576,792	9,880,673	out of water
11/15/2019	7,576,831	9,880,712	out of water
11/16/2019	-	-	
11/17/2019	-	-	
11/18/2019	7,576,849	9,880,730	Out of water

IBM - Hudson Valley
Poughkeepsie, Main Site
Passive Groundwater Collection System
CS 435 Pumping Record

Date	Totalizer	Total	Comments
	Reading	Pumped (gal)	
		Since 1/1998	
11/19/2019	-	-	No water
11/20/2019	-	-	No water
11/21/2019	-	-	No water
11/22/2019	-	-	No water
11/23/2019	-	-	No water
11/24/2019	-	-	No water
11/25/2019	-	-	No water
11/26/2019	-	-	No water
11/27/2019	-	-	No water
11/28/2019	-	-	
11/29/2019	-	-	
11/30/2019	-	-	
12/1/2019	-	-	
12/2/2019	-	-	
12/3/2019	-	-	
12/4/2019	-	-	No flow
12/5/2019	-	-	No flow
12/6/2019	-	-	No flow
12/7/2019	-	-	No flow
12/8/2019	-	-	No flow
12/9/2019	-	-	No flow
12/10/2019	-	-	No flow
12/11/2019	-	-	No flow
12/12/2019	-	-	No flow
12/13/2019	-	-	No flow
12/14/2019	-	-	No flow
12/15/2019	-	-	No flow
12/16/2019	-	-	No flow
12/17/2019	-	-	No flow
12/18/2019	-	-	No flow
12/19/2019	-	-	No flow
12/20/2019	-	-	No flow
12/21/2019	-	-	No flow
12/22/2019	-	-	No flow
12/23/2019	-	-	No flow
12/24/2019	-	-	No flow
12/25/2019	-	-	No flow
12/26/2019	-	-	No flow
12/27/2019	-	-	No flow
12/28/2019	-	-	
12/29/2019	-	-	
12/30/2019	7,577,553	9,881,434	
12/31/2019	7,577,611	9,881,492	

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Gravel Groundwater Extraction

T-8SB Pumping Record

Date	Time	Totalizer Reading	Inst. Pump Rate (gpm)	Avg. Pump Rate (gpm)	Total Pumped (gal) Since 4/18/1992
12/20/2018	0740	140,575,660	9.6	9.68	311,427,103
1/3/2019	0810	140,769,076	9.6	9.58	311,620,519
2/15/2019	0600	141,354,417	9.4	9.47	312,205,860
3/22/2019	0635	141,826,534	9.4	9.36	312,677,977
4/9/2019	0640	142,069,625	9.3	9.38	312,921,068
5/2/2019	1201	142,380,833	9.3	9.31	313,232,276
6/4/2019	0934	142,817,363	9.2	9.21	313,668,806
7/2/2019	0530	143,183,541	9.1	9.14	314,034,984
8/31/2019	1200	143,968,538	9.1	9.04	314,819,981
9/6/2019	0531	144,046,964	9.1	9.51	314,898,407
10/9/2019	0525	144,478,454	9.1	9.08	315,329,897
11/8/2019	0735	144,871,654	9.0	9.07	315,723,097
12/24/2019	0517	145,466,971	8.9	9.01	316,318,414
1/7/2020	0530	145,646,691	8.9	8.91	316,498,134

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

T-49-RA Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0926	1,247,590	2,620,940
1/3/2019	0915	1,250,510	2,623,860
2/15/2019	0934	1,268,290	2,641,640
3/22/2019	0822	1,278,320	2,651,670
4/9/2019	0823	1,282,600	2,655,950
5/2/2019	1105	1,282,970	2,656,320
6/4/2019	0840	1,283,000	2,656,350
7/2/2019	0640	1,283,000	2,656,350
9/6/2019	0641	1,283,000	2,656,350
10/9/2019	1032	1,283,000	2,656,350
11/8/2019	0842	1,287,270	2,660,620
12/24/2019	0908	1,309,880	2,683,230
1/7/2020	0654	1,316,150	2,689,500

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

T-87-RA Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0915	264,190	470,240
1/3/2019	0848	265,410	471,460
2/15/2019	0821	268,130	474,180
3/22/2019	0813	270,570	476,620
4/9/2019	0811	271,520	477,570
5/2/2019	1056	273,340	479,390
6/4/2019	0831	275,980	482,030
7/2/2019	0629	277,170	483,220
9/6/2019	0631	279,520	485,570
10/9/2019	1025	280,290	486,340
11/8/2019	0833	281,710	487,760
12/24/2019	0900	284,830	490,880
1/7/2020	0716	285,860	491,910

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

T-101-RA Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0956	15,541,727	68,629,920
1/3/2019	0939	15,659,617	68,747,810
2/15/2019	0915	16,030,784	69,118,977
3/22/2019	0915	16,363,546	69,451,739
4/9/2019	1000	16,533,031	69,621,224
5/2/2019	1144	16,749,043	69,837,236
6/4/2019	0917	17,100,112	70,188,305
7/2/2019	0740	17,377,761	70,465,954
9/6/2019	0731	17,964,904	71,053,097
10/9/2019	1121	17,969,880	71,058,073
11/8/2019	0941	17,987,671	71,075,864
12/24/2019	0546	18,422,775	71,510,968
1/7/2020	0609	18,553,008	71,641,201

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

T-206-RA Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0935	601,952	1,086,595
1/3/2019	0921	602,580	1,087,223
2/15/2019	0833	604,511	1,089,154
3/22/2019	0849	606,067	1,090,710
4/9/2019	0845	606,851	1,091,494
5/2/2019	1120	607,896	1,092,539
6/4/2019	0848	609,387	1,094,030
7/2/2019	0704	610,574	1,095,217
9/6/2019	0708	612,012	1,096,655
10/9/2019	1043	612,014	1,096,657
11/8/2019	0905	612,015	1,096,658
12/24/2019	0609	612,026	1,096,669
1/7/2020	0638	612,026	1,096,669

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Gravel Groundwater Extraction

T-315S Pumping Record

Date	Time	Totalizer Reading	Inst. Pump Rate (gpm)	Avg. Pump Rate (gpm)	Total Pumped (gal) Since 4/18/1992
12/20/2018	0800	142,427,959	14.8	14.82	240,627,900
1/3/2019	0826	142,726,078	14.8	14.79	240,926,019
2/15/2019	0622	143,635,835	14.7	14.69	241,835,776
3/22/2019	0941	144,375,715	14.7	14.68	242,575,656
4/9/2019	0700	144,751,000	14.7	14.48	242,950,941
5/2/2019	1225	145,134,472	0.0	11.58	243,334,413
6/4/2019	1000	145,619,907	14.7	10.22	243,819,848
7/2/2019	0550	145,965,900	0.0	8.58	244,165,841
8/31/2019	1200	146,758,188	NA	9.17	244,958,129
9/6/2019	0549	146,889,314	16.3	15.18	245,089,255
10/9/2019	0541	147,654,972	16.0	16.11	245,854,913
11/8/2019	0753	148,353,171	16.1	16.16	246,553,112
12/24/2019	0531	149,417,853	16.2	16.07	247,617,794
1/7/2020	0543	149,743,652	16.2	16.16	247,943,593

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

405-R Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0947	2,618,358	11,838,362
1/3/2019	0933	2,634,383	11,854,387
2/15/2019	0852	2,682,095	11,902,099
3/22/2019	0904	2,720,661	11,940,665
4/9/2019	0920	2,740,040	11,960,044
5/2/2019	1135	2,764,949	11,984,953
6/4/2019	0907	2,798,658	12,018,662
7/2/2019	0721	2,827,575	12,047,579
9/6/2019	0722	2,894,665	12,114,669
10/9/2019	1104	2,930,251	12,150,255
11/8/2019	0927	2,962,445	12,182,449
12/24/2019	0556	3,010,847	12,230,851
1/7/2020	0624	3,025,293	12,245,297

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

413-R Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0941	2,807,611	6,903,327
1/3/2019	0927	2,815,107	6,910,823
2/15/2019	0843	2,835,483	6,931,199
3/22/2019	0853	2,855,630	6,951,346
4/9/2019	0852	2,864,753	6,960,469
5/2/2019	1127	2,876,098	6,971,814
6/4/2019	0857	2,893,520	6,989,236
7/2/2019	0710	2,908,308	7,004,024
9/6/2019	0716	2,944,359	7,040,075
10/9/2019	1052	2,968,660	7,064,376
11/8/2019	0913	2,985,642	7,081,358
12/24/2019	0602	3,002,379	7,098,095
1/7/2020	0632	3,007,094	7,102,810

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

416-R Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	1002	9,752,370	9,755,070
1/3/2019	0945	9,763,990	9,766,690
2/15/2019	0922	9,789,580	9,792,280
3/22/2019	0921	9,798,640	9,801,340
4/9/2019	1006	9,800,330	9,803,030
5/2/2019	1153	9,803,790	9,806,490
6/4/2019	0922	9,804,430	9,807,130
7/2/2019	0747	9,804,460	9,807,160
9/6/2019	0742	9,805,460	9,808,160
10/9/2019	1127	9,882,890	9,885,590
11/8/2019	0950	9,966,210	9,968,910
12/24/2019	0550	9,977,580	9,980,280
1/7/2020	0614	9,981,050	9,983,750

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

423-R Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0805	5,387,160	5,532,462
1/3/2019	0903	5,394,210	5,539,512
2/15/2019	0802	5,414,790	5,560,092
3/22/2019	0752	5,431,410	5,576,712
4/9/2019	0743	5,439,620	5,584,922
5/2/2019	1025	5,450,350	5,595,652
6/4/2019	0811	5,466,280	5,611,582
7/2/2019	0606	5,479,660	5,624,962
9/6/2019	0604	5,511,180	5,656,482
10/9/2019	1000	5,527,100	5,672,402
11/8/2019	0807	5,541,340	5,686,642
12/24/2019	0840	5,562,150	5,707,452
1/7/2020	0735	5,568,320	5,713,622

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

425-R Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0905	1,986,700	1,986,700
1/3/2019	0853	1,990,700	1,990,700
2/15/2019	0807	2,003,470	2,003,470
3/22/2019	0802	2,013,220	2,013,220
4/9/2019	0753	2,017,950	2,017,950
5/2/2019	1043	2,023,020	2,023,020
6/4/2019	0816	2,031,710	2,031,710
7/2/2019	0611	2,038,200	2,038,200
9/6/2019	0609	2,053,890	2,053,890
10/9/2019	1006	2,062,920	2,062,920
11/8/2019	0813	2,070,150	2,070,150
12/24/2019	0846	2,080,200	2,080,200
1/7/2020	0726	2,083,120	2,083,120

IBM - Hudson Valley
Poughkeepsie, Main Site
Site Boundary Plume Control /
Corrective Measures Implementation

427-R Pumping Record

Date	Time	Totalizer Reading	Cumulative Discharge (gal) Since 10/2000
12/20/2018	0907	1,215,090	1,215,090
1/3/2019	0845	1,216,230	1,216,230
2/15/2019	0812	1,222,250	1,222,250
3/22/2019	0807	1,227,100	1,227,100
4/9/2019	0801	1,229,490	1,229,490
5/2/2019	1049	1,232,680	1,232,680
6/4/2019	0822	1,237,220	1,237,220
7/2/2019	0616	1,238,410	1,238,410
9/6/2019	0618	1,239,880	1,239,880
10/9/2019	1017	1,240,450	1,240,450
11/8/2019	0823	1,242,170	1,242,170
12/24/2019	0853	1,242,230	1,242,230
1/7/2020	0709	1,242,230	1,242,230

B-3: Groundwater Extraction Well Monitoring Data Report

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		405-R	405-R	405-R	405-R	413-R	413-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-11	420152074-11	420157120-10	420161903-10	420148330-10	420152074-10
Sample Comment Codes							
Parameter	**Units**						
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
PCB 1016	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
PCB 1221	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
PCB 1232	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
PCB 1242	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
PCB 1248	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
PCB 1254	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
PCB 1260	ug/l	ND@0.0095	ND@0.0095	ND@0.0095	ND@0.0095	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	ND@0.060	ND@0.060	ND@0.060	ND@0.060	NA	NA
ARSENIC, DISSOLVED	mg/l	ND@0.010	ND@0.010	ND@0.010	ND@0.010	NA	NA
BERYLLIUM, DISSOLVED	mg/l	ND@0.0050	ND@0.0050	ND@0.0050	ND@0.0050	NA	NA
CADMIUM, DISSOLVED	mg/l	ND@0.0050	ND@0.0050	ND@0.0050	ND@0.0050	NA	NA
CHROMIUM, DISSOLVED	mg/l	ND@0.0070	ND@0.0070	ND@0.0070	ND@0.0070	NA	NA
COPPER, DISSOLVED	mg/l	ND@0.025	ND@0.025	ND@0.025	ND@0.025	NA	NA
LEAD, DISSOLVED	mg/l	ND@0.0050	0.0057	0.0090	ND@0.0050	NA	NA
MERCURY, DISSOLVED	mg/l	ND@0.00020	ND@0.00020	ND@0.00020	ND@0.00020	NA	NA
NICKEL, DISSOLVED	mg/l	ND@0.040	ND@0.040	0.110	ND@0.040	NA	NA
SELENIUM, DISSOLVED	mg/l	ND@0.010	ND@0.010	ND@0.010	ND@0.010	NA	NA
SILVER, DISSOLVED	mg/l	ND@0.010	ND@0.010	ND@0.010	ND@0.010	NA	NA
THALLIUM, DISSOLVED	mg/l	ND@0.010	ND@0.010	ND@0.010	ND@0.010	NA	NA
ZINC, DISSOLVED	mg/l	0.023	ND@0.020	0.470	ND@0.020	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		405-R	405-R	405-R	405-R	413-R	413-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-11	420152074-11	420157120-10	420161903-10	420148330-10	420152074-10
Sample Comment Codes							
Parameter	**Units**						
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	58 D	72 D	53 D	85 D	150 D	130 D
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	420 D	480 D	440 D	530 D	220 D	250 D
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	27	29	29	40	200 D	140 D
1,1-DICHLOROETHYLENE	ug/l	11	8.8	10	17	10	11
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	29	22 JD	27	19 JD	52 D	52 D
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	130 D	130 D	110 D	130 D	74 D	66 D
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	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	NA	NA
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	0.61 J	0.73 J
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	0.52 J
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	0.75 J
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	1.7	2.0

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		405-R	405-R	405-R	405-R	413-R	413-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-11	420152074-11	420157120-10	420161903-10	420148330-10	420152074-10
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA
METHYLENE CHLORIDE	ug/l	1.2	ND@1	ND@1	1.0	ND@1	0.79 J
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	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	150 D	180 D	90 D	300 D	22	27
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	14	14	14	12	4.0	9.3
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		413-R	413-R	416-R	416-R	416-R	416-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-9	420161903-9	420148330-13	420152074-13	420157120-12	420161903-11
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	0.64 J	0.51 J	1.1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	0.27 J	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	2.4	1.9	4.0	0.52 J
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		413-R	413-R	416-R	416-R	416-R	416-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-9	420161903-9	420148330-13	420152074-13	420157120-12	420161903-11
Sample Comment Codes							
Parameter	**Units**						
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	120 D	360 D	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	240 D	310 D	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	130 D	250 D	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	14	25	ND@1	0.31 J	ND@1	0.37 J
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	44 JD	57 D	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	0.48 J	0.58 J	ND@1	0.56 J
1,2-DICHLOROETHYLENE, TOTAL	ug/l	64 D	65 D	18	28	0.81 J	47 D
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	0.62 J	0.73 J	ND@1	0.67 J
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	0.48 J	ND@1	0.53 J	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	0.59 J	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	19	10	23	4.8
CHLORODIBROMOMETHANE	ug/l	ND@1	0.23 J	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	0.37 J	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	3.6	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		413-R	413-R	416-R	416-R	416-R	416-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-9	420161903-9	420148330-13	420152074-13	420157120-12	420161903-11
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	NA	NA	ND@1	ND@1	ND@1	ND@1
METHYLENE CHLORIDE	ug/l	0.67 J	1.2	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	NA	NA	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	22	20	2.0	1.6	ND@1	2.0
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	8.7	8.1	3.9	10	0.20 J	17
XYLENE, TOTAL	ug/l	NA	NA	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		423-R	423-R	423-R	423-R	425-R	425-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-4	420152074-4	420157120-4	420161903-7	420148330-5	420152074-5
Sample Comment Codes							
Parameter	**Units**						
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		423-R	423-R	423-R	423-R	425-R	425-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-4	420152074-4	420157120-4	420161903-7	420148330-5	420152074-5
Sample Comment Codes							
Parameter	**Units**						
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	1.0	1.0
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	3.7	3.8	3.8	3.4	230 D	190 D
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	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
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

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		423-R	423-R	423-R	423-R	425-R	425-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-4	420152074-4	420157120-4	420161903-7	420148330-5	420152074-5
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
DICHLORODIFLUOROMETHANE	ug/l	1.1	1.2	0.88 J	0.87 J	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	1.7	2.1	1.3	1.2	0.61 J	0.42 J
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	4.4	4.9	5.1	4.3	220 D	240 D
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		425-R	425-R	427-R	427-R	427-R	427-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	08/30/2019	10/15/2019
Laboratory Sample I.D.		420157120-5	420161903-6	420148330-6	420152074-6	420159521-2	420161903-4
Sample Comment Codes							
Parameter	**Units**						
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		425-R	425-R	427-R	427-R	427-R	427-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	08/30/2019	10/15/2019
Laboratory Sample I.D.		420157120-5	420161903-6	420148330-6	420152074-6	420159521-2	420161903-4
Sample Comment Codes							
Parameter	**Units**						
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	77 D	74 D	29	31 D
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	0.59 J	ND@1	0.41 J	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	0.28 J	40 D	39 D	36 D	26 D
1,1-DICHLOROETHYLENE	ug/l	0.43 J	0.62 J	1.5	1.3	3.0	3.1
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	0.42 J	ND@1	0.37 J	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	180 D	160 D	3.2	2.1	2.9	2.5
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	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
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	0.98 J	ND@1	1.2	0.51 J
CHLOROFORM	ug/l	ND@1	ND@1	0.37 J	0.38 J	0.37 J	0.29 J
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

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		425-R	425-R	427-R	427-R	427-R	427-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	08/30/2019	10/15/2019
Laboratory Sample I.D.		420157120-5	420161903-6	420148330-6	420152074-6	420159521-2	420161903-4
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	0.75 J	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	0.71 J	0.92 J	1.6	2.3	1.7	2.0
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	200 D	190 D	4.4	1.9	5.9	0.88 J
XYLENE, TOTAL	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-008-SB	T-008-SB	T-008-SB	T-008-SB	T-049-R	T-049-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-2	420152074-2	420157120-2	420161903-2	420148330-8	420152074-8
Sample Comment Codes						A	A
Parameter	**Units**						
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-008-SB	T-008-SB	T-008-SB	T-008-SB	T-049-R	T-049-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-2	420152074-2	420157120-2	420161903-2	420148330-8	420152074-8
Sample Comment Codes						A	A
Parameter	**Units**						
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	0.41 J	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	0.28 J
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	1.0	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	4.1	4.5	6.7	6.1	5.2	5.0
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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	8.9	10
CHLOROFORM	ug/l	0.30 J	0.32 J	0.30 J	0.28 J	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

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-008-SB	T-008-SB	T-008-SB	T-008-SB	T-049-R	T-049-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	10/15/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-2	420152074-2	420157120-2	420161903-2	420148330-8	420152074-8
Sample Comment Codes						A	A
Parameter	**Units**						
Volatile Organics							
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	11	12	16	23	ND@1	ND@1
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	76 D	90 D	90 D	100 D	0.48 J	0.64 J
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	15	11
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-049-R	T-049-R	T-087-R	T-087-R	T-087-R	T-087-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	11/08/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-7	420163079-2	420148330-7	420152074-7	420157120-6	420161903-5
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-049-R	T-049-R	T-087-R	T-087-R	T-087-R	T-087-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	11/08/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-7	420163079-2	420148330-7	420152074-7	420157120-6	420161903-5
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
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	3.5	3.2	31 D	17
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	0.40 J	0.28 J	2.7	1.7	10	7.9
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	2.9	2.2
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	1.9	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	5.6	5.1	1.7	1.2	9.7	8.0
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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	5.7	6.3	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	0.20 J	ND@1	0.42 J	0.36 J
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

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-049-R	T-049-R	T-087-R	T-087-R	T-087-R	T-087-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	11/08/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-7	420163079-2	420148330-7	420152074-7	420157120-6	420161903-5
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Volatile Organics							
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	0.47 J	0.41 J	3.8	3.3	11	10
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	22	9.3	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-101-RA	T-101-RA	T-101-RA	T-101-RA	T-206-RA	T-206-RA
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	11/08/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-12	420152074-12	420157120-11	420163079-3	420148330-9	420152074-9
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
1,3-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
1,4-DICHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.060	ND@0.060
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.010	0.013
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.0050	ND@0.0050
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.0050	ND@0.0050
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.0070	ND@0.0070
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.025	ND@0.025
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.0050	0.0054
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.00020	ND@0.00020
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.040	ND@0.040
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.010	ND@0.010
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.010	ND@0.010
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.010	ND@0.010
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	ND@0.020	ND@0.020

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-101-RA	T-101-RA	T-101-RA	T-101-RA	T-206-RA	T-206-RA
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	11/08/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-12	420152074-12	420157120-11	420163079-3	420148330-9	420152074-9
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
1,1,1-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	1700 D	1000 D
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	14000 D	8700 D
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
1,1-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	1100 D	550 D
1,1-DICHLOROETHYLENE	ug/l	0.55 J	0.60 J	0.48 J	0.54 J	52	71
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	710 D	460 JD
1,2-DICHLOROETHANE	ug/l	0.75 J	0.77 J	0.75 J	0.74 J	ND@10	ND@10
1,2-DICHLOROETHYLENE, TOTAL	ug/l	47 D	45 D	46 D	43 D	100	61
1,2-DICHLOROPROPANE	ug/l	0.86 J	1.0	0.55 J	0.51 J	ND@10	ND@10
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	3.4 J	ND@10
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
CHLOROBENZENE	ug/l	0.37 J	0.84 J	0.42 J	0.36 J	ND@10	ND@10
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	13	ND@10
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
CHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	16	9.1 J

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-101-RA	T-101-RA	T-101-RA	T-101-RA	T-206-RA	T-206-RA
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/16/2019	04/09/2019	07/16/2019	11/08/2019	01/16/2019	04/09/2019
Laboratory Sample I.D.		420148330-12	420152074-12	420157120-11	420163079-3	420148330-9	420152074-9
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	1300 D	1800 D
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
TRICHLOROETHYLENE	ug/l	2.8	2.6	1.7	1.5	19	17
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@10	ND@10
VINYL CHLORIDE	ug/l	13	15	15	9.3	12	31
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-206-RA	T-206-RA	T-315-S	T-315-S	T-315-S	T-315-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-8	420161903-8	420148330-3	420152074-3	420157120-3	420161903-3
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@10	0.25 J	ND@1	ND@1	ND@1	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	ND@0.060	ND@0.060	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	ND@0.010	ND@0.010	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	ND@0.0050	ND@0.0050	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	ND@0.0050	ND@0.0050	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	ND@0.0070	ND@0.0070	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	ND@0.025	ND@0.025	NA	NA	NA	NA
LEAD, DISSOLVED	mg/l	0.0072	ND@0.0050	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	ND@0.00020	ND@0.00020	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	ND@0.040	ND@0.040	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	ND@0.010	ND@0.010	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	ND@0.010	ND@0.010	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	ND@0.010	ND@0.010	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	ND@0.020	ND@0.020	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-206-RA	T-206-RA	T-315-S	T-315-S	T-315-S	T-315-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-8	420161903-8	420148330-3	420152074-3	420157120-3	420161903-3
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,1-TRICHLOROETHANE	ug/l	32	44 D	0.38 J	0.48 J	ND@1	0.49 J
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	210	53 D	ND@1	ND@1	ND@1	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	19	32 D	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	10	7.3	ND@1	ND@1	ND@1	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	12	13	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHANE	ug/l	ND@10	0.56 J	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	70	48 D	4.7	4.9	6.6	5.3
1,2-DICHLOROPROPANE	ug/l	ND@10	0.93 J	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
BROMOBENZENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@10	3.7	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@10	ND@1	0.48 J	0.48 J	0.42 J	0.39 J
CHLOROMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
DIBROMOMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-206-RA	T-206-RA	T-315-S	T-315-S	T-315-S	T-315-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/16/2019	10/15/2019	01/16/2019	04/09/2019	07/16/2019	10/15/2019
Laboratory Sample I.D.		420157120-8	420161903-8	420148330-3	420152074-3	420157120-3	420161903-3
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
DICHLORODIFLUOROMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	21	0.46 J	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	43	10	14	16	20	17
TRICHLOROFLUOROMETHANE	ug/l	ND@10	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	14	19	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Extraction Well Data Report
January 1, 2019 - December 31, 2019

Explanation of Reporting Conventions and Key to Comment Codes

Reporting Conventions

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

Code	Explanation
D	Compound identified at a secondary dilution factor (Organics)
J	Estimated value - compound meets identification criteria, but result is less than the reporting limit

B-4: SBPC Combined Influent Monitoring Data Report

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		01/02/2019	01/02/2019	02/06/2019	02/06/2019	03/06/2019	03/06/2019
Laboratory Sample I.D.		420147571-1	420147571-1	420149011-1	420149011-1	420150388-1	420150388-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.2	NA	7.0	NA	7.9	NA
TEMPERATURE	C	13.2	NA	12.3	NA	11.4	NA
TOTAL DISSOLVED SOLIDS	mg/l	1200	NA	1400	NA	1800	NA
TOTAL SUSPENDED SOLIDS	mg/l	3.6	NA	ND@1	NA	1.2	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,3-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,4-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	1.1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Petroleum Products							
OIL & GREASE	ug/l	ND@5000	NA	ND@5000	NA	ND@5000	NA
Volatile Organics							
1,1,1-TRICHLOROETHANE	ug/l	2.6	NA	14	NA	7.5	NA
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	13	NA	150	NA	42	NA
1,1,2-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHANE	ug/l	ND@1	NA	12	NA	9.3	NA
1,1-DICHLOROETHYLENE	ug/l	1.1	NA	3.1	NA	1.9	NA
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	ND@1	NA	10	NA	8.3	NA
1,2-DICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROETHYLENE, TOTAL	ug/l	58	NA	78	NA	57	NA
1,2-DICHLOROPROPANE	ug/l	ND@1	NA	1.1	NA	ND@1	NA
BENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		01/02/2019	01/02/2019	02/06/2019	02/06/2019	03/06/2019	03/06/2019
Laboratory Sample I.D.		420147571-1	420147571-1	420149011-1	420149011-1	420150388-1	420150388-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
BROMOFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON TETRACHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROBENZENE	ug/l	2.2	3.4	ND@1	ND@1	6.1	7.8
CHLORODIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DICHLORODIFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ETHYLBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TETRACHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TOLUENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRICHLOROETHYLENE	ug/l	6.5	NA	28	NA	4.4	NA
TRICHLOROFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
VINYL CHLORIDE	ug/l	18	NA	22	NA	11	NA
XYLENE, TOTAL	ug/l	NA	ND@1	NA	ND@1	NA	ND@1

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		04/03/2019	04/03/2019	05/01/2019	05/01/2019	06/05/2019	06/05/2019
Laboratory Sample I.D.		420151703-1	420151703-1	420153024-1	420153024-1	420154676-1	420154676-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.40	NA	7.7	NA	7.5	NA
TEMPERATURE	C	13.2	NA	14.2	NA	15.2	NA
TOTAL DISSOLVED SOLIDS	mg/l	1900	NA	1700	NA	1700	NA
TOTAL SUSPENDED SOLIDS	mg/l	1.0	NA	1.1	NA	4.5	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,3-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,4-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Petroleum Products							
OIL & GREASE	ug/l	ND@5200	NA	ND@5100	NA	ND@5100	NA
Volatile Organics							
1,1,1-TRICHLOROETHANE	ug/l	15	NA	12	NA	9.0	NA
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	180	NA	100	NA	26	NA
1,1,2-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHANE	ug/l	15	NA	12	NA	7.4	NA
1,1-DICHLOROETHYLENE	ug/l	3.4	NA	4.6	NA	1.8	NA
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	10	NA	11	NA	3.3	NA
1,2-DICHLOROETHANE	ug/l	1.5	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROETHYLENE, TOTAL	ug/l	91	NA	73	NA	63	NA
1,2-DICHLOROPROPANE	ug/l	1.8	NA	1.2	NA	ND@1	NA
BENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		04/03/2019	04/03/2019	05/01/2019	05/01/2019	06/05/2019	06/05/2019
Laboratory Sample I.D.		420151703-1	420151703-1	420153024-1	420153024-1	420154676-1	420154676-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
BROMOFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON TETRACHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROBENZENE	ug/l	ND@1	1.1	ND@1	1.5	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROFORM	ug/l	ND@1	NA	ND@1	NA	1.3	NA
CHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DICHLORODIFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ETHYLBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	NA	1.0	NA	ND@1	NA
TETRACHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TOLUENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRICHLOROETHYLENE	ug/l	32	NA	26	NA	9.3	NA
TRICHLOROFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
VINYL CHLORIDE	ug/l	17	NA	20	NA	28	NA
XYLENE, TOTAL	ug/l	NA	ND@1	NA	ND@1	NA	ND@1

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		07/03/2019	07/03/2019	08/07/2019	08/07/2019	09/04/2019	09/04/2019
Laboratory Sample I.D.		420156308-1	420156308-1	420158155-1	420158155-1	420159626-1	420159626-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.1	NA	8.1	NA	7.6	NA
TEMPERATURE	C	16.4	NA	19.2	NA	17.5	NA
TOTAL DISSOLVED SOLIDS	mg/l	2100	NA	1300	NA	1900	NA
TOTAL SUSPENDED SOLIDS	mg/l	3.7	NA	4.0	NA	4.8	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,3-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,4-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Petroleum Products							
OIL & GREASE	ug/l	ND@5000	NA	ND@5000	NA	ND@5000	NA
Volatile Organics							
1,1,1-TRICHLOROETHANE	ug/l	2.7	NA	28	NA	6.4	NA
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	17	NA	230	NA	16	NA
1,1,2-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHANE	ug/l	2.6	NA	17	NA	4.0	NA
1,1-DICHLOROETHYLENE	ug/l	1.4	NA	6.6	NA	1.7	NA
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	2.8	NA	17	NA	2.9	NA
1,2-DICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROETHYLENE, TOTAL	ug/l	65	NA	110	NA	69	NA
1,2-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		07/03/2019	07/03/2019	08/07/2019	08/07/2019	09/04/2019	09/04/2019
Laboratory Sample I.D.		420156308-1	420156308-1	420158155-1	420158155-1	420159626-1	420159626-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
BROMOFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON TETRACHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROBENZENE	ug/l	ND@1	ND@1	1.9	2.3	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DICHLORODIFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ETHYLBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
METHYLENE CHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TETRACHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TOLUENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRICHLOROETHYLENE	ug/l	2.8	NA	120	NA	2.9	NA
TRICHLOROFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
VINYL CHLORIDE	ug/l	13	NA	12	NA	15	NA
XYLENE, TOTAL	ug/l	NA	ND@1	NA	ND@1	NA	ND@1

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		10/02/2019	10/02/2019	11/06/2019	11/06/2019	12/04/2019	12/04/2019
Laboratory Sample I.D.		420161207-1	420161207-1	420162839-1	420162839-1	420164068-1	420164068-1
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.04	NA	7.0	NA	7.1	NA
TEMPERATURE	C	18.8	NA	14.3	NA	13.8	NA
TOTAL DISSOLVED SOLIDS	mg/l	1700	NA	1700	NA	1300	NA
TOTAL SUSPENDED SOLIDS	mg/l	2.2	NA	2.6	NA	3.4	NA
Base/Neutral Extractables							
1,2-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,3-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
1,4-DICHLOROBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
2-CHLOROETHYLVINYL ETHER	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Petroleum Products							
OIL & GREASE	ug/l	ND@5000	NA	ND@5000	NA	ND@5200	NA
Volatile Organics							
1,1,1-TRICHLOROETHANE	ug/l	92	NA	9.4	NA	27	NA
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	510	NA	23	NA	52	NA
1,1,2-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHANE	ug/l	50	NA	6.4	NA	21	NA
1,1-DICHLOROETHYLENE	ug/l	13	NA	1.3	NA	4.3	NA
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	45	NA	2.6	NA	11	NA
1,2-DICHLOROETHANE	ug/l	2.3	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROETHYLENE, TOTAL	ug/l	120	NA	55	NA	63	NA
1,2-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	1.9	NA
BENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Sample Location		CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL	CMI INFL
Sample Description		CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT	CMI INFLUENT
Sample Date		10/02/2019	10/02/2019	11/06/2019	11/06/2019	12/04/2019	12/04/2019
Laboratory Sample I.D.		420161207-1	420161207-1	420162839-1	420162839-1	420164068-1	420164068-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
BROMOFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON TETRACHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROBENZENE	ug/l	1.3	2.5	3.2	3.7	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DICHLORODIFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ETHYLBENZENE	ug/l	NA	ND@1	NA	ND@1	NA	ND@1
METHYLENE CHLORIDE	ug/l	2.3	NA	ND@1	NA	ND@1	NA
TETRACHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TOLUENE	ug/l	NA	ND@1	NA	3.2	NA	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRICHLOROETHYLENE	ug/l	130	NA	7.0	NA	35	NA
TRICHLOROFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
VINYL CHLORIDE	ug/l	22	NA	12	NA	8.3	NA
XYLENE, TOTAL	ug/l	NA	ND@1	NA	ND@1	NA	ND@1

IBM Poughkeepsie Main Plant Site
CMI Influent Data Summary
January 1, 2019 - December 31, 2019

Explanation of Reporting Conventions and Key to Comment Codes

Reporting Conventions

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

APPENDIX C:

GROUNDWATER CHEMISTRY DATA, LABORATORY CASE NARRATIVES AND TIME VERSUS CONCENTRATION GRAPHS

C-1: MOSF Monitoring Data Report

C-2: Groundwater Monitoring Plan (Sampling and Analysis Plan)

C-3: Groundwater Monitoring Plan Monitoring Data Report

C-4: Laboratory Case Narratives for each of Sample Delivery Groups (SDGs)

C-5: Field QA/QC Results

C-6: Time versus Concentration Graphs

C-1: MOSF Monitoring Data Report

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-001	BK-001	BK-002	BK-002	BK-003	BK-003
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DUPLICATE	DUPLICATE
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-5	420152923-5	420152923-4	420152923-4	420152923-3	420152923-3
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	6.97	NA	7.13	NA	7.04	NA
SPECIFIC CONDUCTANCE	umhos/cm	992	NA	1764	NA	1276	NA
TEMPERATURE	C	14.0	NA	14.1	NA	14.0	NA
Alcohols, Acetates, Aldehydes, Ketones							
METHYL BUTYL KETONE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
METHYL ETHYL KETONE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
METHYL ISOBUTYL KETONE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
TRANS-1,4-DICHLORO-2-BUTENE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
VINYLACETATE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Base/Neutral Extractables							
1,2,3-TRICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2,4-TRICHLOROBENZENE	ug/l	ND@1	ND@9.5	ND@1	ND@9.5	ND@1	ND@9.5
1,2,4-TRIMETHYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DIBROMO-3-CHLOROPROPANE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
1,2-DICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DIPHENYLHYDRAZINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
1,3,5-TRIMETHYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,3-DICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,4-DICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
2,4-DINITROTOLUENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2,6-DINITROTOLUENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2-CHLORONAPHTHALENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2-METHYLNAPHTHALENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2-NITROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
3,3'-DICHLOROBENZIDENE	ug/l	NA	ND@48	NA	ND@48	NA	ND@48

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-001	BK-001	BK-002	BK-002	BK-003	BK-003
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DUPLICATE	DUPLICATE
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-5	420152923-5	420152923-4	420152923-4	420152923-3	420152923-3
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
3-NITROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-BROMOPHENYL PHENYL ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-CHLOROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-CHLOROPHENYL PHENYL ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-NITROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ACENAPHTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ACENAPHTHYLENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ANTHRACENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZIDINE	ug/l	NA	ND@48	NA	ND@48	NA	ND@48
BENZO(A)ANTHRACENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(A)PYRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(B)FLUORANTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(GHI)PERYLENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(K)FLUORANTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-CHLOROETHOXY)METHANE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-CHLOROETHYL)ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-CHLOROISOPROPYL)ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BUTYL BENZYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
CHRYSENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIBENZO(A,H)ANTHRACENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIBENZOFURAN	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIETHYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIMETHYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DI-N-BUTYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DI-N-OCTYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
FLUORANTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-001	BK-001	BK-002	BK-002	BK-003	BK-003
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DUPLICATE	DUPLICATE
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-5	420152923-5	420152923-4	420152923-4	420152923-3	420152923-3
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
FLUORENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
HEXACHLOROBENZENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
HEXACHLOROBUTADIENE	ug/l	ND@1	ND@9.5	ND@1	ND@9.5	ND@1	ND@9.5
HEXACHLOROCYCLOPENTADIENE	ug/l	NA	ND@29	NA	ND@29	NA	ND@29
HEXACHLOROETHANE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
INDENO(1,2,3,-C,D)PYRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ISOPHORONE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
NAPHTHALENE	ug/l	ND@5	ND@9.5	ND@5	ND@9.5	ND@5	ND@9.5
NITROBENZENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
N-NITROSODIMETHYLAMINE	ug/l	NA	ND@48	NA	ND@48	NA	ND@48
N-NITROSODI-N-PROPYLAMINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
N-NITROSODIPHENYLAMINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
N-PROPYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
PHENANTHRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
PYRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
STYRENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,1-TRICHLOROETHANE	ug/l	0.44 J	NA	0.26 J	NA	ND@1	NA
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,2-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DIBROMOETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-001	BK-001	BK-002	BK-002	BK-003	BK-003
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DUPLICATE	DUPLICATE
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-5	420152923-5	420152923-4	420152923-4	420152923-3	420152923-3
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,3-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
2,2-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
2-CHLOROTOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
4-CHLOROTOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ACETONE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
ACRYLONITRILE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOCHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMODICHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON DISULFIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON TETRACHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLORODIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROFORM	ug/l	ND@1	NA	0.37 J	NA	ND@1	NA
CHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,2-DICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DICHLORODIFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ETHYL ETHER	ug/l	ND@2	NA	ND@2	NA	ND@2	NA
ETHYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ISOPROPYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-001	BK-001	BK-002	BK-002	BK-003	BK-003
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DUPLICATE	DUPLICATE
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-5	420152923-5	420152923-4	420152923-4	420152923-3	420152923-3
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
M,P-XYLENE	ug/l	ND@2	NA	ND@2	NA	ND@2	NA
METHYL T-BUTYL ETHER	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
METHYLENE CHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
N-BUTYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
O-XYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
P-ISOPROPYLTOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
SEC-BUTYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TERT-BUTYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TETRACHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRANS-1,2-DICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRICHLOROETHYLENE	ug/l	1.0	NA	ND@1	NA	ND@1	NA
TRICHLOROFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
VINYL CHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
XYLENE, TOTAL	ug/l	ND@2	NA	ND@2	NA	ND@2	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-003	BK-003	BK-004	BK-004	BK-005	BK-005
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-2	420152923-2	420152923-7	420152923-7	420152923-6	420152923-6
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.04	NA	6.96	NA	7.18	NA
SPECIFIC CONDUCTANCE	umhos/cm	1276	NA	1064	NA	1788	NA
TEMPERATURE	C	14.0	NA	14.3	NA	14.1	NA
Alcohols, Acetates, Aldehydes, Ketones							
METHYL BUTYL KETONE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
METHYL ETHYL KETONE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
METHYL ISOBUTYL KETONE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
TRANS-1,4-DICHLORO-2-BUTENE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
VINYLACETATE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Base/Neutral Extractables							
1,2,3-TRICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2,4-TRICHLOROBENZENE	ug/l	ND@1	ND@9.5	ND@1	ND@9.5	ND@1	ND@9.5
1,2,4-TRIMETHYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DIBROMO-3-CHLOROPROPANE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
1,2-DICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DIPHENYLHYDRAZINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
1,3,5-TRIMETHYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,3-DICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,4-DICHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
2,4-DINITROTOLUENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2,6-DINITROTOLUENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2-CHLORONAPHTHALENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2-METHYLNAPHTHALENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
2-NITROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
3,3'-DICHLOROBENZIDENE	ug/l	NA	ND@48	NA	ND@48	NA	ND@48

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-003	BK-003	BK-004	BK-004	BK-005	BK-005
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-2	420152923-2	420152923-7	420152923-7	420152923-6	420152923-6
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
3-NITROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-BROMOPHENYL PHENYL ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-CHLOROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-CHLOROPHENYL PHENYL ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
4-NITROANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ACENAPHTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ACENAPHTHYLENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ANILINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ANTHRACENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZIDINE	ug/l	NA	ND@48	NA	ND@48	NA	ND@48
BENZO(A)ANTHRACENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(A)PYRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(B)FLUORANTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(GHI)PERYLENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BENZO(K)FLUORANTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-CHLOROETHOXY)METHANE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-CHLOROETHYL)ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-CHLOROISOPROPYL)ETHER	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
BUTYL BENZYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
CHRYSENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIBENZO(A,H)ANTHRACENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIBENZOFURAN	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIETHYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DIMETHYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DI-N-BUTYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
DI-N-OCTYL PHTHALATE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
FLUORANTHENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-003	BK-003	BK-004	BK-004	BK-005	BK-005
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-2	420152923-2	420152923-7	420152923-7	420152923-6	420152923-6
Sample Comment Codes							
Parameter	**Units**						
Base/Neutral Extractables							
FLUORENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
HEXACHLOROBENZENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
HEXACHLOROBUTADIENE	ug/l	ND@1	ND@9.5	ND@1	ND@9.5	ND@1	ND@9.5
HEXACHLOROCYCLOPENTADIENE	ug/l	NA	ND@29	NA	ND@29	NA	ND@29
HEXACHLOROETHANE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
INDENO(1,2,3,-C,D)PYRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
ISOPHORONE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
NAPHTHALENE	ug/l	ND@5	ND@9.5	ND@5	ND@9.5	ND@5	ND@9.5
NITROBENZENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
N-NITROSODIMETHYLAMINE	ug/l	NA	ND@48	NA	ND@48	NA	ND@48
N-NITROSODI-N-PROPYLAMINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
N-NITROSODIPHENYLAMINE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
N-PROPYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
PHENANTHRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
PYRENE	ug/l	NA	ND@9.5	NA	ND@9.5	NA	ND@9.5
STYRENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
Volatile Organics							
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,1-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	0.81 J	NA
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1,2-TRICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,1-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2,3-TRICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DIBROMOETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-003	BK-003	BK-004	BK-004	BK-005	BK-005
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-2	420152923-2	420152923-7	420152923-7	420152923-6	420152923-6
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,2-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
1,3-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
2,2-DICHLOROPROPANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
2-CHLOROTOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
4-CHLOROTOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ACETONE	ug/l	ND@5	NA	ND@5	NA	ND@5	NA
ACRYLONITRILE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOCHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMODICHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOFORM	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
BROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON DISULFIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CARBON TETRACHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLORODIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CHLOROFORM	ug/l	ND@1	NA	ND@1	NA	0.26 J	NA
CHLOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,2-DICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DIBROMOMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
DICHLORODIFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ETHYL ETHER	ug/l	ND@2	NA	ND@2	NA	ND@2	NA
ETHYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
ISOPROPYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		BK-003	BK-003	BK-004	BK-004	BK-005	BK-005
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019	04/29/2019
Laboratory Sample I.D.		420152923-2	420152923-2	420152923-7	420152923-7	420152923-6	420152923-6
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
M,P-XYLENE	ug/l	ND@2	NA	ND@2	NA	ND@2	NA
METHYL T-BUTYL ETHER	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
METHYLENE CHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
N-BUTYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
O-XYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
P-ISOPROPYLTOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
SEC-BUTYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TERT-BUTYLBENZENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TETRACHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TOLUENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRANS-1,2-DICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
TRICHLOROETHYLENE	ug/l	ND@1	NA	ND@1	NA	1.2	NA
TRICHLOROFLUOROMETHANE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
VINYL CHLORIDE	ug/l	ND@1	NA	ND@1	NA	ND@1	NA
XYLENE, TOTAL	ug/l	ND@2	NA	ND@2	NA	ND@2	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK
Sample Description		4/29/2019
Sample Date		04/29/2019
Laboratory Sample I.D.		420152923-1
Sample Comment Codes		
Parameter	**Units**	
Indicator Parameters		
PH	pH	NA
SPECIFIC CONDUCTANCE	umhos/cm	NA
TEMPERATURE	C	NA
Alcohols, Acetates, Aldehydes, Ketones		
METHYL BUTYL KETONE	ug/l	ND@5
METHYL ETHYL KETONE	ug/l	ND@1
METHYL ISOBUTYL KETONE	ug/l	ND@5
TRANS-1,4-DICHLORO-2-BUTENE	ug/l	ND@5
VINYLACETATE	ug/l	ND@1
Base/Neutral Extractables		
1,2,3-TRICHLOROBENZENE	ug/l	ND@1
1,2,4-TRICHLOROBENZENE	ug/l	ND@1
1,2,4-TRIMETHYLBENZENE	ug/l	ND@1
1,2-DIBROMO-3-CHLOROPROPANE	ug/l	ND@5
1,2-DICHLOROBENZENE	ug/l	ND@1
1,2-DIPHENYLHYDRAZINE	ug/l	NA
1,3,5-TRIMETHYLBENZENE	ug/l	ND@1
1,3-DICHLOROBENZENE	ug/l	ND@1
1,4-DICHLOROBENZENE	ug/l	ND@1
2,4-DINITROTOLUENE	ug/l	NA
2,6-DINITROTOLUENE	ug/l	NA
2-CHLORONAPHTHALENE	ug/l	NA
2-METHYLNAPHTHALENE	ug/l	NA
2-NITROANILINE	ug/l	NA
3,3'-DICHLOROBENZIDENE	ug/l	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK
Sample Description		4/29/2019
Sample Date		04/29/2019
Laboratory Sample I.D.		420152923-1
Sample Comment Codes		
Parameter	**Units**	
Base/Neutral Extractables		
3-NITROANILINE	ug/l	NA
4-BROMOPHENYL PHENYL ETHER	ug/l	NA
4-CHLOROANILINE	ug/l	NA
4-CHLOROPHENYL PHENYL ETHER	ug/l	NA
4-NITROANILINE	ug/l	NA
ACENAPHTHENE	ug/l	NA
ACENAPHTHYLENE	ug/l	NA
ANILINE	ug/l	NA
ANTHRACENE	ug/l	NA
BENZIDINE	ug/l	NA
BENZO(A)ANTHRACENE	ug/l	NA
BENZO(A)PYRENE	ug/l	NA
BENZO(B)FLUORANTHENE	ug/l	NA
BENZO(GHI)PERYLENE	ug/l	NA
BENZO(K)FLUORANTHENE	ug/l	NA
BIS(2-CHLOROETHOXY)METHANE	ug/l	NA
BIS(2-CHLOROETHYL)ETHER	ug/l	NA
BIS(2-CHLOROISOPROPYL)ETHER	ug/l	NA
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	NA
BUTYL BENZYL PHTHALATE	ug/l	NA
CHRYSENE	ug/l	NA
DIBENZO(A,H)ANTHRACENE	ug/l	NA
DIBENZOFURAN	ug/l	NA
DIETHYL PHTHALATE	ug/l	NA
DIMETHYL PHTHALATE	ug/l	NA
DI-N-BUTYL PHTHALATE	ug/l	NA
DI-N-OCTYL PHTHALATE	ug/l	NA
FLUORANTHENE	ug/l	NA

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK
Sample Description		4/29/2019
Sample Date		04/29/2019
Laboratory Sample I.D.		420152923-1
Sample Comment Codes		
Parameter	**Units**	
Base/Neutral Extractables		
FLUORENE	ug/l	NA
HEXACHLOROBENZENE	ug/l	NA
HEXACHLOROBUTADIENE	ug/l	ND@1
HEXACHLOROCYCLOPENTADIENE	ug/l	NA
HEXACHLOROETHANE	ug/l	NA
INDENO(1,2,3,-C,D)PYRENE	ug/l	NA
ISOPHORONE	ug/l	NA
NAPHTHALENE	ug/l	ND@5
NITROBENZENE	ug/l	NA
N-NITROSODIMETHYLAMINE	ug/l	NA
N-NITROSODI-N-PROPYLAMINE	ug/l	NA
N-NITROSODIPHENYLAMINE	ug/l	NA
N-PROPYLBENZENE	ug/l	ND@1
PHENANTHRENE	ug/l	NA
PYRENE	ug/l	NA
STYRENE	ug/l	ND@1
Volatile Organics		
1,1,1,2-TETRACHLOROETHANE	ug/l	ND@1
1,1,1-TRICHLOROETHANE	ug/l	ND@1
1,1,2,2-TETRACHLOROETHANE	ug/l	ND@1
1,1,2-TRICHLOROETHANE	ug/l	ND@1
1,1-DICHLOROETHANE	ug/l	ND@1
1,1-DICHLOROETHYLENE	ug/l	ND@1
1,1-DICHLOROPROPENE	ug/l	ND@1
1,2,3-TRICHLOROPROPANE	ug/l	ND@1
1,2-DIBROMOETHANE	ug/l	ND@1
1,2-DICHLOROETHANE	ug/l	ND@1

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK
Sample Description		4/29/2019
Sample Date		04/29/2019
Laboratory Sample I.D.		420152923-1
Sample Comment Codes		
Parameter	**Units**	
Volatile Organics		
1,2-DICHLOROETHYLENE, TOTAL	ug/l	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1
1,3-DICHLOROPROPANE	ug/l	ND@1
2,2-DICHLOROPROPANE	ug/l	ND@1
2-CHLOROTOLUENE	ug/l	ND@1
4-CHLOROTOLUENE	ug/l	ND@1
ACETONE	ug/l	ND@5
ACRYLONITRILE	ug/l	ND@1
BENZENE	ug/l	ND@1
BROMOBENZENE	ug/l	ND@1
BROMOCHLOROMETHANE	ug/l	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1
BROMOFORM	ug/l	ND@1
BROMOMETHANE	ug/l	ND@1
CARBON DISULFIDE	ug/l	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1
CHLOROBENZENE	ug/l	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1
CHLOROETHANE	ug/l	ND@1
CHLOROFORM	ug/l	ND@1
CHLOROMETHANE	ug/l	ND@1
CIS-1,2-DICHLOROETHYLENE	ug/l	ND@1
CIS-1,3-DICHLOROPROPYLENE	ug/l	ND@1
DIBROMOMETHANE	ug/l	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1
ETHYL ETHER	ug/l	ND@2
ETHYLBENZENE	ug/l	ND@1
ISOPROPYLBENZENE	ug/l	ND@1

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK
Sample Description		4/29/2019
Sample Date		04/29/2019
Laboratory Sample I.D.		420152923-1
Sample Comment Codes		
Parameter	**Units**	
Volatile Organics		
M,P-XYLENE	ug/l	ND@2
METHYL T-BUTYL ETHER	ug/l	ND@1
METHYLENE CHLORIDE	ug/l	ND@1
N-BUTYLBENZENE	ug/l	ND@1
O-XYLENE	ug/l	ND@1
P-ISOPROPYLTOLUENE	ug/l	ND@1
SEC-BUTYLBENZENE	ug/l	ND@1
TERT-BUTYLBENZENE	ug/l	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1
TOLUENE	ug/l	ND@1
TRANS-1,2-DICHLOROETHYLENE	ug/l	ND@1
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1
TRICHLOROETHYLENE	ug/l	ND@1
TRICHLOROFLUOROMETHANE	ug/l	ND@1
VINYL CHLORIDE	ug/l	ND@1
XYLENE, TOTAL	ug/l	ND@2

IBM Poughkeepsie Main Plant Site
MOSF Sampling Data Report

January 1, 2019 - December 31, 2019

Explanation of Reporting Conventions and Key to Comment Codes

Reporting Conventions

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

Code	Explanation
J	Estimated value - compound meets identification criteria, but result is less than the reporting limit

C-2: Groundwater Monitoring Plan (Sampling and Analysis Plan)

Explanation of Abbreviations Used in Following Tables

Abbreviation	Explanation
Field Params	**Field** Parameters
VOCs 8021-Halogenated	SW846 Method 8021 Volatile Organic Compounds **(**Halogenated**)**
VOCs 8021-Aromatics	SW846 Method 8021 Volatile Organic Compounds (Aromatics)
Frequency	Frequency of Sampling per Year (e.g. 4 = quarterly, 2 = semiannually, 1 = annually)
X	Analysis Parameter - sampling frequency is as specified in Freq column
X(#)	Analysis Parameter - annual sampling frequency measured is in parentheses

IBM Poughkeepsie Main Plant Site
Revised Groundwater Monitoring Plan: October 25, 2002

Compliance Monitoring Program

Well #	Field Params	VOCs 8021 Halogenated	VOCs 8021 Aromatics	Priority Pollutant Metals	PCBs	Cn	Frequency	1Q	2Q	3Q	4Q
T-20-SA							4	X	X	X	X
T-20-RA							4	X	X	X	X
T-22-SA				(Cr)			4	X	X	X	X
T-42-RA				(Ni)			4	X	X	X	X
T-83-RA							4	X	X	X	X
T-104-RB							4	X	X	X	X
T-104-RA							4	X	X	X	X
T-203-RA							4	X	X	X	X

IBM Poughkeepsie Main Plant Site
Revised Groundwater Monitoring Plan: October 25, 2002

Corrective Action Monitoring Program

Well #	Field Params	VOCs 8021 Halogenated	VOCs 8021 Aromatics	Priority Pollutant Metals	PCBs	Cyanide	Frequency	1Q	2Q	3Q	4Q
T-15-RA							1		X		
T-34-SA							1		X		
T-41-SA							1		X		
T-43-SB							2		X		X
T-48-R							1		X		
T-57-SA							2		X		X
T-75-SA							1		X		

IBM Poughkeepsie Main Plant Site
Revised Groundwater Monitoring Plan: October 25, 2002

Corrective Action Monitoring Program

Well #	Field Params	VOCs 8021 Halogenated	VOCs 8021 Aromatics	Priority Pollutant Metals	PCBs	Cyanide	Frequency	1Q	2Q	3Q	4Q
T-81-SA							1		X		
T-85-RB							1		X		
T-99-S							1		X		
T-100-RA							1		X		
T-103-R							1		X		
T-108-SDA							1		X		
T-204-R							2		X		X
T-206-S							1		X		
T-208-RA							2		X		X
T-217-SA							1		X		
T-311-S							1		X		
T-312-SA							1		X		
T-314-S							2		X		X
404-R							1		X		
406-RB							1		X		
407-R							1		X		
410-R							4	X	X	X	X
410-M							4	X	X	X	X
412-R							4	X	X	X	X
412-RB							4	X	X	X	X
414-R							4	X	X	X	X

IBM Poughkeepsie Main Plant Site
Revised Groundwater Monitoring Plan: October 25, 2002

Corrective Action Monitoring Program

Well #	Field Params	VOCs 8021 Halogenated	VOCs 8021 Aromatics	Priority Pollutant Metals	PCBs	Cyanide	Frequency	1Q	2Q	3Q	4Q
415-R							2		X		X
417-R							2		X		X
422-R							4	X	X	X	X

IBM Poughkeepsie Main Plant Site
Revised Groundwater Monitoring Plan: October 25, 2002

Groundwater Extraction Program

Well #	Field Params	VOCs 8021 Halogenated	VOCs 8021 Aromatics	Priority Pollutant Metals	PCBs	Cn	Freq	1Q	2Q	3Q	4Q
T-8-SB							4	X	X	X	X
T-49-RA							4	X	X	X	X
T-87-RA							4	X	X	X	X
T-101-RA							4	X	X	X	X
T-206-RA							4	X	X	X	X
T-315-S							4	X	X	X	X
405-R							4	X	X	X	X
413-R							4	X	X	X	X
416-R							4	X	X	X	X
423							4	X	X	X	X
425							4	X	X	X	X
427							4	X	X	X	X

Oil Skim Wells
75-B
T-58-R
T-102-R

Additional Hydraulic Effectiveness Locations		
T-008-S	T-310-C	75-I
T-010-S	T-313-SA	75-K
T-015-SA	T-313-SB	75-L
T-017-SA	T-337-S	75-O
T-031-R	408-S	BK-1
T-032-SA	409-S	BK-2
T-074-SA	411-R	BK-3
T-086-R	75-C	BK-4
T-088-R	75-D	BK-5
T-207-R	75-E	MW-19-S
T-303-SA	75-GA	MW-B11

Chemical Constituents/Monitoring Parameters and Methods

Constituent or Group List	Method[1]
Volatile Organic Compounds (Halogenated and Aromatic)	8010, 8020, 8021
Isopropyl Alcohol	524.2
PCBs / Pesticides	8080
Cyanide	335.2
Ammonia	350.2
Priority Pollutant Metals:	Standard EPA/ SW846 Methods

[1] EPA Method SW-846

C-3: Groundwater Monitoring Plan Monitoring Data Report

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		404-R	406-RB	407-R	410-M	410-M	410-M
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	REPLICATE	GROUNDWATER
Sample Date		04/18/2019	04/23/2019	04/17/2019	01/25/2019	01/25/2019	04/17/2019
Laboratory Sample I.D.		420152548-11	420152652-7	420152548-2	420148603-4	420148603-5	420152548-6
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.20	7.82	7.27	7.11	7.11	7.12
SPECIFIC CONDUCTANCE	umhos/cm	840	1611	1057	747	747	803
TEMPERATURE	C	14.6	14.3	14.7	14.4	14.4	14.8
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		404-R	406-RB	407-R	410-M	410-M	410-M
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	REPLICATE	GROUNDWATER
Sample Date		04/18/2019	04/23/2019	04/17/2019	01/25/2019	01/25/2019	04/17/2019
Laboratory Sample I.D.		420152548-11	420152652-7	420152548-2	420148603-4	420148603-5	420152548-6
Sample Comment Codes							
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	0.67 J	ND@1	ND@1	ND@1	3.2
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	22	ND@1	ND@1	ND@1	21
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	0.46 J	ND@1	130 D	120 D	82 D
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	15	15	12
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	7.5	ND@1	5.0	5.6	16
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	6.3	ND@1	ND@1	69 D	72 D	49 D
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		404-R	406-RB	407-R	410-M	410-M	410-M
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	REPLICATE	GROUNDWATER
Sample Date		04/18/2019	04/23/2019	04/17/2019	01/25/2019	01/25/2019	04/17/2019
Laboratory Sample I.D.		420152548-11	420152652-7	420152548-2	420148603-4	420148603-5	420152548-6
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	10	10	4.8
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	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	0.50 J	ND@1
TETRACHLOROETHYLENE	ug/l	0.71 J	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	130 D	ND@1	ND@1	ND@1	0.34 J	3.8
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	22 D	26 D	20
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		410-M	410-M	410-M	410-R	410-R	410-R
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/23/2019	07/23/2019	10/18/2019	01/25/2019	04/17/2019	07/23/2019
Laboratory Sample I.D.		420157371-3	420157371-4	420162118-6	420148603-3	420152548-5	420157371-2
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.19	7.19	7.05	7.02	7.18	7.13
SPECIFIC CONDUCTANCE	umhos/cm	7.97	7.97	7.83	1018	1029	1020
TEMPERATURE	C	14.9	14.9	14.6	14.3	14.8	14.9
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	ND@0.060	ND@0.060	ND@0.060
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	ND@0.010	ND@0.010	ND@0.010
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	ND@0.0050	ND@0.0050	ND@0.0050
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	ND@0.0050	ND@0.0050	ND@0.0050
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	ND@0.0070	ND@0.0070	ND@0.0070
COPPER, DISSOLVED	mg/l	NA	NA	NA	ND@0.025	ND@0.025	ND@0.025

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		410-M	410-M	410-M	410-R	410-R	410-R
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/23/2019	07/23/2019	10/18/2019	01/25/2019	04/17/2019	07/23/2019
Laboratory Sample I.D.		420157371-3	420157371-4	420162118-6	420148603-3	420152548-5	420157371-2
Sample Comment Codes							
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	ND@0.0050	ND@0.0050	ND@0.0050
MERCURY, DISSOLVED	mg/l	NA	NA	NA	ND@0.00020	ND@0.00020	ND@0.00020
NICKEL, DISSOLVED	mg/l	NA	NA	NA	ND@0.040	ND@0.040	ND@0.040
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	ND@0.010	ND@0.010	ND@0.010
SILVER, DISSOLVED	mg/l	NA	NA	NA	ND@0.010	ND@0.010	ND@0.010
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	ND@0.010	ND@0.010	ND@0.010
ZINC, DISSOLVED	mg/l	NA	NA	NA	ND@0.020	ND@0.020	ND@0.020
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	0.64 J	0.82 J	ND@1	ND@1	0.45 J	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	1.3	0.81 J	0.57 J	1.4	5.4	4.4
1,1,2-TRICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHANE	ug/l	37 D	49 D	4.7	3.5	11	7.9
1,1-DICHLOROETHYLENE	ug/l	2.2	3.9	0.39 J	ND@1	ND@1	0.36 J
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	8.2	7.8	5.5	1.7	15	7.5
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	27	37 D	5.3	0.62 J	0.91 J	0.95 J
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		410-M	410-M	410-M	410-R	410-R	410-R
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/23/2019	07/23/2019	10/18/2019	01/25/2019	04/17/2019	07/23/2019
Laboratory Sample I.D.		420157371-3	420157371-4	420162118-6	420148603-3	420152548-5	420157371-2
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	20	28 D	35 D	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	2.8
ETHYLBENZENE	ug/l	NA	NA	NA	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	NA	NA	NA	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	35 D	41 D	32 D	ND@1	0.92 J	0.51 J
XYLENE, TOTAL	ug/l	NA	NA	NA	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		410-R	412-R	412-R	412-R	412-R	412-RB
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/18/2019	01/24/2019	04/24/2019	07/19/2019	10/22/2019	01/24/2019
Laboratory Sample I.D.		420162118-5	420148547-8	420152756-5	420157254-9	420162278-3	420148547-9
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.10	7.38	7.31	7.25	7.16	7.36
SPECIFIC CONDUCTANCE	umhos/cm	1033	2009	1992	1883	1892	1992
TEMPERATURE	C	14.7	14.3	14.5	14.7	14.5	14.4
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	ND@0.060	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	ND@0.010	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	ND@0.0050	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	ND@0.0050	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	ND@0.0070	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	ND@0.025	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		410-R	412-R	412-R	412-R	412-R	412-RB
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/18/2019	01/24/2019	04/24/2019	07/19/2019	10/22/2019	01/24/2019
Laboratory Sample I.D.		420162118-5	420148547-8	420152756-5	420157254-9	420162278-3	420148547-9
Sample Comment Codes							
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	ND@0.0050	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	ND@0.00020	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	ND@0.040	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	ND@0.010	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	ND@0.010	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	ND@0.010	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	ND@0.020	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	4.4	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	8.1	ND@1	ND@1	ND@1	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	0.41 J	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	7.9	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	0.74 J	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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		410-R	412-R	412-R	412-R	412-R	412-RB
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/18/2019	01/24/2019	04/24/2019	07/19/2019	10/22/2019	01/24/2019
Laboratory Sample I.D.		420162118-5	420148547-8	420152756-5	420157254-9	420162278-3	420148547-9
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	0.36 J	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	0.37 J	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	ND@1	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		412-RB	412-RB	412-RB	414-R	414-R	414-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/24/2019	07/19/2019	10/22/2019	01/17/2019	04/19/2019	07/18/2019
Laboratory Sample I.D.		420152756-7	420157254-10	420162278-2	420148330-14	420152603-6	420157254-4
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.31	7.22	7.20	6.96	7.07	7.09
SPECIFIC CONDUCTANCE	umhos/cm	2001	1983	1992	937	951	968
TEMPERATURE	C	14.6	14.8	14.7	14.5	14.6	14.8
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		412-RB	412-RB	412-RB	414-R	414-R	414-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/24/2019	07/19/2019	10/22/2019	01/17/2019	04/19/2019	07/18/2019
Laboratory Sample I.D.		420152756-7	420157254-10	420162278-2	420148330-14	420152603-6	420157254-4
Sample Comment Codes							
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	1.1	0.75 J	0.81 J
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	0.40 J	ND@1	0.64 J	ND@1	1.2
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	1.4	ND@1	3.7
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	0.36 J
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	0.51 J	ND@1	0.92 J	ND@1	2.6
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	1.4	ND@1	4.4
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		412-RB	412-RB	412-RB	414-R	414-R	414-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/24/2019	07/19/2019	10/22/2019	01/17/2019	04/19/2019	07/18/2019
Laboratory Sample I.D.		420152756-7	420157254-10	420162278-2	420148330-14	420152603-6	420157254-4
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	0.20 J	ND@1	0.23 J
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	3.9
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
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	3.9	0.53 J	6.8
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	1.3
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		414-R	415-R	415-R	417-R	417-R	422-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/17/2019	04/12/2019	10/16/2019	04/11/2019	10/17/2019	01/17/2019
Laboratory Sample I.D.		420162042-10	420152303-3	420162042-6	420152234-15	420162042-11	420148330-16
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.06	7.03	7.24	NA	NA	6.80
SPECIFIC CONDUCTANCE	umhos/cm	992	990	827	NA	NA	1172
TEMPERATURE	C	14.5	13.7	15.1	NA	NA	15.1
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		414-R	415-R	415-R	417-R	417-R	422-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/17/2019	04/12/2019	10/16/2019	04/11/2019	10/17/2019	01/17/2019
Laboratory Sample I.D.		420162042-10	420152303-3	420162042-6	420152234-15	420162042-11	420148330-16
Sample Comment Codes							
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	0.76 J	ND@1	ND@1	ND@1	ND@1	0.40 J
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	0.37 J
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	0.63 J	ND@1	2.0	0.53 J	3.5
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		414-R	415-R	415-R	417-R	417-R	422-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/17/2019	04/12/2019	10/16/2019	04/11/2019	10/17/2019	01/17/2019
Laboratory Sample I.D.		420162042-10	420152303-3	420162042-6	420152234-15	420162042-11	420148330-16
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	0.52 J
CHLOROFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	0.68 J
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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	0.65 J	ND@1	ND@1	0.62 J	ND@1	29
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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		422-R	422-R	422-R	422-R	T-015-R	T-020-R
Sample Description		REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/17/2019	04/11/2019	07/18/2019	10/16/2019	04/10/2019	01/23/2019
Laboratory Sample I.D.		420148330-17	420152234-14	420157254-5	420162042-9	420152234-5	420148547-4
Sample Comment Codes						A	A
Parameter	**Units**						
Indicator Parameters							
PH	pH	6.80	6.92	7.16	7.16	6.92	7.17
SPECIFIC CONDUCTANCE	umhos/cm	1172	1130	1414	1414	972	988
TEMPERATURE	C	15.1	15.9	14.7	14.5	14.3	14.5
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		422-R	422-R	422-R	422-R	T-015-R	T-020-R
Sample Description		REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/17/2019	04/11/2019	07/18/2019	10/16/2019	04/10/2019	01/23/2019
Laboratory Sample I.D.		420148330-17	420152234-14	420157254-5	420162042-9	420152234-5	420148547-4
Sample Comment Codes						A	A
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	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	0.35 J	0.57 J	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	3.2	7.1	3.9	3.8	1.3	5.8
1,2-DICHLOROPROPANE	ug/l	ND@1	0.64 J	0.48 J	1.9	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		422-R	422-R	422-R	422-R	T-015-R	T-020-R
Sample Description		REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		01/17/2019	04/11/2019	07/18/2019	10/16/2019	04/10/2019	01/23/2019
Laboratory Sample I.D.		420148330-17	420152234-14	420157254-5	420162042-9	420152234-5	420148547-4
Sample Comment Codes						A	A
Parameter	**Units**						
Volatile Organics							
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	0.51 J	ND@1	ND@1
CHLOROFORM	ug/l	0.65 J	0.76 J	0.49 J	0.50 J	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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	25	36 D	18	28 D	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	1.2	ND@1	ND@1	0.72 J	ND@1
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-020-R	T-020-R	T-020-R	T-020-R	T-020-R	T-020-S
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER
Sample Date		04/10/2019	04/10/2019	07/17/2019	07/17/2019	10/23/2019	01/23/2019
Laboratory Sample I.D.		420152234-2	420152234-3	420157120-13	420157120-14	420162278-6	420148547-5
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.09	7.09	6.97	6.97	6.82	7.04
SPECIFIC CONDUCTANCE	umhos/cm	1001	1001	1003	1003	1013	1002
TEMPERATURE	C	14.7	14.7	14.8	14.8	14.7	14.4
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-020-R	T-020-R	T-020-R	T-020-R	T-020-R	T-020-S
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER
Sample Date		04/10/2019	04/10/2019	07/17/2019	07/17/2019	10/23/2019	01/23/2019
Laboratory Sample I.D.		420152234-2	420152234-3	420157120-13	420157120-14	420162278-6	420148547-5
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	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	1.1	1.6	0.89 J	1.3	0.41 J	ND@1
1,1-DICHLOROETHYLENE	ug/l	2.7	2.8	2.5	3.0	0.88 J	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	650 D	690 D	1000 D	990 D	290 D	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-020-R	T-020-R	T-020-R	T-020-R	T-020-R	T-020-S
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER
Sample Date		04/10/2019	04/10/2019	07/17/2019	07/17/2019	10/23/2019	01/23/2019
Laboratory Sample I.D.		420152234-2	420152234-3	420157120-13	420157120-14	420162278-6	420148547-5
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Volatile Organics							
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	0.44 J
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	3.9
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	0.31 J	0.30 J	1.1	1.7	1.1	1.2
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	430 D	450 D	1000 D	1000 D	180 D	ND@1
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-020-S	T-020-S	T-020-S	T-022-S	T-022-S	T-022-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/10/2019	07/17/2019	10/23/2019	01/23/2019	04/10/2019	07/18/2019
Laboratory Sample I.D.		420152234-4	420157120-15	420162278-7	420148547-2	420152234-8	420157254-3
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.08	6.99	7.07	7.09	7.12	6.96
SPECIFIC CONDUCTANCE	umhos/cm	1008	1276	1251	713	739	1734
TEMPERATURE	C	14.6	14.5	14.4	14.7	14.9	14.9
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	0.039	ND@0.0070	ND@0.0070
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-020-S	T-020-S	T-020-S	T-022-S	T-022-S	T-022-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/10/2019	07/17/2019	10/23/2019	01/23/2019	04/10/2019	07/18/2019
Laboratory Sample I.D.		420152234-4	420157120-15	420162278-7	420148547-2	420152234-8	420157254-3
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	0.60 J	0.51 J	0.38 J
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	0.69 J	0.34 J	0.47 J	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-020-S	T-020-S	T-020-S	T-022-S	T-022-S	T-022-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/10/2019	07/17/2019	10/23/2019	01/23/2019	04/10/2019	07/18/2019
Laboratory Sample I.D.		420152234-4	420157120-15	420162278-7	420148547-2	420152234-8	420157254-3
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Volatile Organics							
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	0.45 J	0.51 J	0.25 J	2.2	1.4	1.5
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	5.5	1.7	0.99 J	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	1.5	1.3	1.7	1.2	1.1	0.83 J
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	0.19 J	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-022-S	T-034-S	T-041-S	T-042-R	T-042-R	T-042-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/23/2019	04/23/2019	04/23/2019	01/23/2019	04/10/2019	07/18/2019
Laboratory Sample I.D.		420162278-9	420152652-6	420152652-2	420148547-3	420152234-7	420157254-2
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Indicator Parameters							
PH	pH	6.89	7.48	7.16	7.06	7.11	7.06
SPECIFIC CONDUCTANCE	umhos/cm	1721	941	962	815	886	1646
TEMPERATURE	C	14.8	15.6	15.0	14.4	14.6	14.9
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	ND@0.0070	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-022-S	T-034-S	T-041-S	T-042-R	T-042-R	T-042-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/23/2019	04/23/2019	04/23/2019	01/23/2019	04/10/2019	07/18/2019
Laboratory Sample I.D.		420162278-9	420152652-6	420152652-2	420148547-3	420152234-7	420157254-2
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	1.5	1.3	1.4
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	0.39 J	0.52 J	0.43 J	0.48 J
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	0.52 J	1.6	ND@1	ND@1	ND@1
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-022-S	T-034-S	T-041-S	T-042-R	T-042-R	T-042-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/23/2019	04/23/2019	04/23/2019	01/23/2019	04/10/2019	07/18/2019
Laboratory Sample I.D.		420162278-9	420152652-6	420152652-2	420148547-3	420152234-7	420157254-2
Sample Comment Codes		A	A	A	A	A	A
Parameter	**Units**						
Volatile Organics							
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	2.0	ND@1	0.23 J	0.34 J	0.35 J	1.5
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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	1.3	5.7	1.2	2.0	1.8	1.8
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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-042-R	T-043-SB	T-043-SB	T-043-SB	T-048-R	T-057-S
Sample Description		GROUNDWATER	GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/23/2019	04/18/2019	04/18/2019	10/16/2019	04/17/2019	04/23/2019
Laboratory Sample I.D.		420162278-8	420152548-7	420152548-8	420162042-2	420152548-4	420152652-4
Sample Comment Codes		A					A
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.12	7.14	7.14	7.08	7.41	7.20
SPECIFIC CONDUCTANCE	umhos/cm	1526	1903	1903	2006	822	1096
TEMPERATURE	C	14.8	14.8	14.8	14.6	13.8	15.8
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-042-R	T-043-SB	T-043-SB	T-043-SB	T-048-R	T-057-S
Sample Description		GROUNDWATER	GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/23/2019	04/18/2019	04/18/2019	10/16/2019	04/17/2019	04/23/2019
Laboratory Sample I.D.		420162278-8	420152548-7	420152548-8	420162042-2	420152548-4	420152652-4
Sample Comment Codes		A					A
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	1.4	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	0.97 J	0.89 J	1.1	ND@1	0.27 J
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	0.31 J	ND@1	1.4
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	2.0	2.0	3.0	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-042-R	T-043-SB	T-043-SB	T-043-SB	T-048-R	T-057-S
Sample Description		GROUNDWATER	GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/23/2019	04/18/2019	04/18/2019	10/16/2019	04/17/2019	04/23/2019
Laboratory Sample I.D.		420162278-8	420152548-7	420152548-8	420162042-2	420152548-4	420152652-4
Sample Comment Codes		A					A
Parameter	**Units**						
Volatile Organics							
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	0.35 J	0.32 J	0.76 J	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	1.1	14	14	24	ND@1	0.63 J
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	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	0.68 J	0.67 J	0.92 J	ND@1	2.5
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	1.7	9.9	9.6	14	ND@1	1.3
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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-057-S	T-075-S	T-081-S	T-083-R	T-083-R	T-083-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/18/2019	04/23/2019	04/23/2019	01/17/2019	04/10/2019	07/17/2019
Laboratory Sample I.D.		420162118-4	420152652-3	420152652-5	420148330-15	420152234-9	420157120-16
Sample Comment Codes		A		A	A	A	A
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.14	7.08	7.23	NA	NA	NA
SPECIFIC CONDUCTANCE	umhos/cm	1081	1016	1853	NA	NA	NA
TEMPERATURE	C	15.6	14.9	15.0	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
PCB 1016	ug/l	NA	NA	NA	ND@0.0095	ND@0.0095	ND@0.0095
PCB 1221	ug/l	NA	NA	NA	ND@0.0095	ND@0.0095	ND@0.0095
PCB 1232	ug/l	NA	NA	NA	ND@0.0095	ND@0.0095	ND@0.0095
PCB 1242	ug/l	NA	NA	NA	ND@0.0095	ND@0.0095	ND@0.0095
PCB 1248	ug/l	NA	NA	NA	ND@0.0095	ND@0.0095	ND@0.0095
PCB 1254	ug/l	NA	NA	NA	1.6	2.1	ND@0.0095
PCB 1260	ug/l	NA	NA	NA	ND@0.0095	ND@0.0095	ND@0.0095
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-057-S	T-075-S	T-081-S	T-083-R	T-083-R	T-083-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/18/2019	04/23/2019	04/23/2019	01/17/2019	04/10/2019	07/17/2019
Laboratory Sample I.D.		420162118-4	420152652-3	420152652-5	420148330-15	420152234-9	420157120-16
Sample Comment Codes		A		A	A	A	A
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	230 D	450 D	330 D
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	200 D	250 D	33 D
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	1.4	8.2	12	13
1,1-DICHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	6.8	14	15
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	1.1	1.5	0.80 J
1,2-DICHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	1.1	ND@1	ND@1	3.3	11	9.0
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	3.2	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	1.9	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-057-S	T-075-S	T-081-S	T-083-R	T-083-R	T-083-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/18/2019	04/23/2019	04/23/2019	01/17/2019	04/10/2019	07/17/2019
Laboratory Sample I.D.		420162118-4	420152652-3	420152652-5	420148330-15	420152234-9	420157120-16
Sample Comment Codes		A		A	A	A	A
Parameter	**Units**						
Volatile Organics							
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	0.52 J
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	0.35 J	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	0.53 J	22	1.6	0.60 J	1.2	1.1
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	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	0.87 J	0.70 J
TETRACHLOROETHYLENE	ug/l	1.7	ND@1	ND@1	4.4	5.5	4.7
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	0.86 J	11	1.4	74 JD	450 D	340 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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-083-R	T-085-RB	T-099-S	T-100-R	T-104-RA	T-104-RA
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/22/2019	04/10/2019	04/11/2019	04/11/2019	01/18/2019	04/12/2019
Laboratory Sample I.D.		420162278-4	420152234-6	420152234-13	420152234-12	420148377-4	420152303-5
Sample Comment Codes		A			A		
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	6.92	6.97	6.98	NA	NA
SPECIFIC CONDUCTANCE	umhos/cm	NA	986	988	788	NA	NA
TEMPERATURE	C	NA	14.6	10.8	12.2	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
PCB 1016	ug/l	ND@0.0095	NA	NA	NA	NA	NA
PCB 1221	ug/l	ND@0.0095	NA	NA	NA	NA	NA
PCB 1232	ug/l	ND@0.0095	NA	NA	NA	NA	NA
PCB 1242	ug/l	ND@0.0095	NA	NA	NA	NA	NA
PCB 1248	ug/l	ND@0.0095	NA	NA	NA	NA	NA
PCB 1254	ug/l	2.0	NA	NA	NA	NA	NA
PCB 1260	ug/l	ND@0.0095	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-083-R	T-085-RB	T-099-S	T-100-R	T-104-RA	T-104-RA
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/22/2019	04/10/2019	04/11/2019	04/11/2019	01/18/2019	04/12/2019
Laboratory Sample I.D.		420162278-4	420152234-6	420152234-13	420152234-12	420148377-4	420152303-5
Sample Comment Codes		A			A		
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	440 D	ND@1	11	47 D	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	270 D	ND@1	11	39 D	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	8.3	ND@1	2.2	3.7	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	5.6	ND@1	0.53 J	1.7	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	2.4	ND@1	3.2	3.7	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	1.7	2.3	6.7	4.0	2.7	5.4
1,2-DICHLOROPROPANE	ug/l	3.2	ND@1	ND@1	ND@1	ND@1	1.3
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-083-R	T-085-RB	T-099-S	T-100-R	T-104-RA	T-104-RA
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/22/2019	04/10/2019	04/11/2019	04/11/2019	01/18/2019	04/12/2019
Laboratory Sample I.D.		420162278-4	420152234-6	420152234-13	420152234-12	420148377-4	420152303-5
Sample Comment Codes		A			A		
Parameter	**Units**						
Volatile Organics							
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	0.66 J	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	0.40 J
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	0.58 J	0.50 J	0.42 J	0.52 J	0.21 J	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	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	0.28 J	ND@1
TETRACHLOROETHYLENE	ug/l	5.1	ND@1	ND@1	0.48 J	ND@1	ND@1
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	44 D	3.8	8.5	29 D	6.1	8.7
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	0.34 J	ND@1	ND@1	0.18 J
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-104-RA	T-104-RA	T-104-RB	T-104-RB	T-104-RB	T-104-RB
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/23/2019	10/17/2019	01/18/2019	04/12/2019	07/23/2019	10/17/2019
Laboratory Sample I.D.		420157371-6	420162042-13	420148377-5	420152303-6	420157371-5	420162042-12
Sample Comment Codes							
Parameter	**Units**						
Indicator Parameters							
PH	pH	NA	NA	NA	NA	NA	NA
SPECIFIC CONDUCTANCE	umhos/cm	NA	NA	NA	NA	NA	NA
TEMPERATURE	C	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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-104-RA	T-104-RA	T-104-RB	T-104-RB	T-104-RB	T-104-RB
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/23/2019	10/17/2019	01/18/2019	04/12/2019	07/23/2019	10/17/2019
Laboratory Sample I.D.		420157371-6	420162042-13	420148377-5	420152303-6	420157371-5	420162042-12
Sample Comment Codes							
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	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	3.7	2.8	4.6	4.4	3.4	5.9
1,2-DICHLOROPROPANE	ug/l	0.52 J	ND@1	0.55 J	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-104-RA	T-104-RA	T-104-RB	T-104-RB	T-104-RB	T-104-RB
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		07/23/2019	10/17/2019	01/18/2019	04/12/2019	07/23/2019	10/17/2019
Laboratory Sample I.D.		420157371-6	420162042-13	420148377-5	420152303-6	420157371-5	420162042-12
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	0.31 J	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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	4.2	2.7	1.5	0.60 J	ND@1	0.41 J
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	0.35 J	0.30 J	0.35 J	0.67 J
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-108-SD	T-203-RA	T-203-RA	T-203-RA	T-203-RA	T-204-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/24/2019	01/18/2019	04/12/2019	07/17/2019	10/18/2019	04/12/2019
Laboratory Sample I.D.		420152756-4	420148377-3	420152303-2	420157120-17	420162118-7	420152303-4
Sample Comment Codes		A					
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.14	NA	NA	NA	NA	6.92
SPECIFIC CONDUCTANCE	umhos/cm	1048	NA	NA	NA	NA	788
TEMPERATURE	C	15.0	NA	NA	NA	NA	14.3
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA	0.64
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-108-SD	T-203-RA	T-203-RA	T-203-RA	T-203-RA	T-204-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/24/2019	01/18/2019	04/12/2019	07/17/2019	10/18/2019	04/12/2019
Laboratory Sample I.D.		420152756-4	420148377-3	420152303-2	420157120-17	420162118-7	420152303-4
Sample Comment Codes		A					
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	1.3	1.1	1.1	1.0	0.24 J
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	0.60 J	ND@1	ND@1
1,1-DICHLOROETHYLENE	ug/l	0.32 J	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	0.33 J	0.34 J	1.3	0.35 J	ND@1
1,2-DICHLOROETHYLENE, TOTAL	ug/l	19	3.4	2.7	16	6.6	0.36 J
1,2-DICHLOROPROPANE	ug/l	ND@1	3.3	2.9	9.1	3.7	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-108-SD	T-203-RA	T-203-RA	T-203-RA	T-203-RA	T-204-R
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		04/24/2019	01/18/2019	04/12/2019	07/17/2019	10/18/2019	04/12/2019
Laboratory Sample I.D.		420152756-4	420148377-3	420152303-2	420157120-17	420162118-7	420152303-4
Sample Comment Codes		A					
Parameter	**Units**						
Volatile Organics							
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	0.83 J	2.1	2.0	3.5	1.6	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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	120 D	3.6	5.1	30	13	7.5
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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-204-R	T-206-S	T-208-R	T-208-R	T-217-S	T-311-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/16/2019	04/23/2019	04/18/2019	10/16/2019	04/11/2019	04/19/2019
Laboratory Sample I.D.		420162042-7	420152652-8	420152548-9	420162042-3	420152234-11	420152603-4
Sample Comment Codes				A	A	A	
Parameter	**Units**						
Indicator Parameters							
PH	pH	7.19	7.35	7.09	7.08	6.92	7.38
SPECIFIC CONDUCTANCE	umhos/cm	1204	2001	1422	1484	863	1902
TEMPERATURE	C	15.2	13.0	14.8	14.6	14.5	14.7
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
PCB 1016	ug/l	NA	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA	NA
Inorganics							
CYANIDE, TOTAL	mg/l	1.4	NA	NA	NA	NA	NA
Metals							
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-204-R	T-206-S	T-208-R	T-208-R	T-217-S	T-311-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/16/2019	04/23/2019	04/18/2019	10/16/2019	04/11/2019	04/19/2019
Laboratory Sample I.D.		420162042-7	420152652-8	420152548-9	420162042-3	420152234-11	420152603-4
Sample Comment Codes				A	A	A	
Parameter	**Units**						
Metals							
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA	NA
ZINC, DISSOLVED	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	0.32 J	4.1	ND@1	ND@1	0.61 J	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	12	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	2.1	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	1.4	1.2	ND@1	ND@1	0.32 J	ND@1
1,2-DICHLOROPROPANE	ug/l	1.4	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-204-R	T-206-S	T-208-R	T-208-R	T-217-S	T-311-S
Sample Description		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample Date		10/16/2019	04/23/2019	04/18/2019	10/16/2019	04/11/2019	04/19/2019
Laboratory Sample I.D.		420162042-7	420152652-8	420152548-9	420162042-3	420152234-11	420152603-4
Sample Comment Codes				A	A	A	
Parameter	**Units**						
Volatile Organics							
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	1.0	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	0.47 J	ND@1	ND@1	ND@1	6.6	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	NA	NA	NA	NA	NA	NA
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	0.61 J	ND@1
TOLUENE	ug/l	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	7.8	4.6	0.28 J	ND@1	2.8	3.6
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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-312-S	T-312-S	T-314-S	T-314-S	T-314-S
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	REPLICATE
Sample Date		04/19/2019	04/19/2019	04/18/2019	10/16/2019	10/16/2019
Laboratory Sample I.D.		420152603-2	420152603-3	420152548-10	420162042-4	420162042-5
Sample Comment Codes						
Parameter	**Units**					
Indicator Parameters						
PH	pH	7.46	7.46	7.66	7.59	7.59
SPECIFIC CONDUCTANCE	umhos/cm	2098	2098	947	992	992
TEMPERATURE	C	14.8	14.8	15.4	15.1	15.1
Base/Neutral Extractables						
1,2-DICHLOROBENZENE	ug/l	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
1,4-DICHLOROBENZENE	ug/l	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
PCB 1016	ug/l	NA	NA	NA	NA	NA
PCB 1221	ug/l	NA	NA	NA	NA	NA
PCB 1232	ug/l	NA	NA	NA	NA	NA
PCB 1242	ug/l	NA	NA	NA	NA	NA
PCB 1248	ug/l	NA	NA	NA	NA	NA
PCB 1254	ug/l	NA	NA	NA	NA	NA
PCB 1260	ug/l	NA	NA	NA	NA	NA
Inorganics						
CYANIDE, TOTAL	mg/l	NA	NA	NA	NA	NA
Metals						
ANTIMONY, DISSOLVED	mg/l	NA	NA	NA	NA	NA
ARSENIC, DISSOLVED	mg/l	NA	NA	NA	NA	NA
BERYLLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA
CADMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA
CHROMIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA
COPPER, DISSOLVED	mg/l	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-312-S	T-312-S	T-314-S	T-314-S	T-314-S
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	REPLICATE
Sample Date		04/19/2019	04/19/2019	04/18/2019	10/16/2019	10/16/2019
Laboratory Sample I.D.		420152603-2	420152603-3	420152548-10	420162042-4	420162042-5
Sample Comment Codes						
Parameter	**Units**					
Metals						
LEAD, DISSOLVED	mg/l	NA	NA	NA	NA	NA
MERCURY, DISSOLVED	mg/l	NA	NA	NA	NA	NA
NICKEL, DISSOLVED	mg/l	NA	NA	NA	NA	NA
SELENIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA
SILVER, DISSOLVED	mg/l	NA	NA	NA	NA	NA
THALLIUM, DISSOLVED	mg/l	NA	NA	NA	NA	NA
ZINC, DISSOLVED	mg/l	NA	NA	NA	NA	NA
Volatile Organics						
1,1,1,2-TETRACHLOROETHANE	ug/l	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
1,1,2,2-TETRACHLOROETHANE	ug/l	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
1,1,2-TRICHLOROETHANE	ug/l	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
1,1-DICHLOROETHYLENE	ug/l	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
1,2-DICHLORO-1,2,2-TRIFLUOROETHANE	ug/l	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
1,2-DICHLOROETHYLENE, TOTAL	ug/l	21	21	3.1	2.6	2.4
1,2-DICHLOROPROPANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA
BROMOBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
BROMODICHLOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
BROMOFORM	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Sample Location		T-312-S	T-312-S	T-314-S	T-314-S	T-314-S
Sample Description		GROUNDWATER	REPLICATE	GROUNDWATER	GROUNDWATER	REPLICATE
Sample Date		04/19/2019	04/19/2019	04/18/2019	10/16/2019	10/16/2019
Laboratory Sample I.D.		420152603-2	420152603-3	420152548-10	420162042-4	420162042-5
Sample Comment Codes						
Parameter	**Units**					
Volatile Organics						
BROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
CARBON TETRACHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROBENZENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
CHLORODIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
CHLOROFORM	ug/l	ND@1	ND@1	0.37 J	0.25 J	0.23 J
CHLOROMETHANE	ug/l	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
DIBROMOMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
DICHLORODIFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
ETHYLBENZENE	ug/l	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	1.6	1.2	1.1
TOLUENE	ug/l	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
TRICHLOROETHYLENE	ug/l	10	11	210 D	170 D	160 D
TRICHLOROFLUOROMETHANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
VINYL CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1
XYLENE, TOTAL	ug/l	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Groundwater Monitoring Data Report
January 1, 2019 - December 31, 2019

Explanation of Reporting Conventions and Key to Comment Codes

Reporting Conventions

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

Code	Explanation
D	Compound identified at a secondary dilution factor (Organics)
J	Estimated value - compound meets identification criteria, but result is less than the reporting limit

C-4: Laboratory Case Narratives for each of Sample Delivery Groups (SDGs)

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-148330-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
02/18/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148330-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	EnvTest	SW846 8082A	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148330-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
SW846 8082A	Miller, Kyle A	KAM
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-148330-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-148330-1	MTBC01160117	Water	01/16/2019 0000	01/17/2019 1320
420-148330-2	MT08SB90116G	Ground Water	01/16/2019 0615	01/17/2019 1320
420-148330-3	MT315S90116G	Ground Water	01/16/2019 0630	01/17/2019 1320
420-148330-4	M0423R90116G	Ground Water	01/16/2019 0730	01/17/2019 1320
420-148330-5	M0425R90116G	Ground Water	01/16/2019 0740	01/17/2019 1320
420-148330-6	M0427R90116G	Ground Water	01/16/2019 0750	01/17/2019 1320
420-148330-7	MT87RA90116G	Ground Water	01/16/2019 0800	01/17/2019 1320
420-148330-8	MT49RA90116G	Ground Water	01/16/2019 0815	01/17/2019 1320
420-148330-9	MT206R90116G	Ground Water	01/16/2019 0831	01/17/2019 1320
420-148330-10	M0413R90116G	Ground Water	01/16/2019 0840	01/17/2019 1320
420-148330-11	M0405R90116G	Ground Water	01/16/2019 0849	01/17/2019 1320
420-148330-12	MT101R90116G	Ground Water	01/16/2019 0900	01/17/2019 1320
420-148330-13	M0416R90116G	Ground Water	01/16/2019 0920	01/17/2019 1320
420-148330-14	M0414R90117G	Ground Water	01/17/2019 0857	01/17/2019 1320
420-148330-15	MT83RA90117G	Ground Water	01/17/2019 1015	01/17/2019 1320
420-148330-16	M0422R90117G	Ground Water	01/17/2019 1216	01/17/2019 1320
420-148330-17	MO422R90117D	Ground Water	01/17/2019 1216	01/17/2019 1320
420-148330-18	MEQ90117WLID	Water	01/17/2019 1130	01/17/2019 1320

ANALYTICAL REPORT

Job Number: 420-148377-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
02/18/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148377-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148377-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-148377-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-148377-1	MTBC01180118	Water	01/18/2019 0000	01/18/2019 1102
420-148377-2	MEQ90118WLID	Water	01/18/2019 0711	01/18/2019 1102
420-148377-3	MT203R90118G	Ground Water	01/18/2019 0759	01/18/2019 1102
420-148377-4	MT104A90118G	Ground Water	01/18/2019 0856	01/18/2019 1102
420-148377-5	MT104B90118G	Ground Water	01/18/2019 0945	01/18/2019 1102

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-148547-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
02/18/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148547-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148547-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-148547-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-148547-1	MTBC01230124	Water	01/23/2019 0000	01/24/2019 1225
420-148547-2	MT22SA90123G	Ground Water	01/23/2019 1121	01/24/2019 1225
420-148547-3	MT42RA90123G	Ground Water	01/23/2019 1148	01/24/2019 1225
420-148547-4	MT20RA90123G	Ground Water	01/23/2019 1304	01/24/2019 1225
420-148547-5	MT20SA90123G	Ground Water	01/23/2019 1354	01/24/2019 1225
420-148547-6	MEQ90123WLID	Water	01/23/2019 1217	01/24/2019 1225
420-148547-7	MEQ90124PUMP	Water	01/24/2019 0748	01/24/2019 1225
420-148547-8	MO412RB90124G	Ground Water	01/24/2019 1006	01/24/2019 1225
420-148547-9	M412RB90124G	Ground Water	01/24/2019 1129	01/24/2019 1225

ANALYTICAL REPORT

Job Number: 420-148603-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
02/18/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148603-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148603-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-148603-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-148603-1	MTBC01250125	Water	01/25/2019 0000	01/25/2019 1145
420-148603-2	MEQ90125WL1D	Water	01/25/2019 0710	01/25/2019 1145
420-148603-3	M0410R90125G	Ground Water	01/25/2019 0750	01/25/2019 1145
420-148603-4	M0410M90125G	Ground Water	01/25/2019 0851	01/25/2019 1145
420-148603-5	M0410M90125D	Ground Water	01/25/2019 0851	01/25/2019 1145

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-148684-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
02/18/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148684-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148684-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-148684-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-148684-1	MTBC01290130	Water	01/29/2019 0000	01/29/2019 0938
420-148684-2	CS0043490129	Ground Water	01/29/2019 0600	01/29/2019 0938
420-148684-3	CS0043590129	Ground Water	01/29/2019 0621	01/29/2019 0938
420-148684-4	MEQ90129BALR	Water	01/29/2019 0831	01/29/2019 0938
420-148684-5	CS0019890129	Ground Water	01/29/2019 0840	01/29/2019 0938

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-152074-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152074-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	EnvTest	SW846 8082A	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152074-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
SW846 8082A	Miller, Kyle A	KAM
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152074-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152074-1	MTBC04090410	Water	04/09/2019 0000	04/09/2019 1355
420-152074-2	MT08SB90409G	Ground Water	04/09/2019 0640	04/09/2019 1355
420-152074-3	MT315S90409G	Ground Water	04/09/2019 0700	04/09/2019 1355
420-152074-4	M0423R90409G	Ground Water	04/09/2019 0743	04/09/2019 1355
420-152074-5	M0425R90409G	Ground Water	04/09/2019 0753	04/09/2019 1355
420-152074-6	M0427R90409G	Ground Water	04/09/2019 0801	04/09/2019 1355
420-152074-7	MT87RA90409G	Ground Water	04/09/2019 0811	04/09/2019 1355
420-152074-8	MT49RA90409G	Ground Water	04/09/2019 0823	04/09/2019 1355
420-152074-9	MT206R90409G	Ground Water	04/09/2019 0845	04/09/2019 1355
420-152074-10	M0413R90409G	Ground Water	04/09/2019 0852	04/09/2019 1355
420-152074-11	M0405R90409G	Ground Water	04/09/2019 0920	04/09/2019 1355
420-152074-12	MT101R90409G	Ground Water	04/09/2019 1000	04/09/2019 1355
420-152074-13	M0416R90409G	Ground Water	04/09/2019 1006	04/09/2019 1355

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-152234-1

SDG Number:

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152234-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	EnvTest	SW846 8082A	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152234-1
SDG Number:

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
SW846 8082A	Miller, Kyle A	KAM
EPA 200.7 Rev 4.4	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152234-1
SDG Number:

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152234-1	MTBC04100411	Water	04/10/2019 0000	04/11/2019 1410
420-152234-2	MT20RA90410G	Ground Water	04/10/2019 0908	04/11/2019 1410
420-152234-3	MT20RA90410D	Ground Water	04/10/2019 0908	04/11/2019 1410
420-152234-4	MT20SA90410G	Ground Water	04/10/2019 0930	04/11/2019 1410
420-152234-5	MT15RA90410G	Ground Water	04/10/2019 1009	04/11/2019 1410
420-152234-6	MT85RB90410G	Ground Water	04/10/2019 1105	04/11/2019 1410
420-152234-7	MT42RA90410G	Ground Water	04/10/2019 1319	04/11/2019 1410
420-152234-8	MT22SA90410G	Ground Water	04/10/2019 1259	04/11/2019 1410
420-152234-9	MT83RA90410G	Ground Water	04/10/2019 1433	04/11/2019 1410
420-152234-10	MEQ90410WLID	Water	04/10/2019 1511	04/11/2019 1410
420-152234-11	MT217S90411G	Ground Water	04/11/2019 0756	04/11/2019 1410
420-152234-12	MT100R90411G	Ground Water	04/11/2019 0929	04/11/2019 1410
420-152234-13	MT099S90411G	Ground Water	04/11/2019 0957	04/11/2019 1410
420-152234-14	M0422R90411G	Ground Water	04/11/2019 1101	04/11/2019 1410
420-152234-15	MO417R90411G	Ground Water	04/11/2019 1217	04/11/2019 1410
420-152234-16	MEQ90411WLID	Water	04/11/2019 1317	04/11/2019 1410

ANALYTICAL REPORT

Job Number: 420-152303-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152303-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Cyanide, Total (Semi-Automated Colorimetry)	EnvTest	EPA 335.4 Rev1.0	
Distillation/Cyanide	EnvTest		Distillation
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152303-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 335.4 Rev1.0	Molchon, Renee	RM

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152303-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152303-1	MTBC04120412	Water	04/12/2019 0000	04/12/2019 1410
420-152303-2	MT203R90412G	Ground Water	04/12/2019 0718	04/12/2019 1410
420-152303-3	M0415R90412G	Ground Water	04/12/2019 0843	04/12/2019 1410
420-152303-4	MT204R90412G	Ground Water	04/12/2019 0927	04/12/2019 1410
420-152303-5	MT104A90412G	Ground Water	04/12/2019 1002	04/12/2019 1410
420-152303-6	MT104B90412G	Ground Water	04/12/2019 1039	04/12/2019 1410
420-152303-7	MEQ90412WLID	Water	04/12/2019 1144	04/12/2019 1410

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-152548-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152548-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152548-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152548-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152548-1	MTBC04170418	Water	04/17/2019 0000	04/18/2019 1325
420-152548-2	M0407R90417G	Ground Water	04/17/2019 0909	04/18/2019 1325
420-152548-3	MEQ90417WL1D	Water	04/17/2019 0928	04/18/2019 1325
420-152548-4	MT048R90417G	Ground Water	04/17/2019 1348	04/18/2019 1325
420-152548-5	M0410R90417G	Ground Water	04/17/2019 1239	04/18/2019 1325
420-152548-6	M0410M90417G	Ground Water	04/17/2019 1319	04/18/2019 1325
420-152548-7	MT43SB90418G	Ground Water	04/18/2019 0731	04/18/2019 1325
420-152548-8	MT43SB90418D	Ground Water	04/18/2019 0731	04/18/2019 1325
420-152548-9	MT208R90418G	Ground Water	04/18/2019 0853	04/18/2019 1325
420-152548-10	MT314S90418G	Ground Water	04/18/2019 1013	04/18/2019 1325
420-152548-11	M0404R90418G	Ground Water	04/18/2019 1212	04/18/2019 1325
420-152548-12	MEQ90418WL1D	Water	04/18/2019 1047	04/18/2019 1325

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-152603-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152603-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152603-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152603-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152603-1	MTBC04190419	Water	04/19/2019 0000	04/19/2019 1352
420-152603-2	MT312S90419G	Ground Water	04/19/2019 0906	04/19/2019 1352
420-152603-3	MT312S90419D	Ground Water	04/19/2019 0906	04/19/2019 1352
420-152603-4	MT311S90419G	Ground Water	04/19/2019 0856	04/19/2019 1352
420-152603-5	MEQ90419PUMP	Water	04/19/2019 0946	04/19/2019 1352
420-152603-6	M0414R90419G	Ground Water	04/19/2019 1153	04/19/2019 1352

ANALYTICAL REPORT

Job Number: 420-152652-1

SDG Number: Routine

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152652-1
SDG Number: Routine

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152652-1
SDG Number: Routine

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152652-1
SDG Number: Routine

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152652-1	MTBC04230424	Water	04/23/2019 0000	04/23/2019 1255
420-152652-2	MT41SA90423G	Ground Water	04/23/2019 0621	04/23/2019 1255
420-152652-3	MT075S90423G	Ground Water	04/23/2019 0655	04/23/2019 1255
420-152652-4	MT57SA902423G	Ground Water	04/23/2019 0741	04/23/2019 1255
420-152652-5	MT81SA90423G	Ground Water	04/23/2019 0824	04/23/2019 1255
420-152652-6	MT34SA90423G	Ground Water	04/23/2019 0903	04/23/2019 1255
420-152652-7	M406RB90423G	Ground Water	04/23/2019 1107	04/23/2019 1255
420-152652-8	MT206S90423G	Ground Water	04/23/2019 1153	04/23/2019 1255
420-152652-9	MEQ90423WLID	Water	04/23/2019 1216	04/23/2019 1255

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-152756-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/16/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152756-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152756-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152756-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152756-1	MTBC0420425	Water	04/24/2019 0000	04/24/2019 1310
420-152756-2	CS0043490424	Ground Water	04/24/2019 0647	04/24/2019 1310
420-152756-3	CS0043590424	Ground Water	04/24/2019 0659	04/24/2019 1310
420-152756-4	MT108S90424G	Ground Water	04/24/2019 0739	04/24/2019 1310
420-152756-5	M0412R90424G	Ground Water	04/24/2019 1049	04/24/2019 1310
420-152756-6	MEQ90424WLID	Water	04/24/2019 1107	04/24/2019 1310
420-152756-7	M412RB90424G	Ground Water	04/24/2019 1203	04/24/2019 1310
420-152756-8	CS0019890424	Ground Water	04/24/2019 0831	04/24/2019 1310

ANALYTICAL REPORT

Job Number: 420-152923-1

Job Description: 97001.19 MOSF

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
05/10/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Job Narrative
420-J152923-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method 8260C: Method 8260C: Per client request, a scan was performed for 1,4-diethylbenzene, 4-ethyltoluene, 1,2,4,5-tetramethylbenzene, tetrahydrofuran and ethyl ether according to the procedures outlined in Method 8260. Results were negative for all samples.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method 8270D: Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for several analytes did not meet the range of acceptable recoveries. The associated laboratory control standard (LCS) met acceptance criteria for those analytes.

Method 8270D: The LCS for this analytical batch did not meet the range of acceptable recoveries for benzidine. The matrix spike duplicate for the batch was within control limits for both the MS and LCS limits. Therefore, the data as reported without qualification as per item 210 A. 1.1.2.1 c of the ELAP certification manual.

Method 8270D: Method 8270D: Per client request, a scan was performed for 1-methylnapthalene according to the procedures outlined in Method 8270D. Results were negative for all samples.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 420-152923-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
420-152923-4	**M00BK290429G**					
Chloroform		0.37	J	1.0	ug/L	8260C
1,1,1-Trichloroethane		0.26	J	1.0	ug/L	8260C
420-152923-5	**M00BK190429G**					
Trichloroethene		1.0		1.0	ug/L	8260C
1,1,1-Trichloroethane		0.44	J	1.0	ug/L	8260C
420-152923-6	**M00BK590429G**					
Chloroform		0.26	J	1.0	ug/L	8260C
Trichloroethene		1.2		1.0	ug/L	8260C
1,1,1-Trichloroethane		0.81	J	1.0	ug/L	8260C

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152923-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	EnvTest	SW846 8260C	
Purge and Trap for Aqueous Samples	EnvTest		SW846 5030C
Semivolatile Compounds by GC/MS	EnvTest	SW846 8270D	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-152923-1

Method	Analyst	Analyst ID
SW846 8260C	Andersen, Eric C	ECA
SW846 8270D	Palentino, Gus J	GJP

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-152923-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-152923-1	MTBC04290429	Water	04/29/2019 0000	04/29/2019 1325
420-152923-2	M00BK390429G	Water	04/29/2019 0540	04/29/2019 1325
420-152923-3	M00BK390429D	Water	04/29/2019 0540	04/29/2019 1325
420-152923-4	M00BK290429G	Water	04/29/2019 0642	04/29/2019 1325
420-152923-5	M00BK190429G	Water	04/29/2019 0731	04/29/2019 1325
420-152923-6	M00BK590429G	Water	04/29/2019 0842	04/29/2019 1325
420-152923-7	M00BK490429G	Water	04/29/2019 0858	04/29/2019 1325

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-157120-1

SDG Number:

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
08/21/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-157120-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	EnvTest	SW846 8082A	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-157120-1
SDG Number:

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
SW846 8082A	Miller, Kyle A	KAM
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-157120-1
SDG Number:

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-157120-1	MTBC07160717	Water	07/16/2019 0000	07/17/2019 1330
420-157120-2	MT08SB90716G	Ground Water	07/16/2019 0535	07/17/2019 1330
420-157120-3	MT315S90716G	Ground Water	07/16/2019 0547	07/17/2019 1330
420-157120-4	M0423R90716G	Ground Water	07/16/2019 0913	07/17/2019 1330
420-157120-5	M0425R90716G	Ground Water	07/16/2019 0923	07/17/2019 1330
420-157120-6	MT87RA90716G	Ground Water	07/16/2019 0951	07/17/2019 1330
420-157120-7	MT49RA90716G	Ground Water	07/16/2019 1011	07/17/2019 1330
420-157120-8	MT206R90716G	Ground Water	07/16/2019 1042	07/17/2019 1330
420-157120-9	M0413R90716G	Ground Water	07/16/2019 1103	07/17/2019 1330
420-157120-10	M0405R90716G	Ground Water	07/16/2019 1121	07/17/2019 1330
420-157120-11	MT101R90716G	Ground Water	07/16/2019 1219	07/17/2019 1330
420-157120-12	M0416R90716G	Ground Water	07/16/2019 1228	07/17/2019 1330
420-157120-13	MT20RA90717G	Ground Water	07/17/2019 0723	07/17/2019 1330
420-157120-14	MT20RA90717D	Ground Water	07/17/2019 0723	07/17/2019 1330
420-157120-15	MT20SA90717G	Ground Water	07/17/2019 0757	07/17/2019 1330
420-157120-16	MT83RA90717G	Ground Water	07/17/2019 1000	07/17/2019 1330
420-157120-17	MT203R90717G	Ground Water	07/17/2019 1052	07/17/2019 1330
420-157120-18	MEQ90717WLID	Water	07/17/2019 1027	07/17/2019 1330

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-157254-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
08/21/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-157254-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-157254-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-157254-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-157254-1	MTBC07180719	Water	07/18/2019 0000	07/19/2019 1205
420-157254-2	MT42RA90718G	Ground Water	07/18/2019 0917	07/19/2019 1205
420-157254-3	MT22SA90718G	Ground Water	07/18/2019 0851	07/19/2019 1205
420-157254-4	M0414R90718G	Ground Water	07/18/2019 1131	07/19/2019 1205
420-157254-5	M0422R90718G	Ground Water	07/18/2019 1256	07/19/2019 1205
420-157254-6	MEQ90718WL1D	Water	07/18/2019 1159	07/19/2019 1205
420-157254-7	CS0043490719	Ground Water	07/19/2019 0514	07/19/2019 1205
420-157254-8	CS0043590719	Ground Water	07/19/2019 0523	07/19/2019 1205
420-157254-9	M0412R90719G	Ground Water	07/19/2019 0827	07/19/2019 1205
420-157254-10	M412RB90719G	Ground Water	07/19/2019 0956	07/19/2019 1205
420-157254-11	CS0019890719	Ground Water	07/19/2019 1031	07/19/2019 1205

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-157371-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
08/21/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-157371-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-157371-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-157371-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-157371-1	MTBC07230724	Water	07/23/2019 0000	07/23/2019 1305
420-157371-2	M0410R90723G	Ground Water	07/23/2019 0723	07/23/2019 1305
420-157371-3	M0410M90723G	Ground Water	07/23/2019 0817	07/23/2019 1305
420-157371-4	M0410M90723D	Ground Water	07/23/2019 0817	07/23/2019 1305
420-157371-5	MT104B90723G	Ground Water	07/23/2019 0942	07/23/2019 1305
420-157371-6	MT104A90723G	Ground Water	07/23/2019 1038	07/23/2019 1305
420-157371-7	MEQ90723WL1D	Water	07/23/2019 0630	07/23/2019 1305

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-159521-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
10/03/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-159521-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-159521-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-159521-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-159521-1	MTBC08300831	Water	08/30/2019 0000	08/30/2019 1330
420-159521-2	M0427R90830G	Water	08/30/2019 1119	08/30/2019 1330

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-161903-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
11/25/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-161903-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	EnvTest	SW846 8082A	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-161903-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
SW846 8082A	Palentino, Gus J	GJP
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation

Job Number: 420-161903-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-161903-1	MTBC10151016	Water	10/15/2019 0000	10/15/2019 1345
420-161903-2	MT08SB91015G	Ground Water	10/15/2019 0525	10/15/2019 1345
420-161903-3	MT315S91015G	Ground Water	10/15/2019 0539	10/15/2019 1345
420-161903-4	M0427R91015G	Ground Water	10/15/2019 0802	10/15/2019 1345
420-161903-5	MT87RA91015G	Ground Water	10/15/2019 0834	10/15/2019 1345
420-161903-6	M0425R91015G	Ground Water	10/15/2019 0845	10/15/2019 1345
420-161903-7	M0423R91015G	Ground Water	10/15/2019 0858	10/15/2019 1345
420-161903-8	MT206R91015G	Ground Water	10/15/2019 0936	10/15/2019 1345
420-161903-9	M0413R91015G	Ground Water	10/15/2019 0953	10/15/2019 1345
420-161903-10	M0405R91015G	Ground Water	10/15/2019 1001	10/15/2019 1345
420-161903-11	M0416R91015G	Ground Water	10/15/2019 1100	10/15/2019 1345

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-162042-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
11/25/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162042-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Cyanide, Total (Semi-Automated Colorimetry)	EnvTest	EPA 335.4 Rev1.0	
Distillation/Cyanide	EnvTest		Distillation
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162042-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 335.4 Rev1.0	Molchon, Renee	RM

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162042-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-162042-1	MTBC10161017	Water	10/16/2019 0000	10/17/2019 1315
420-162042-2	MT43SB91016G	Ground Water	10/16/2019 0701	10/17/2019 1315
420-162042-3	MT208R91016G	Ground Water	10/16/2019 0649	10/17/2019 1315
420-162042-4	MT314S91016G	Ground Water	10/16/2019 0816	10/17/2019 1315
420-162042-5	MT314S91016D	Ground Water	10/16/2019 0816	10/17/2019 1315
420-162042-6	M0415R91016G	Ground Water	10/16/2019 1023	10/17/2019 1315
420-162042-7	MT204R91016G	Ground Water	10/16/2019 1202	10/17/2019 1315
420-162042-8	MEQ91016WLID	Water	10/16/2019 1238	10/17/2019 1315
420-162042-9	M0422R91016G	Ground Water	10/16/2019 1341	10/17/2019 1315
420-162042-10	M0414R91017G	Ground Water	10/17/2019 0756	10/17/2019 1315
420-162042-11	M0417R91017G	Ground Water	10/17/2019 1006	10/17/2019 1315
420-162042-12	MT104B91017G	Ground Water	10/17/2019 1101	10/17/2019 1315
420-162042-13	MT104A91017G	Ground Water	10/17/2019 1209	10/17/2019 1315
420-162042-14	MEQ91017WLID	Water	10/17/2019 0627	10/17/2019 1315

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-162118-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
11/25/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162118-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162118-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Luis, Carlos	CL
EPA 245.1 Rev.3.0	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162118-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-162118-1	MTBC10181018	Water	10/18/2019 0000	10/18/2019 1212
420-162118-2	CS0043491018	Ground Water	10/18/2019 0531	10/18/2019 1212
420-162118-3	CS0043591018	Ground Water	10/18/2019 0540	10/18/2019 1212
420-162118-4	MT57SA91018G	Ground Water	10/18/2019 0626	10/18/2019 1212
420-162118-5	M0410R91018G	Ground Water	10/18/2019 0744	10/18/2019 1212
420-162118-6	M0410M91018G	Ground Water	10/18/2019 0831	10/18/2019 1212
420-162118-7	MT203R91018G	Ground Water	10/18/2019 0936	10/18/2019 1212
420-162118-8	MEQ91018WLID	Water	10/18/2019 0858	10/18/2019 1212

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-162278-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
11/25/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162278-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Total Metals Digestion for 200.7	EnvTest		EPA 200.7 Rev 4.4
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	EnvTest	SW846 8082A	
Separatory Funnel Liquid-Liquid Extraction	EnvTest		SW846 3510C

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162278-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA
SW846 8082A	Palentino, Gus J	GJP
EPA 200.7 Rev 4.4	Luis, Carlos	CL

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-162278-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-162278-1	MTBC10221023	Water	10/22/2019 0000	10/23/2019 1320
420-162278-2	M412RB91022G	Ground Water	10/22/2019 1026	10/23/2019 1320
420-162278-3	M0412R91022G	Ground Water	10/22/2019 1119	10/23/2019 1320
420-162278-4	MT83RA91022G	Ground Water	10/22/2019 1316	10/23/2019 1320
420-162278-5	MEQ91022PUMP	Water	10/22/2019 0924	10/23/2019 1320
420-162278-6	MT20RA91023G	Ground Water	10/23/2019 0656	10/23/2019 1320
420-162278-7	MT20SA91023G	Ground Water	10/23/2019 0751	10/23/2019 1320
420-162278-8	MT42RA91023G	Ground Water	10/23/2019 1047	10/23/2019 1320
420-162278-9	MT22SA91023G	Ground Water	10/23/2019 1019	10/23/2019 1320
420-162278-10	CS0019891023	Ground Water	10/23/2019 1131	10/23/2019 1320

EnviroTest Laboratories Inc.

ANALYTICAL REPORT

Job Number: 420-163079-1

Job Description: 97001.01 IBM Poughkeepsie

For:
Groundwater Sciences Corporation
560 Route 52
Suite 202
Beacon, NY 12508

Attention: Ms. Dorothy Bergmann

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com
11/25/2019

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-163079-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Aromatic and Halogenated VOCs by Gas Chromatography using PID or ELCD	EnvTest	SW846 8021B	
Purge-and-Trap	EnvTest		SW846 5030C

Lab References:

EnvTest = EnviroTest

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-163079-1

Method	Analyst	Analyst ID
SW846 8021B	Andersen, Eric C	ECA

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 420-163079-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-163079-1	MTBC11081108	Water	11/08/2019 0000	11/08/2019 1310
420-163079-2	MT49RA91108G	Ground Water	11/08/2019 0842	11/08/2019 1310
420-163079-3	MT101R91108G	Ground Water	11/08/2019 0941	11/08/2019 1310

C-5: Field QA/QC Results

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK
Sample Description		WTR LVL IND	WTR LVL IND	WTR LVL IND	NON DED PUMP	WTR LVL IND	NON DED BALR
Sample Date		01/17/2019	01/18/2019	01/23/2019	01/24/2019	01/25/2019	01/29/2019
Laboratory Sample I.D.		420148330-18	420148377-2	420148547-6	420148547-7	420148603-2	420148684-4
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	ND@1	NA
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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK
Sample Description		WTR LVL IND	WTR LVL IND	WTR LVL IND	NON DED PUMP	WTR LVL IND	NON DED BALR
Sample Date		01/17/2019	01/18/2019	01/23/2019	01/24/2019	01/25/2019	01/29/2019
Laboratory Sample I.D.		420148330-18	420148377-2	420148547-6	420148547-7	420148603-2	420148684-4
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA	NA	NA	ND@1	NA
METHYLENE CHLORIDE	ug/l	0.50 J	0.65 J	0.45 J	0.39 J	ND@1	0.34 J
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	NA	NA	NA	NA	ND@1	NA
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	NA	NA	NA	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK
Sample Description		WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	NON DED PUMP
Sample Date		04/10/2019	04/11/2019	04/12/2019	04/17/2019	04/18/2019	04/19/2019
Laboratory Sample I.D.		420152234-10	420152234-16	420152303-7	420152548-3	420152548-12	420152603-5
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	NA	NA
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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK
Sample Description		WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	NON DED PUMP
Sample Date		04/10/2019	04/11/2019	04/12/2019	04/17/2019	04/18/2019	04/19/2019
Laboratory Sample I.D.		420152234-10	420152234-16	420152303-7	420152548-3	420152548-12	420152603-5
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK
Sample Description		WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND
Sample Date		04/23/2019	04/24/2019	07/17/2019	07/18/2019	07/23/2019	10/16/2019
Laboratory Sample I.D.		420152652-9	420152756-6	420157120-18	420157254-6	420157371-7	420162042-8
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	NA	ND@1	NA
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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK
Sample Description		WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND	WTR LVL IND
Sample Date		04/23/2019	04/24/2019	07/17/2019	07/18/2019	07/23/2019	10/16/2019
Laboratory Sample I.D.		420152652-9	420152756-6	420157120-18	420157254-6	420157371-7	420162042-8
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA	NA	NA	ND@1	NA
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	NA	NA	NA	NA	ND@1	NA
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	NA	NA	NA	NA	ND@1	NA

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		WTR LVL IND	WTR LVL IND	NON DED PUMP	1/16-17/19	1/18/2019	1/23-24/19
Sample Date		10/17/2019	10/18/2019	10/22/2019	01/16/2019	01/18/2019	01/23/2019
Laboratory Sample I.D.		420162042-14	420162118-8	420162278-5	420148330-1	420148377-1	420148547-1
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	ND@1	NA	NA
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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		EQ RINSE BLK	EQ RINSE BLK	EQ RINSE BLK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		WTR LVL IND	WTR LVL IND	NON DED PUMP	1/16-17/19	1/18/2019	1/23-24/19
Sample Date		10/17/2019	10/18/2019	10/22/2019	01/16/2019	01/18/2019	01/23/2019
Laboratory Sample I.D.		420162042-14	420162118-8	420162278-5	420148330-1	420148377-1	420148547-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA	NA	ND@1	NA	NA
METHYLENE CHLORIDE	ug/l	ND@1	ND@1	ND@1	ND@1	0.36 J	ND@1
TETRACHLOROETHYLENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
TOLUENE	ug/l	NA	NA	NA	ND@1	NA	NA
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	NA	NA	NA	ND@1	NA	NA

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		1/25/2019	1/29-30/19	4/09-10/19	4/10-11/19	4/12/2019	4/17-18/19
Sample Date		01/25/2019	01/29/2019	04/09/2019	04/10/2019	04/12/2019	04/17/2019
Laboratory Sample I.D.		420148603-1	420148684-1	420152074-1	420152234-1	420152303-1	420152548-1
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	NA	ND@1	NA	NA	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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		1/25/2019	1/29-30/19	4/09-10/19	4/10-11/19	4/12/2019	4/17-18/19
Sample Date		01/25/2019	01/29/2019	04/09/2019	04/10/2019	04/12/2019	04/17/2019
Laboratory Sample I.D.		420148603-1	420148684-1	420152074-1	420152234-1	420152303-1	420152548-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	ND@1	NA	NA	ND@1
METHYLENE CHLORIDE	ug/l	0.33 J	0.34 J	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	NA	ND@1	NA	NA	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	NA	ND@1	NA	NA	ND@1

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		4/19/2019	4/23-24/19	4/24-25/19	7/16-17/19	7/18-19/19	7/23-24/19
Sample Date		04/19/2019	04/23/2019	04/24/2019	07/16/2019	07/18/2019	07/23/2019
Laboratory Sample I.D.		420152603-1	420152652-1	420152756-1	420157120-1	420157254-1	420157371-1
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	NA	NA	NA	ND@1	NA	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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		4/19/2019	4/23-24/19	4/24-25/19	7/16-17/19	7/18-19/19	7/23-24/19
Sample Date		04/19/2019	04/23/2019	04/24/2019	07/16/2019	07/18/2019	07/23/2019
Laboratory Sample I.D.		420152603-1	420152652-1	420152756-1	420157120-1	420157254-1	420157371-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	NA	NA	ND@1	NA	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	NA	NA	NA	ND@1	NA	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	NA	NA	NA	ND@1	NA	ND@1

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		8/30-31/19	10/15-16/19	10/16-17/19	10/18/2019	10/22-23/19	11/8/2019
Sample Date		08/30/2019	10/15/2019	10/16/2019	10/18/2019	10/22/2019	11/08/2019
Laboratory Sample I.D.		420159521-1	420161903-1	420162042-1	420162118-1	420162278-1	420163079-1
Sample Comment Codes							
Parameter	**Units**						
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
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
1-CHLOROHEXANE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
2-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
4-CHLOROTOLUENE	ug/l	ND@1	ND@1	ND@1	ND@1	ND@1	ND@1
BENZENE	ug/l	ND@1	ND@1	NA	ND@1	NA	NA
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

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

Sample Location		TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sample Description		8/30-31/19	10/15-16/19	10/16-17/19	10/18/2019	10/22-23/19	11/8/2019
Sample Date		08/30/2019	10/15/2019	10/16/2019	10/18/2019	10/22/2019	11/08/2019
Laboratory Sample I.D.		420159521-1	420161903-1	420162042-1	420162118-1	420162278-1	420163079-1
Sample Comment Codes							
Parameter	**Units**						
Volatile Organics							
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	NA	ND@1	NA	NA
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	NA	ND@1	NA	NA
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	NA	ND@1	NA	NA

IBM Poughkeepsie Main Plant Site
Field Quality Assurance/Control Data Report
January 1, 2019 - December 31, 2019

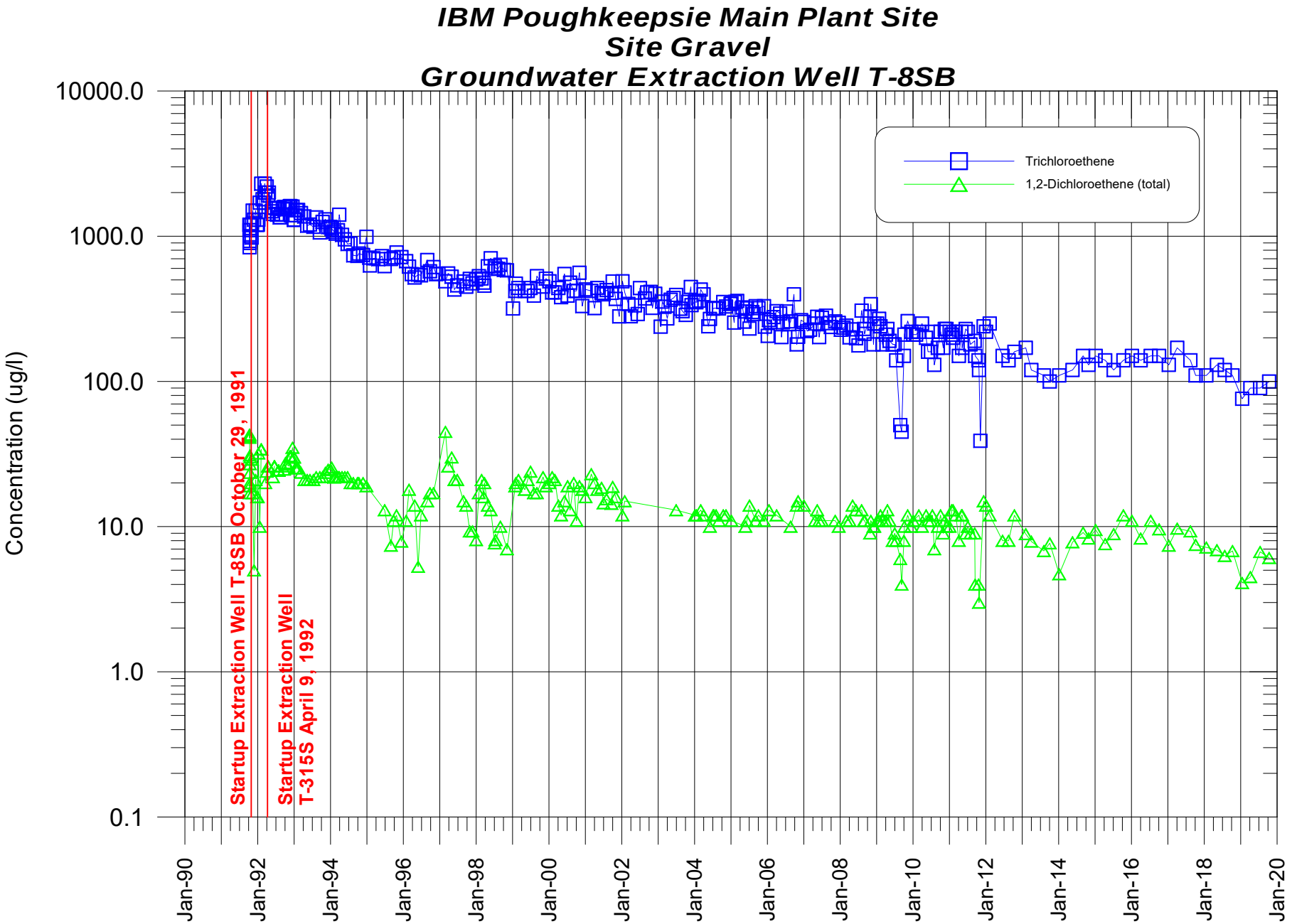
Explanation of Reporting Conventions and Key to Comment Codes

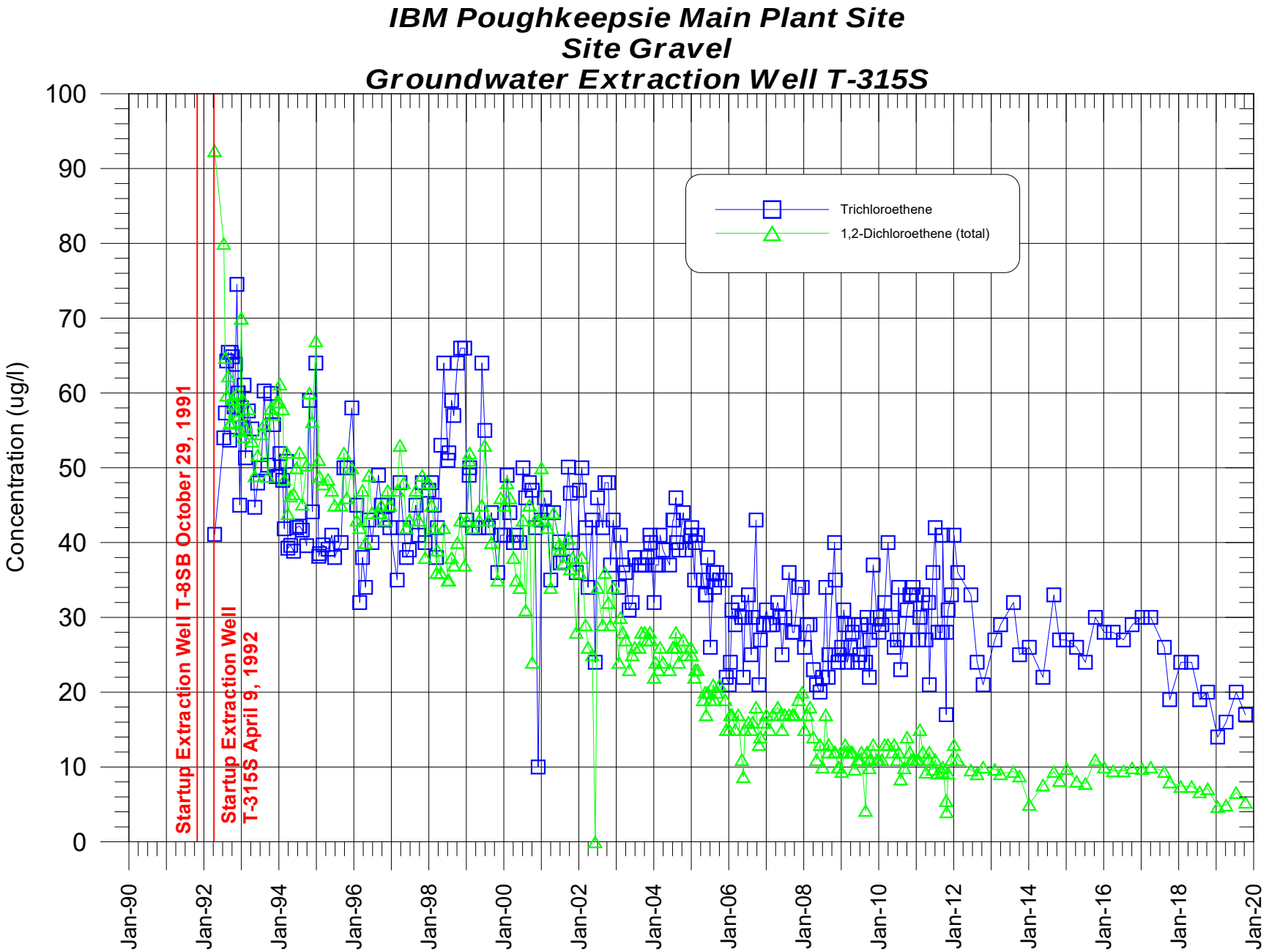
Reporting Conventions

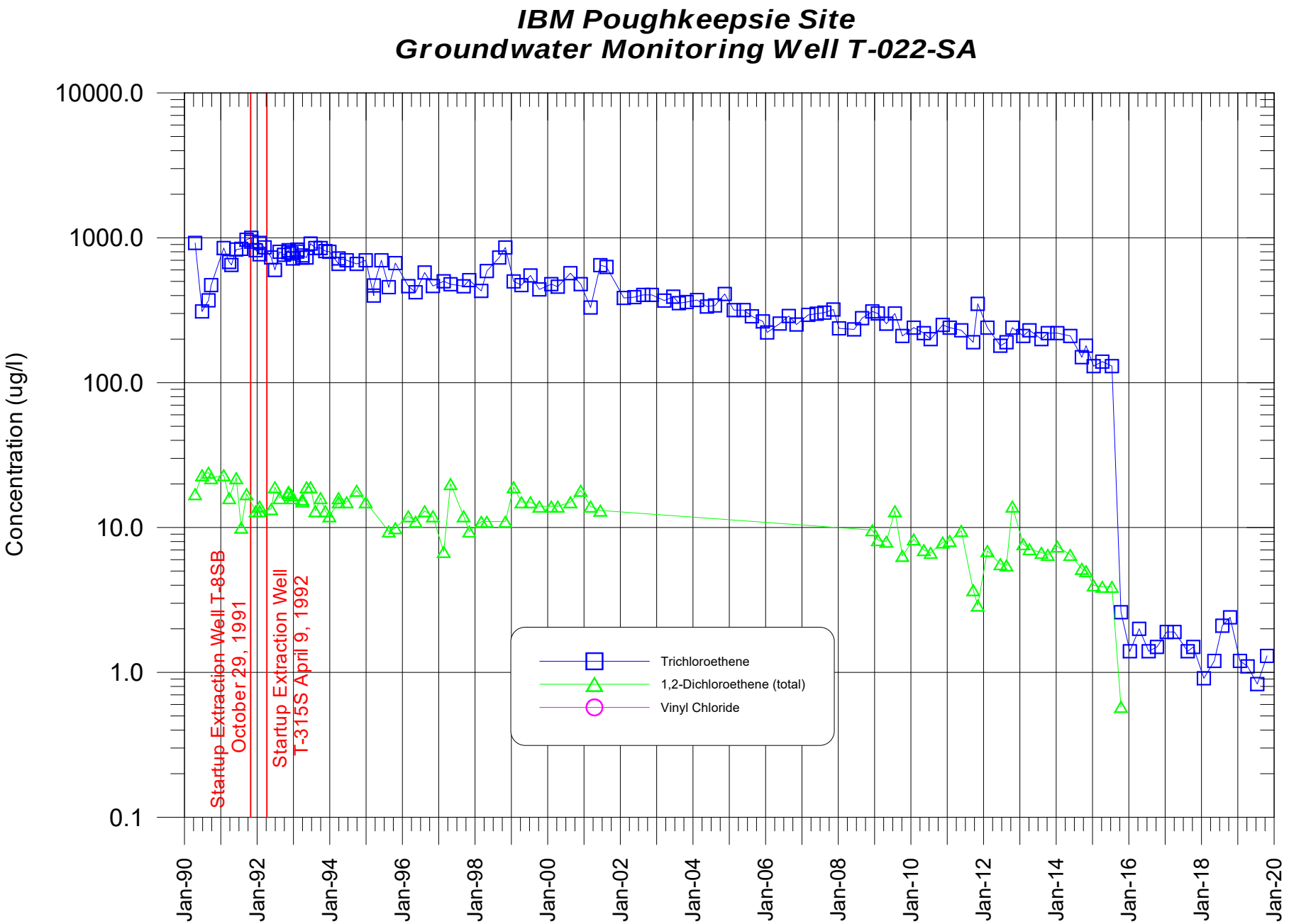
NA	Not Analyzed
ND@X	Not Detected at Detection Limit X

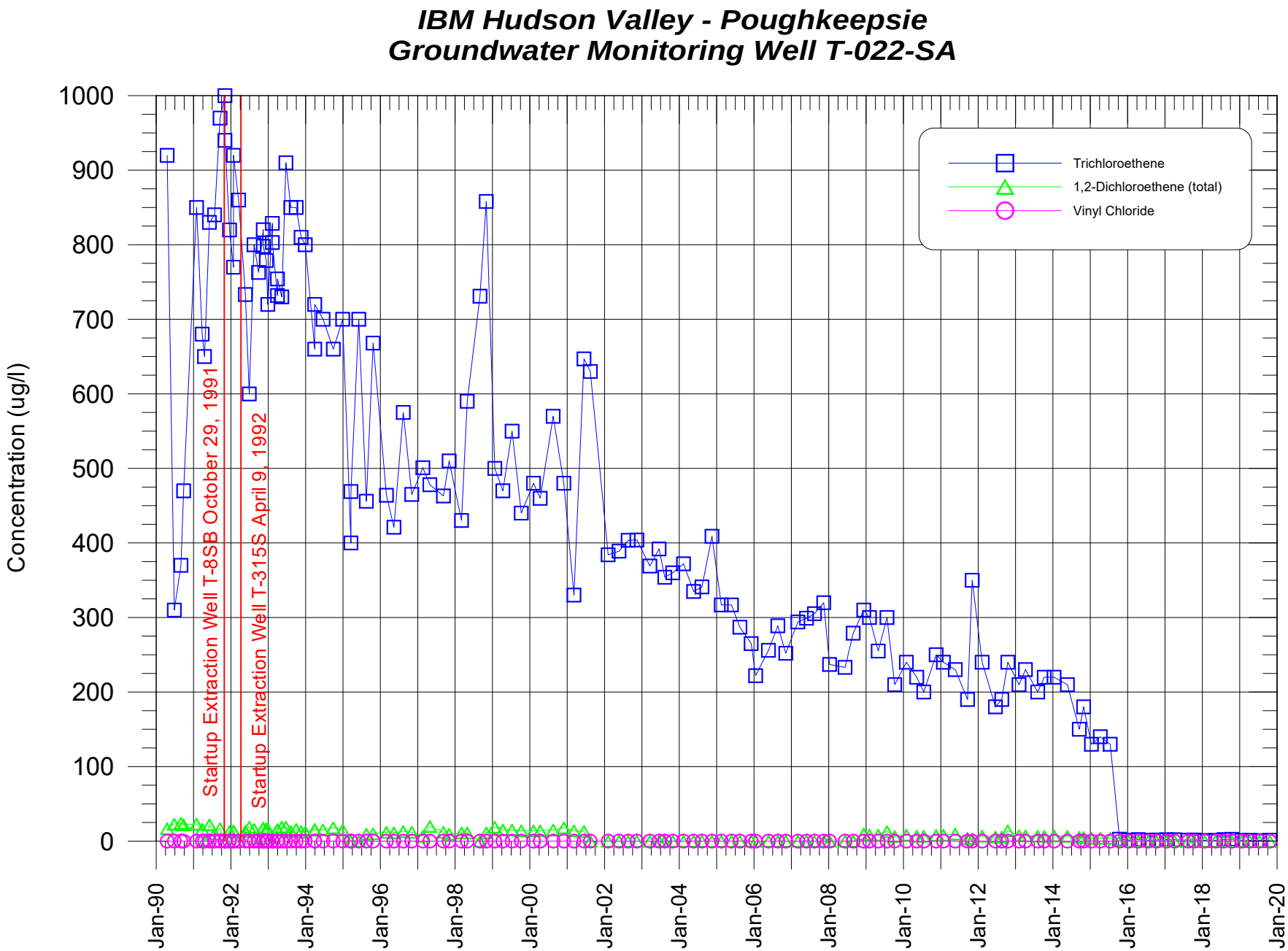
Code	Explanation
J	Estimated value - compound meets identification criteria, but result is less than the reporting limit

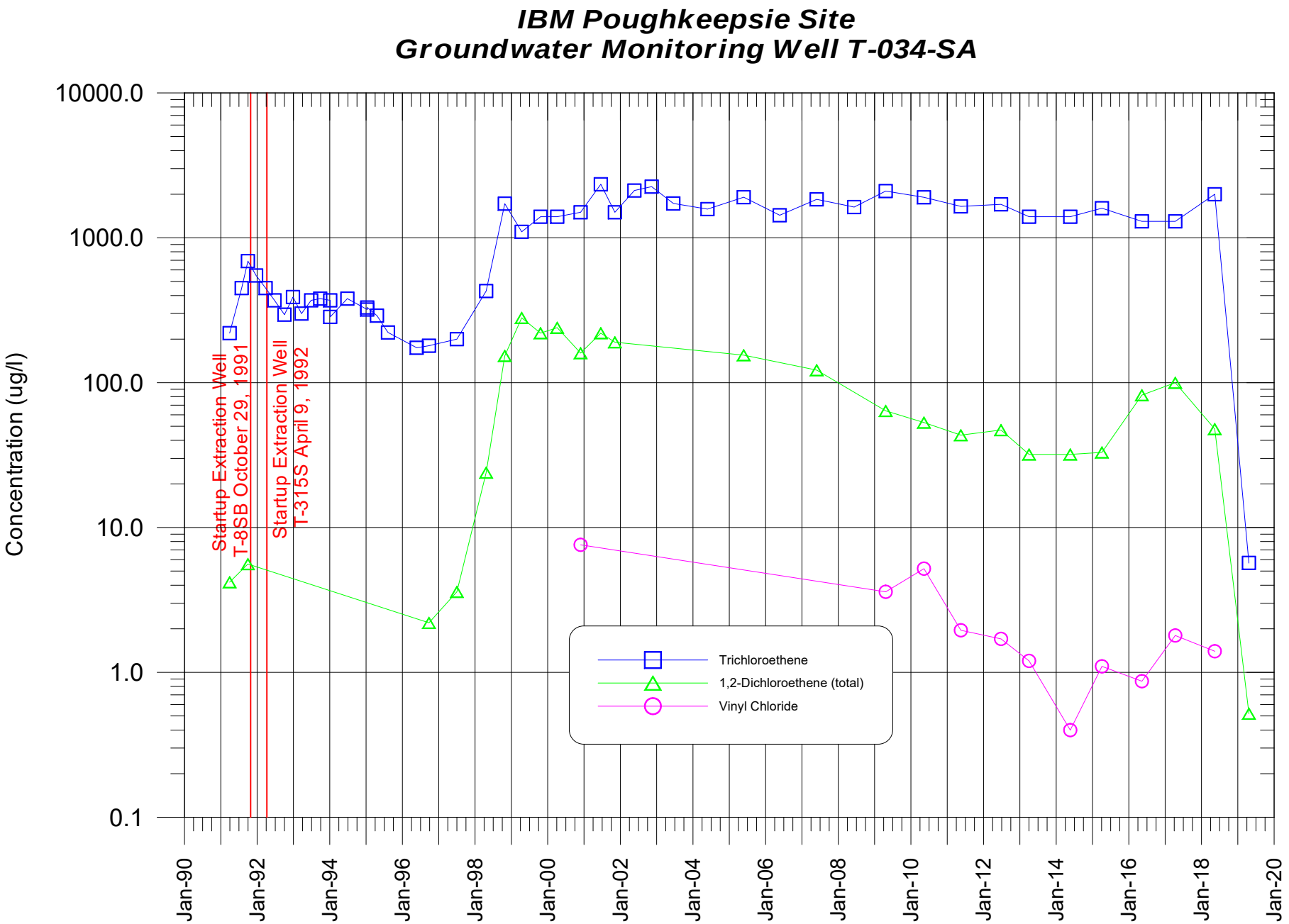
C-6: Time versus Concentration Graphs

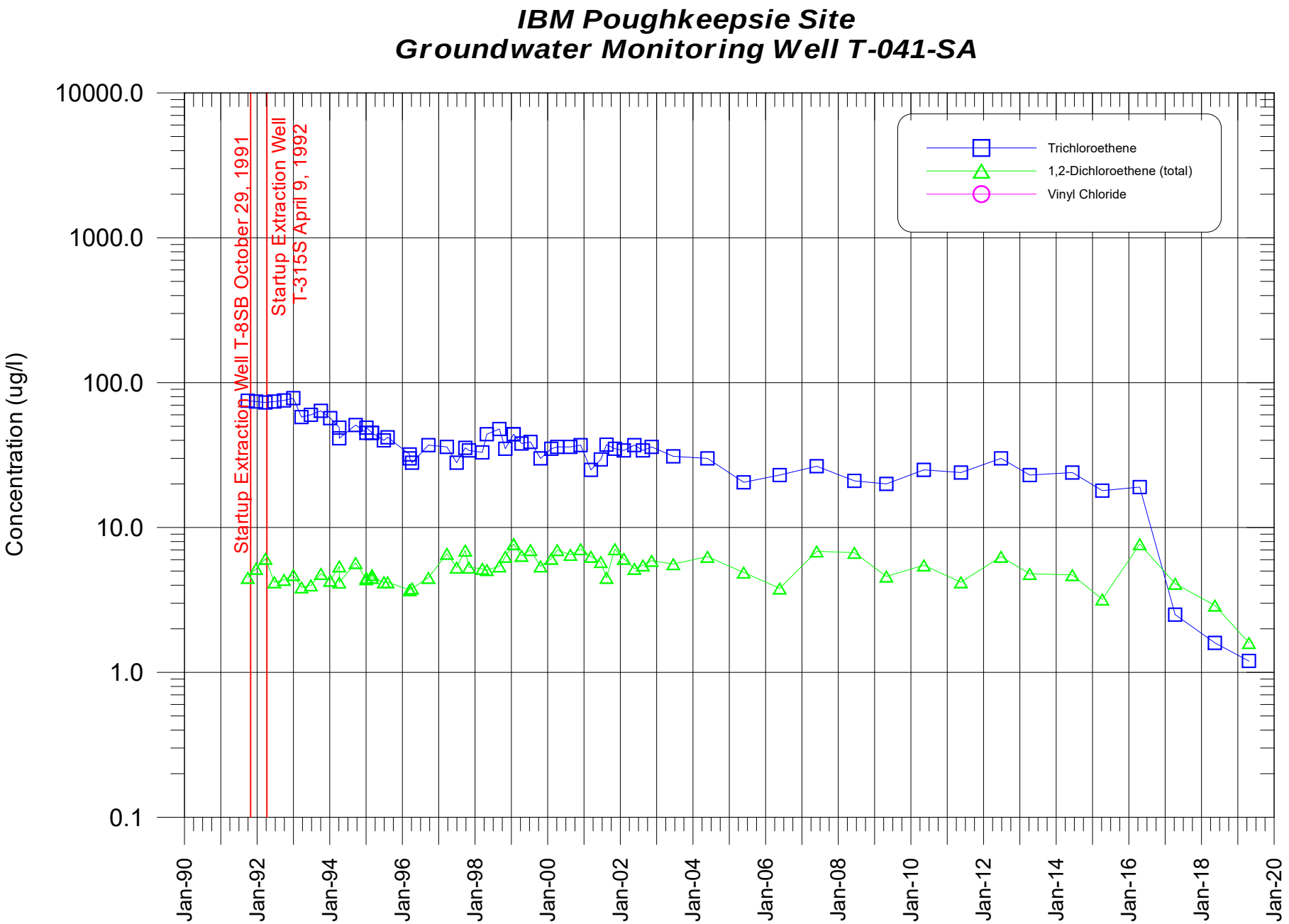

IBM Poughkeepsie Main Plant Site
Site Gravel
Groundwater Extraction Well T-8SB
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Trichloroethene
1,2-Dichloroethene (total)
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20

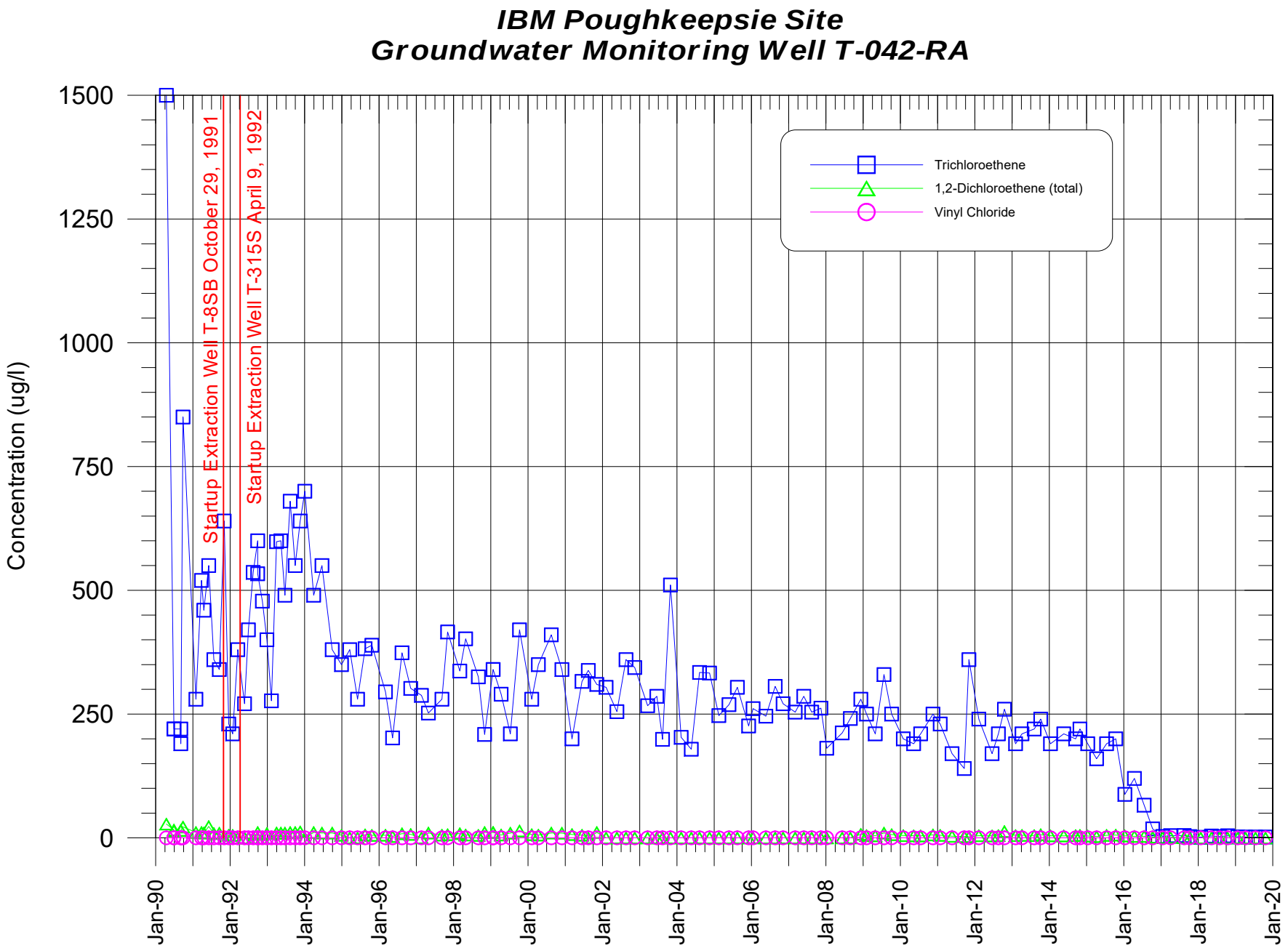

IBM Poughkeepsie Main Plant Site
Site Gravel
Groundwater Extraction Well T-315S
Concentration (ug/l)
100
90
80
70
60
50
40
30
20
10
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992

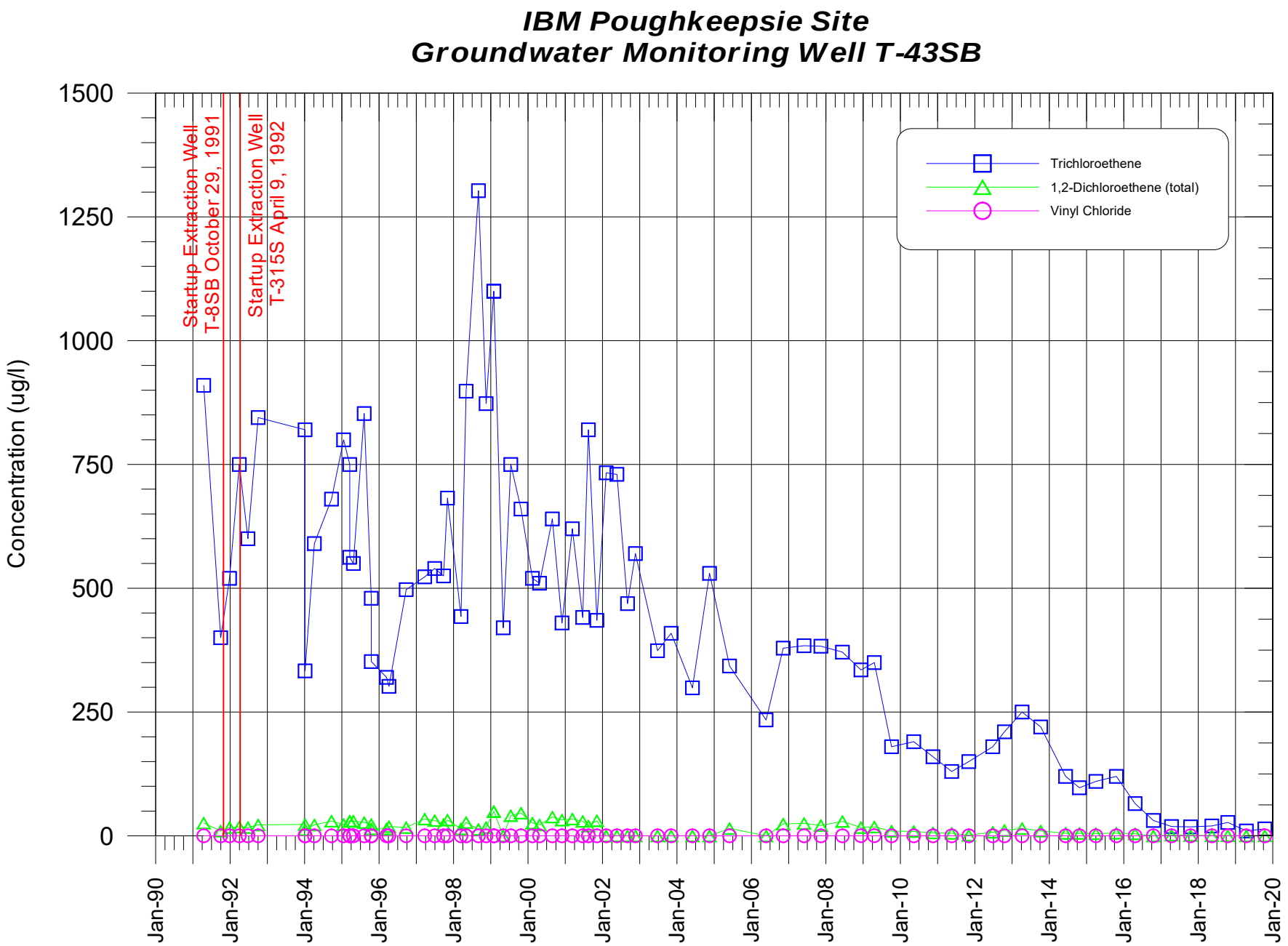

IBM Poughkeepsie Site
Groundwater Monitoring Well T-022-SA
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB
October 29, 1991
Startup Extraction Well
T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

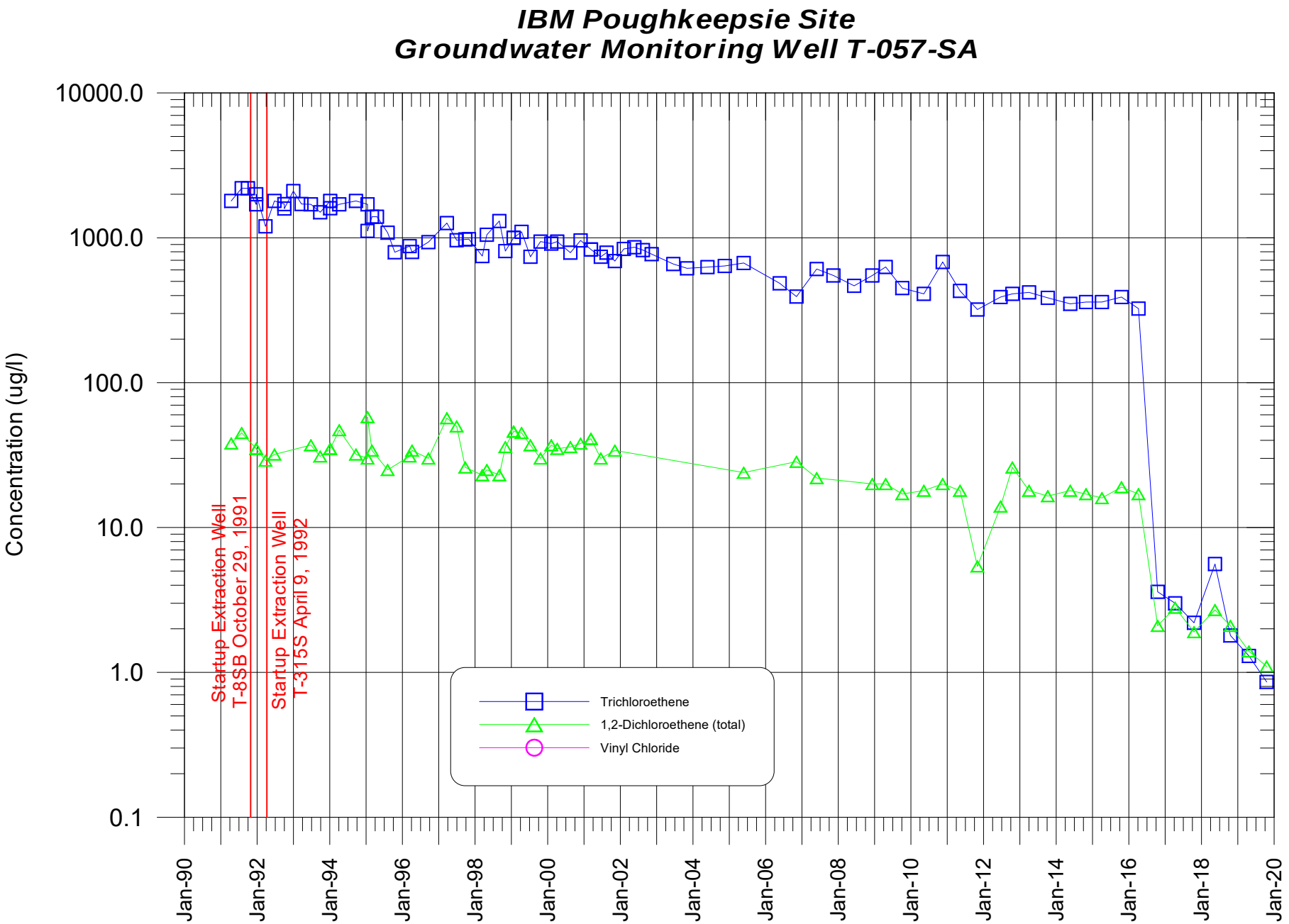

IBM Hudson Valley - Poughkeepsie
Groundwater Monitoring Well T-022-SA
Concentration (ug/l)
1000
900
800
700
600
500
400
300
200
100
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992

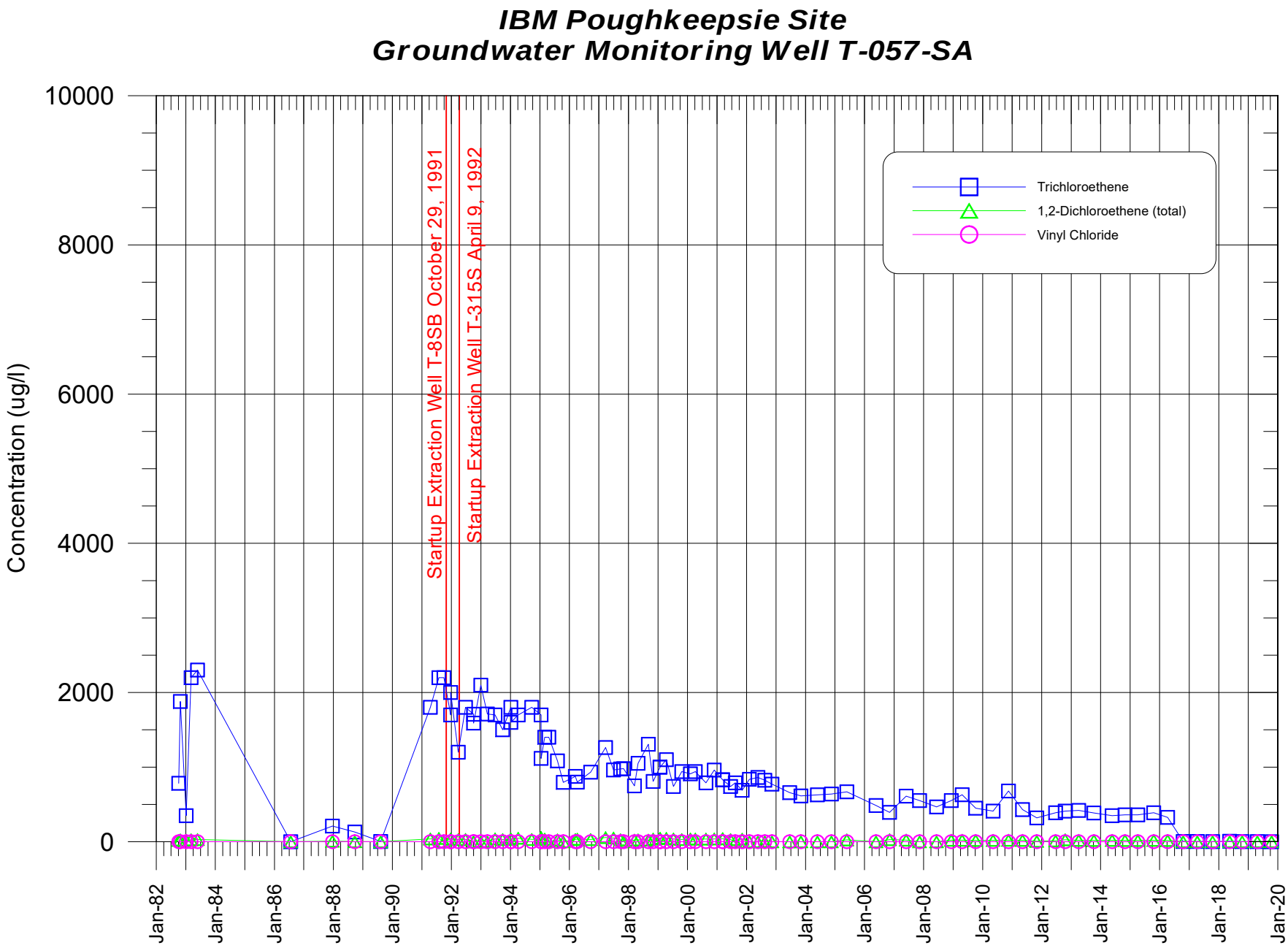

IBM Poughkeepsie Site
Groundwater Monitoring Well T-034-SA
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well
T-8SB October 29, 1991
Startup Extraction Well
T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

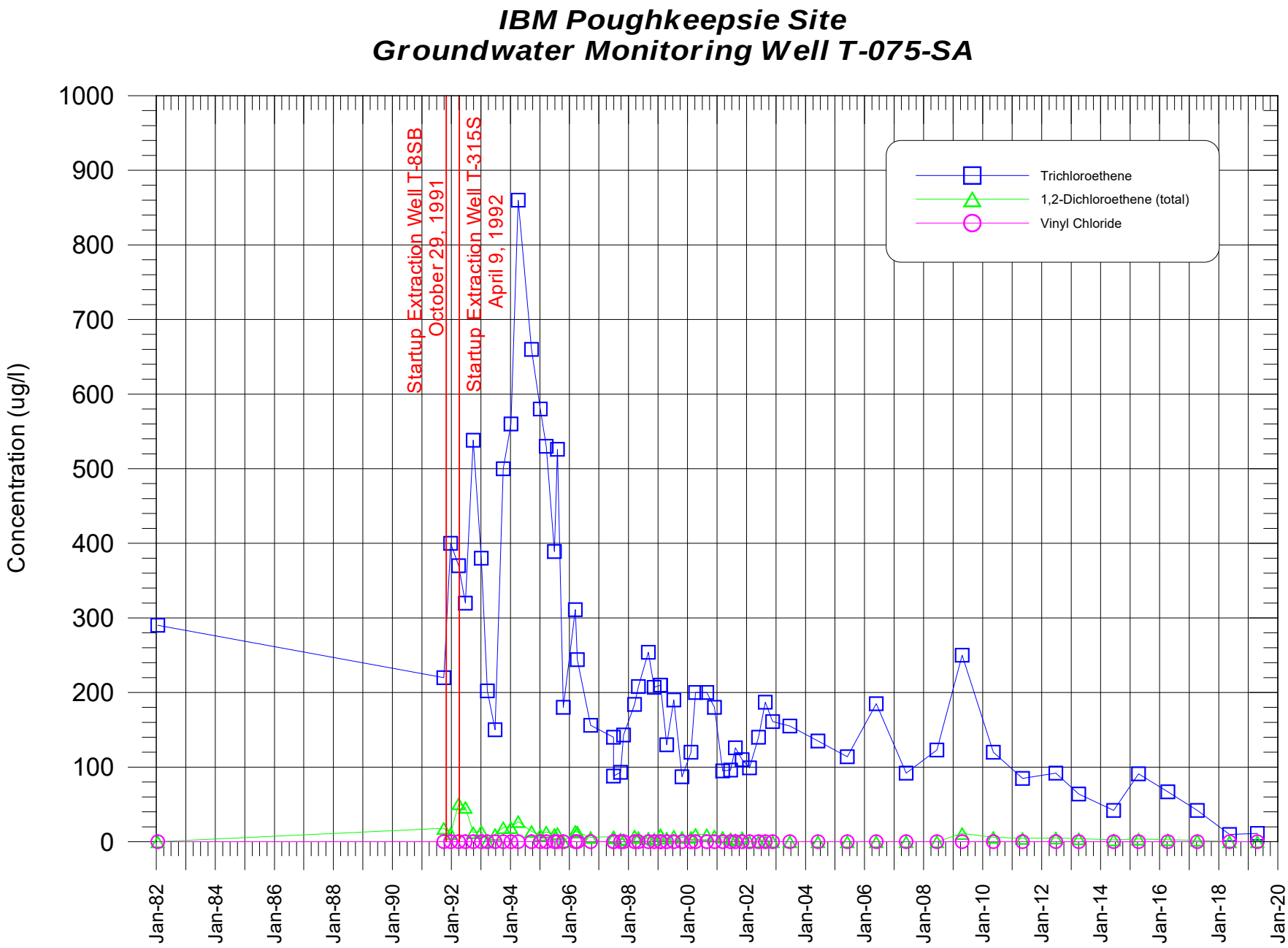

IBM Poughkeepsie Site
Groundwater Monitoring Well T-041-SA
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride


IBM Poughkeepsie Site
Groundwater Monitoring Well T-042-RA
Concentration (ug/l)
1500
1250
1000
750
500
250
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

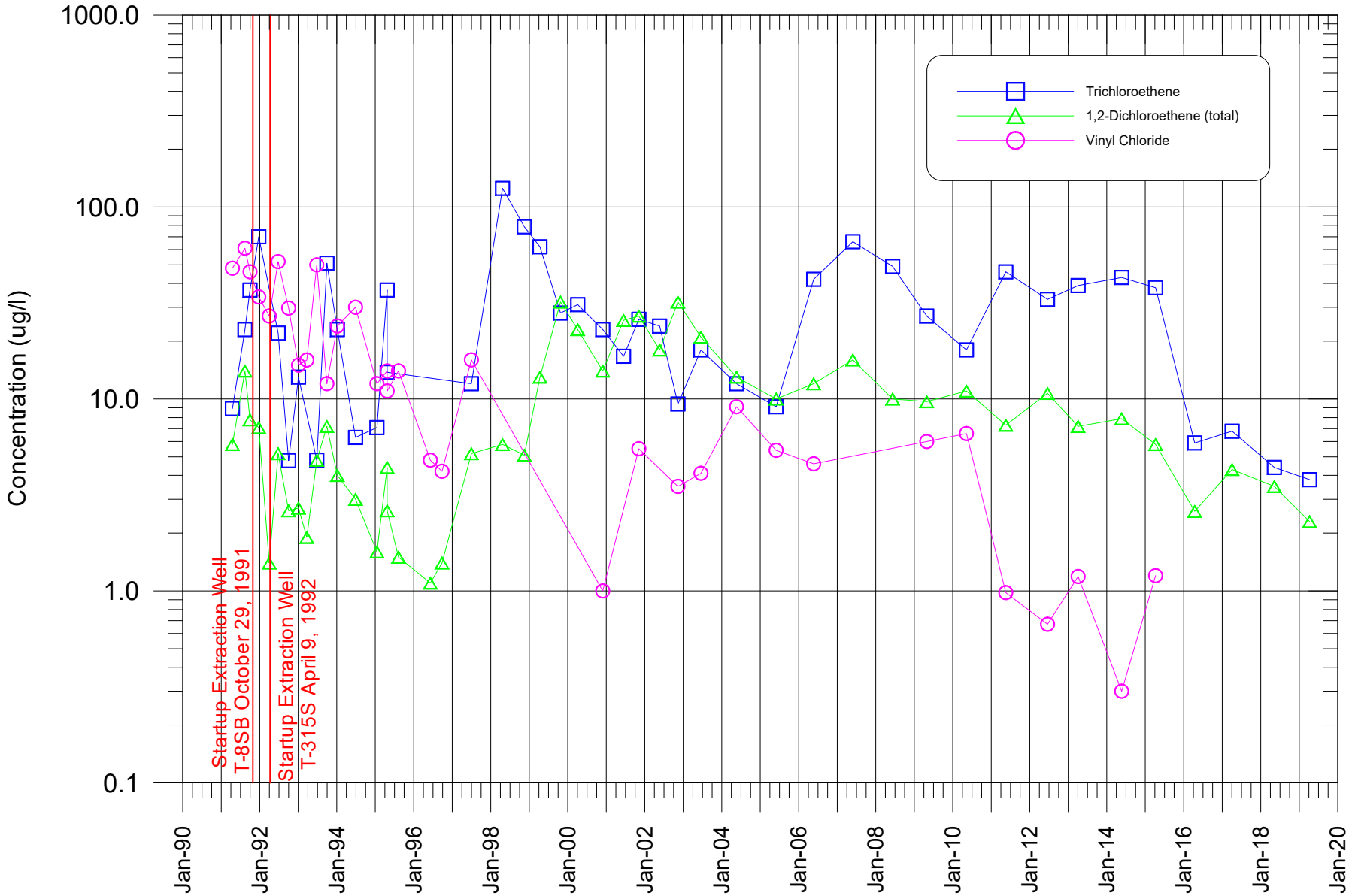

IBM Poughkeepsie Site
Groundwater Monitoring Well T-43SB
Concentration (ug/l)
1500
1250
1000
750
500
250
0
Startup Extraction Well
T-8SB October 29, 1991
Startup Extraction Well
T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20


IBM Poughkeepsie Site
Groundwater Monitoring Well T-057-SA
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well
T-8SB October 29, 1991
Startup Extraction Well
T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

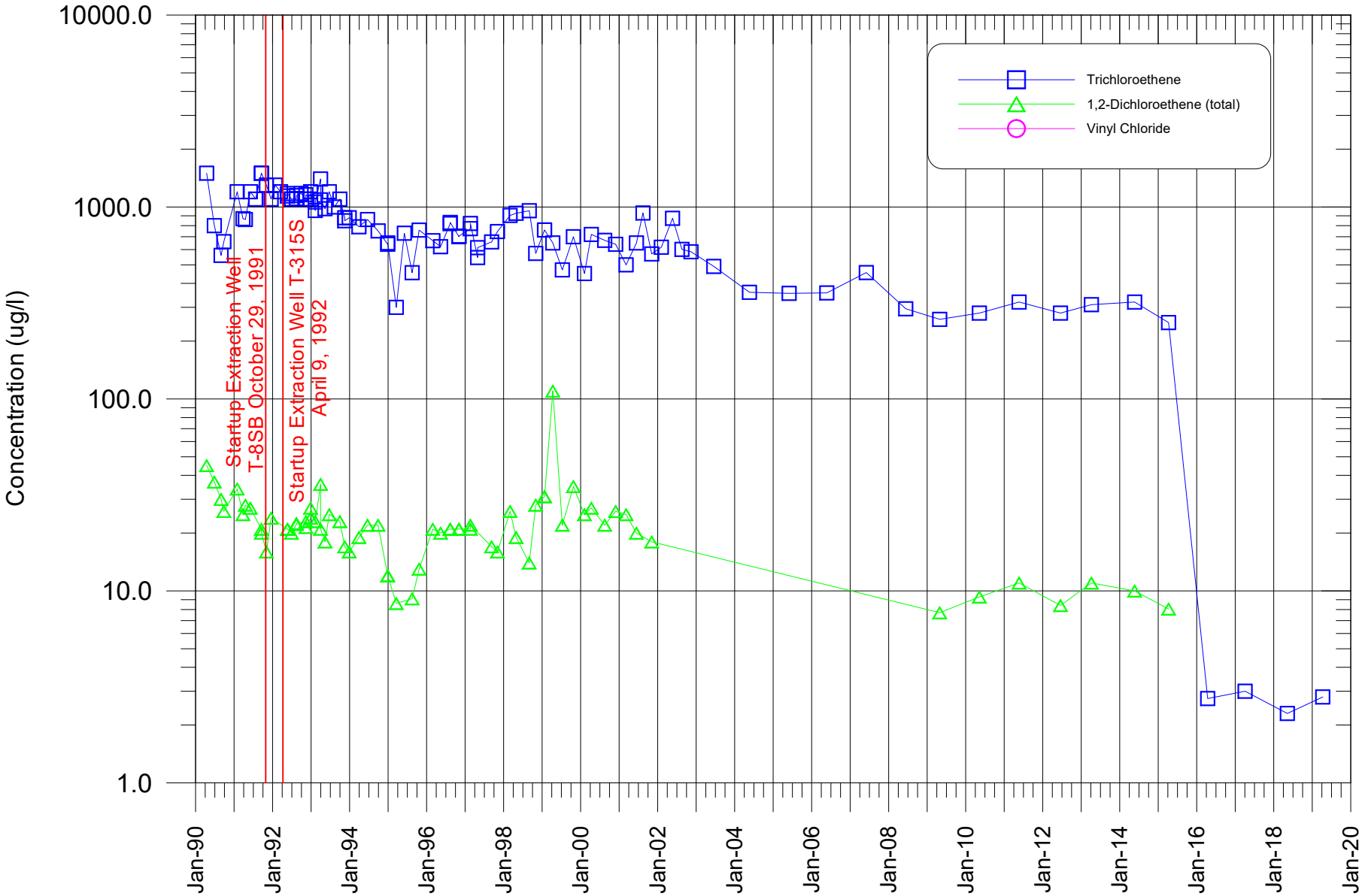

IBM Poughkeepsie Site
Groundwater Monitoring Well T-057-SA
Concentration (ug/l)
10000
8000
6000
4000
2000
0
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

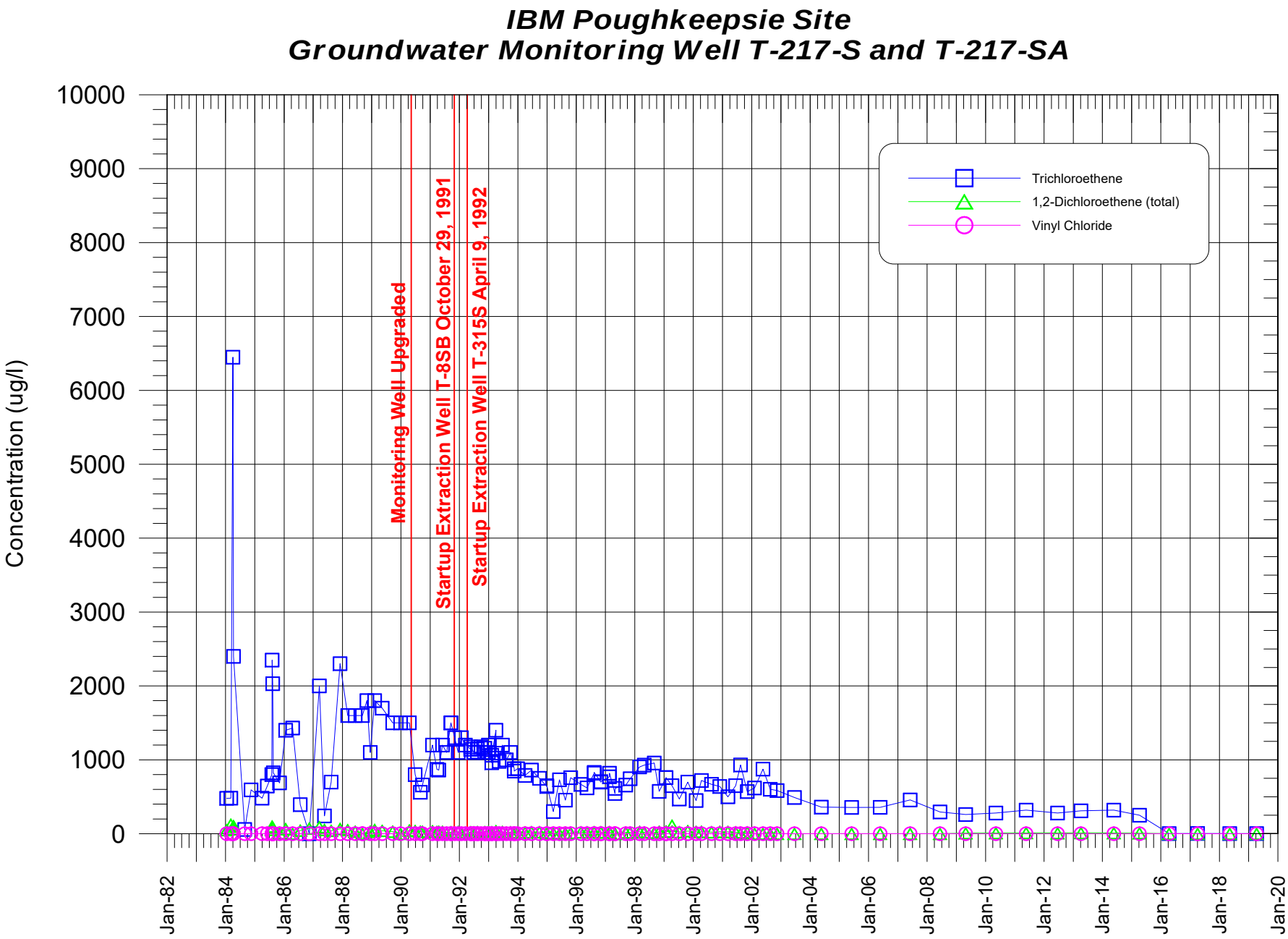

IBM Poughkeepsie Site
Groundwater Monitoring Well T-075-SA
Concentration (ug/l)
1000
900
800
700
600
500
400
300
200
100
0
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB
October 29, 1991
Startup Extraction Well T-315S
April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

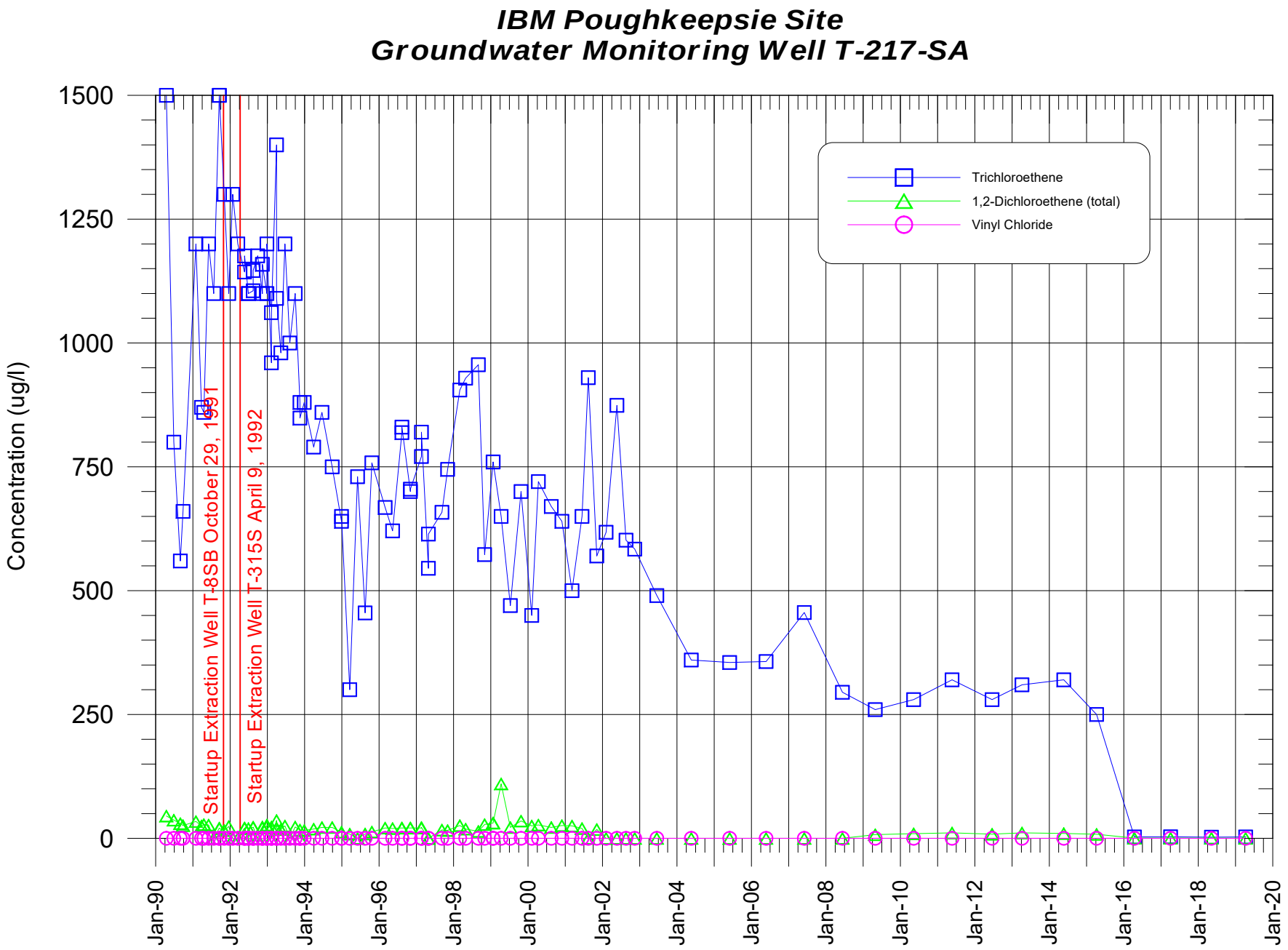
IBM Poughkeepsie Site
Groundwater Monitoring Well T-085-RB

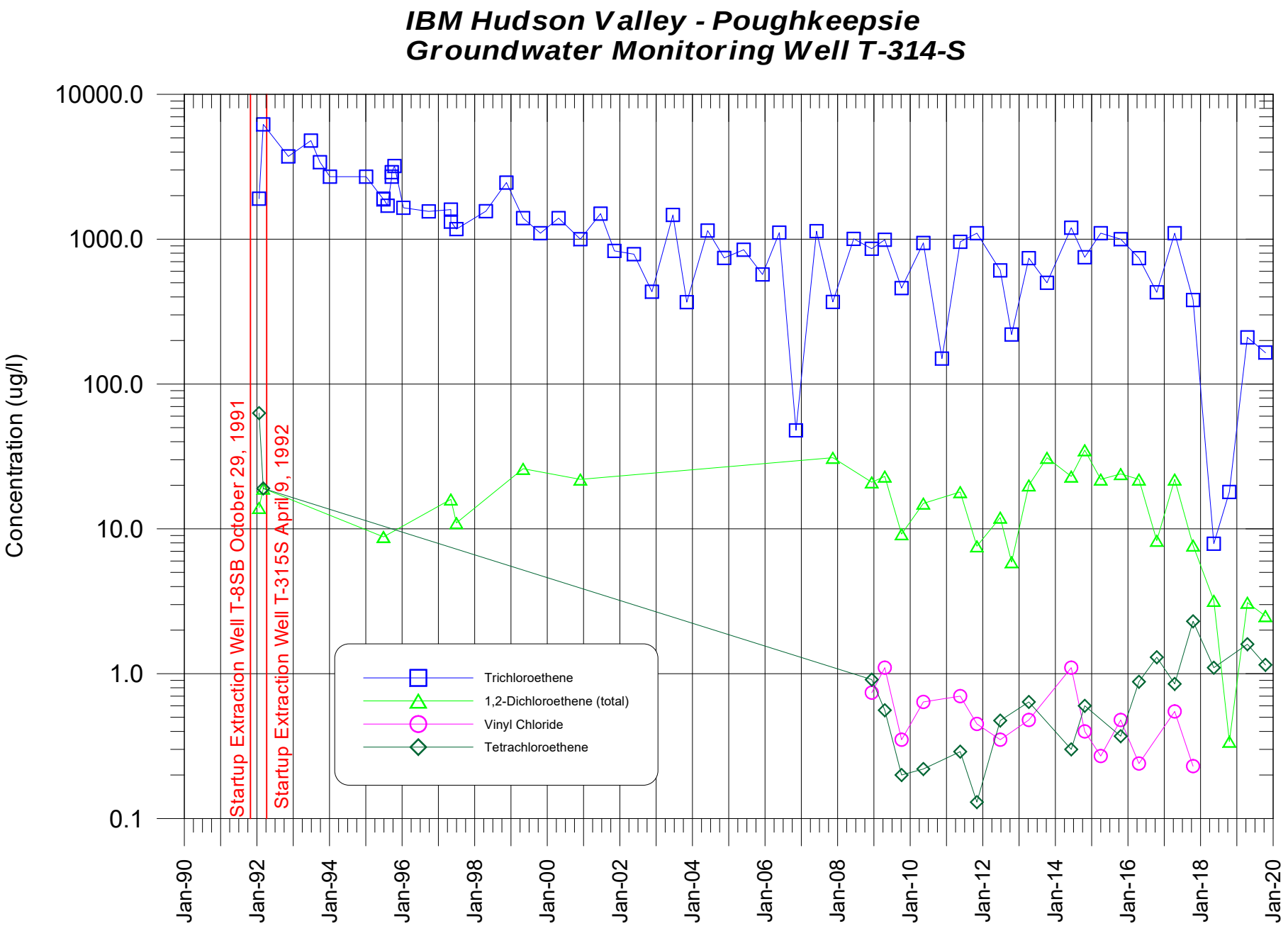


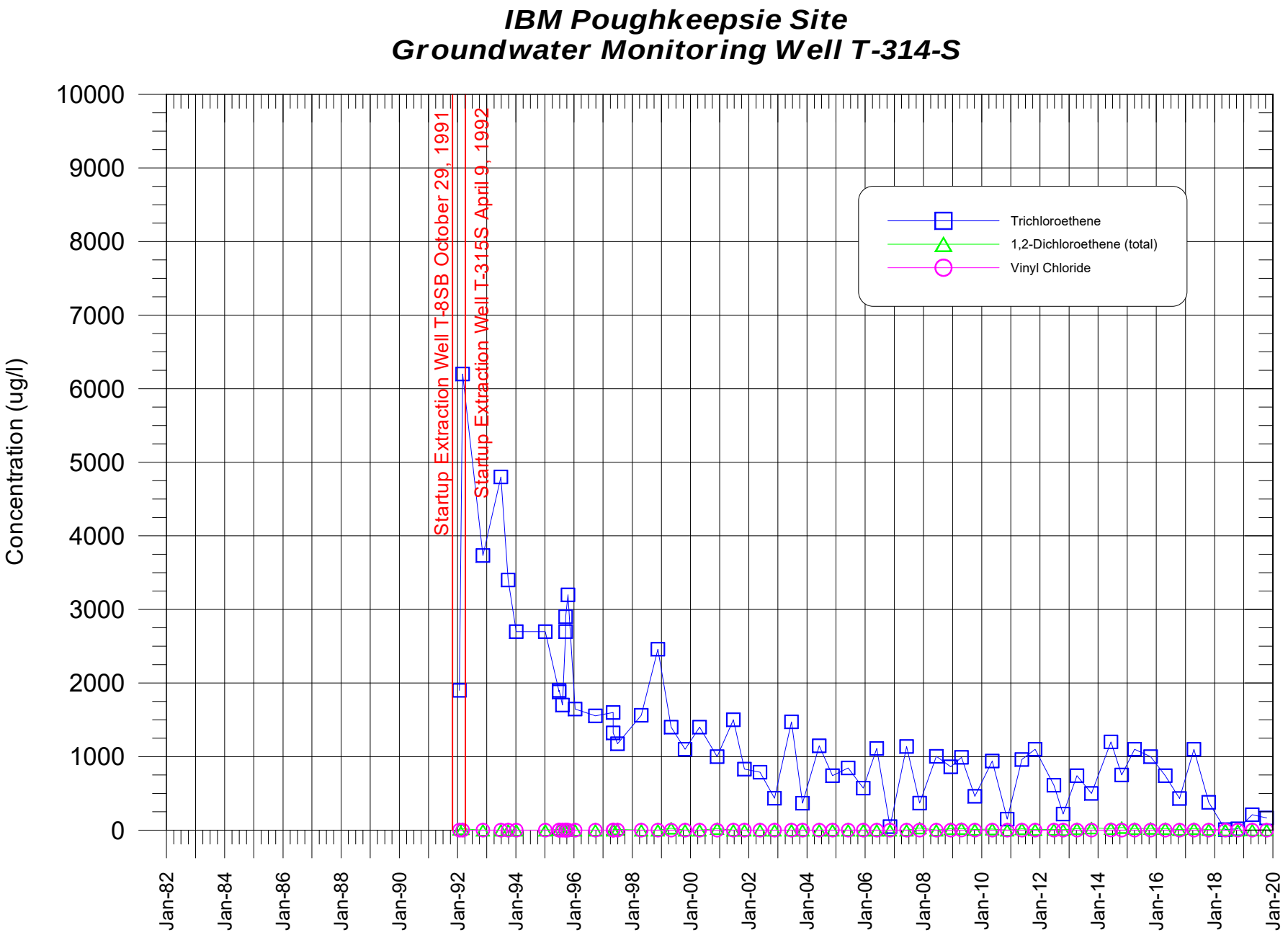
IBM Poughkeepsie Site
Groundwater Monitoring Well T-217-SA

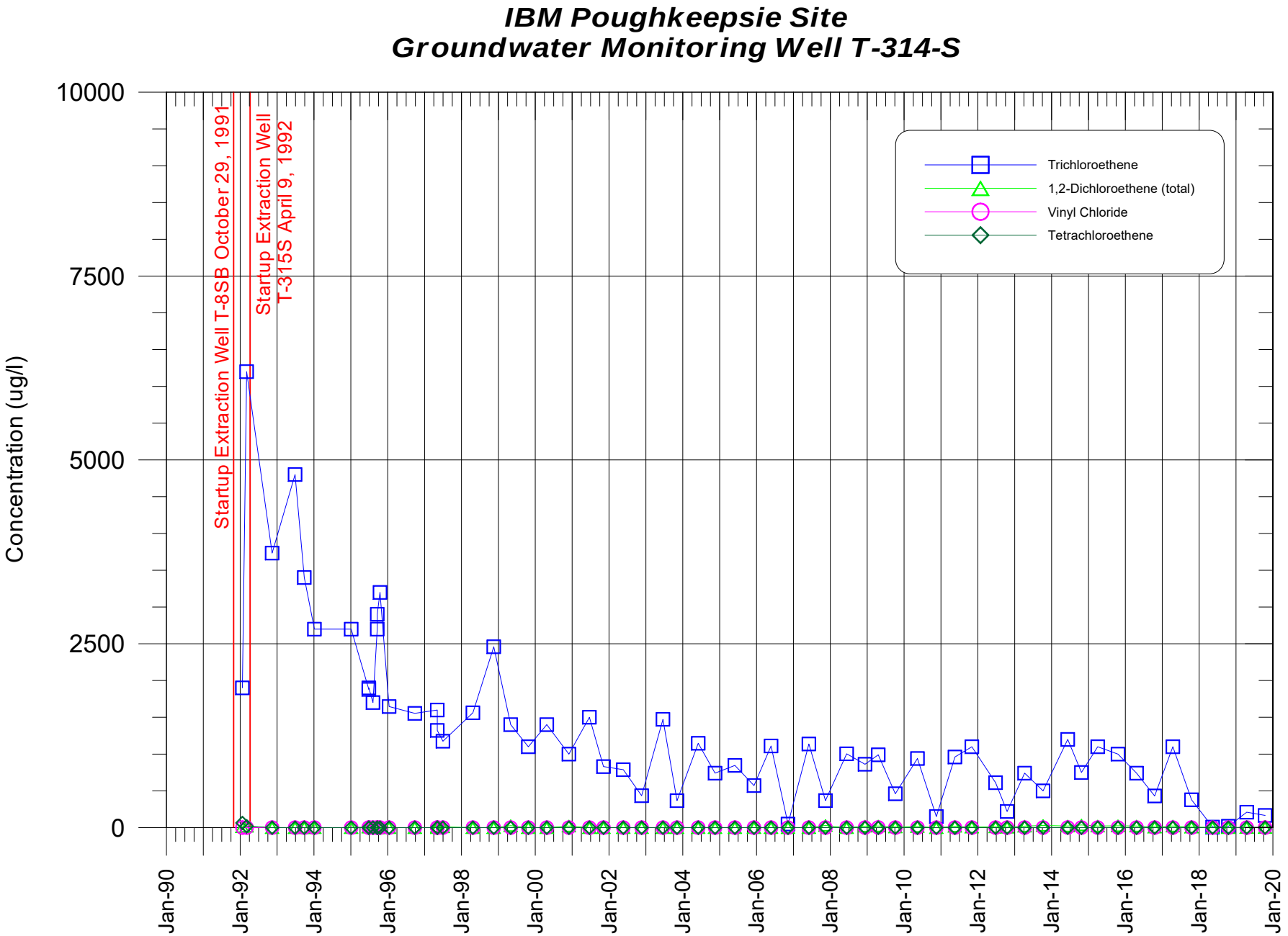


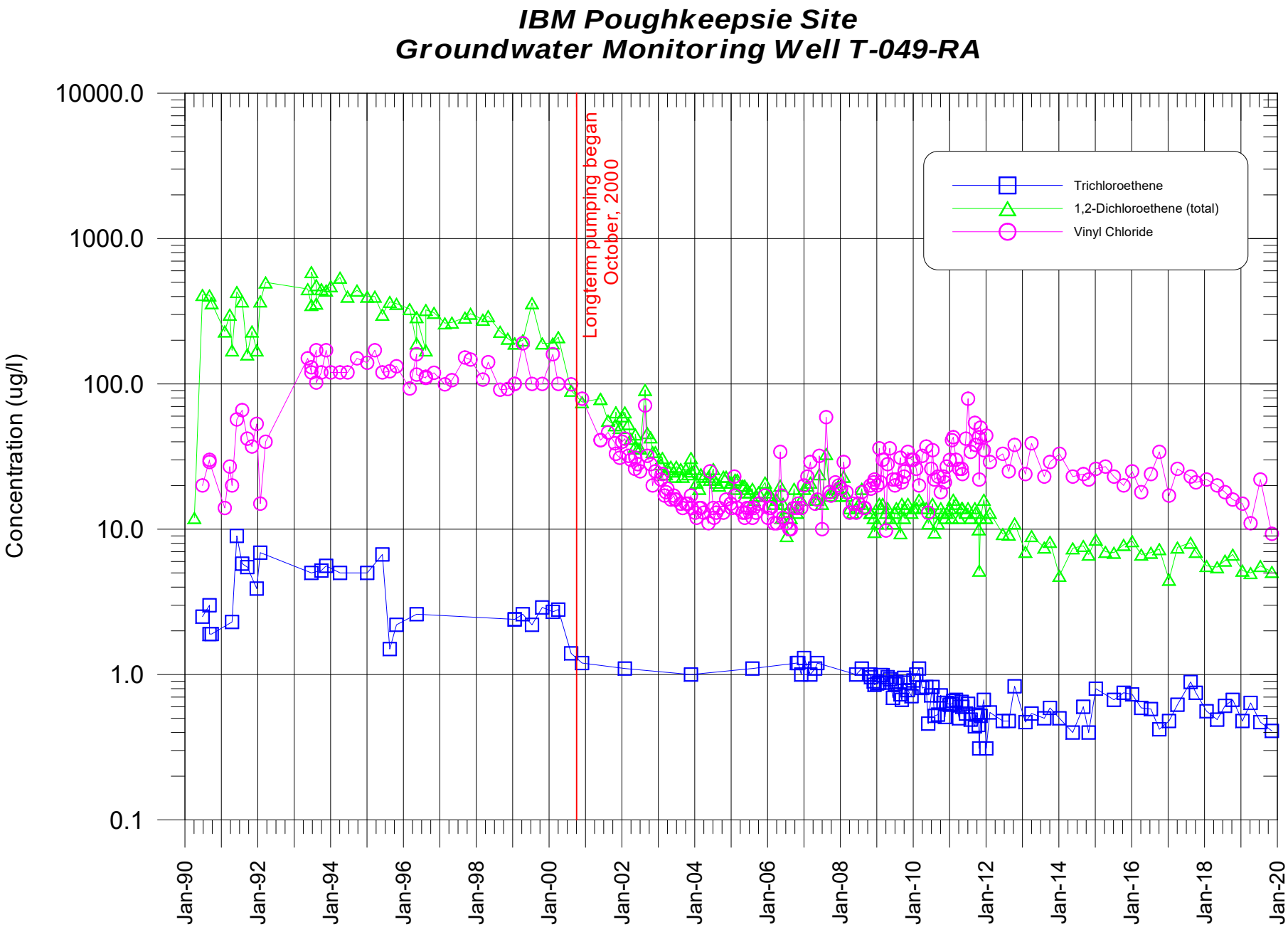

IBM Poughkeepsie Site
Groundwater Monitoring Well T-217-S and T-217-SA
Concentration (ug/l)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Monitoring Well Upgraded
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

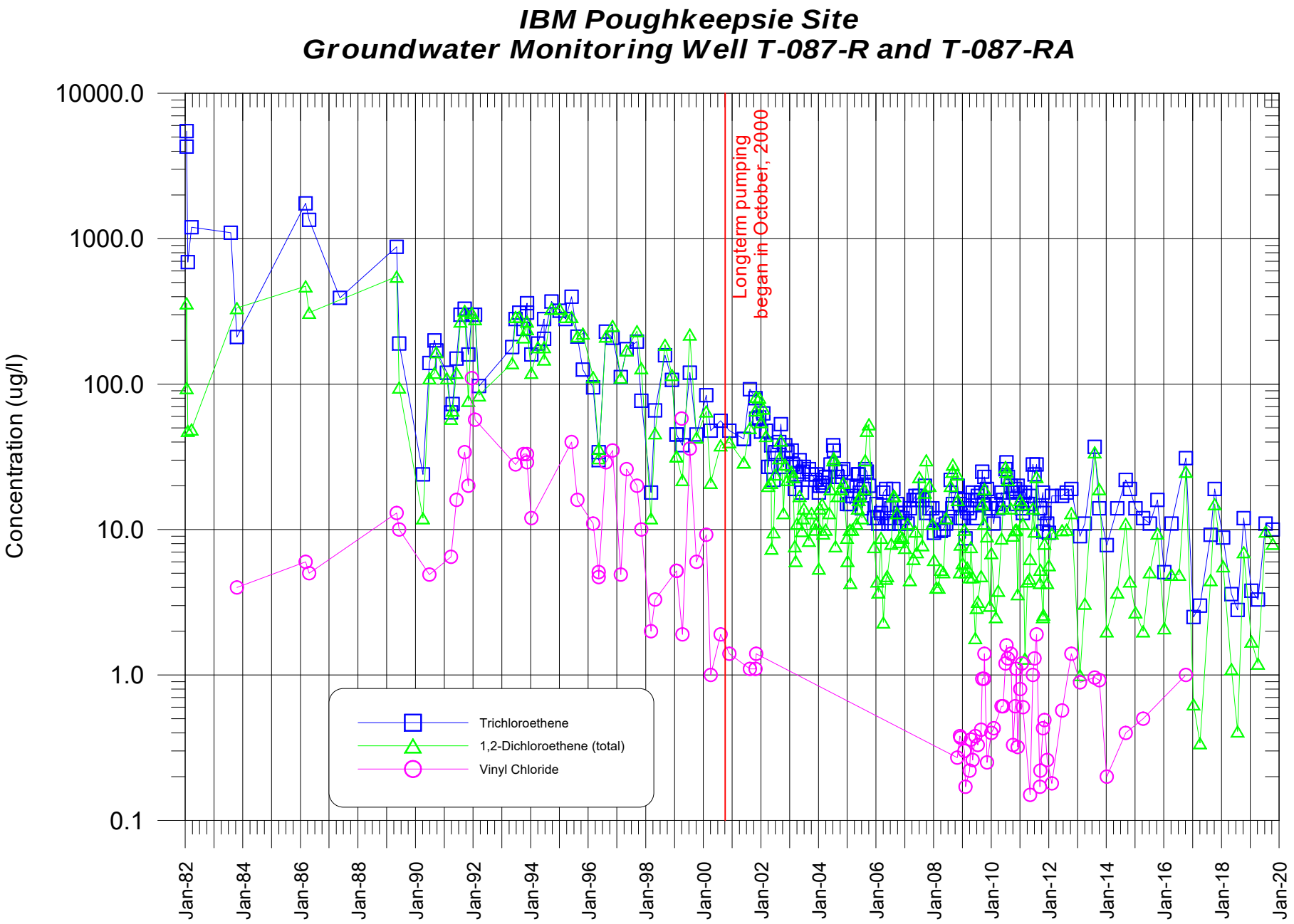

IBM Poughkeepsie Site
Groundwater Monitoring Well T-217-SA
Concentration (ug/l)
1500
1250
1000
750
500
250
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992

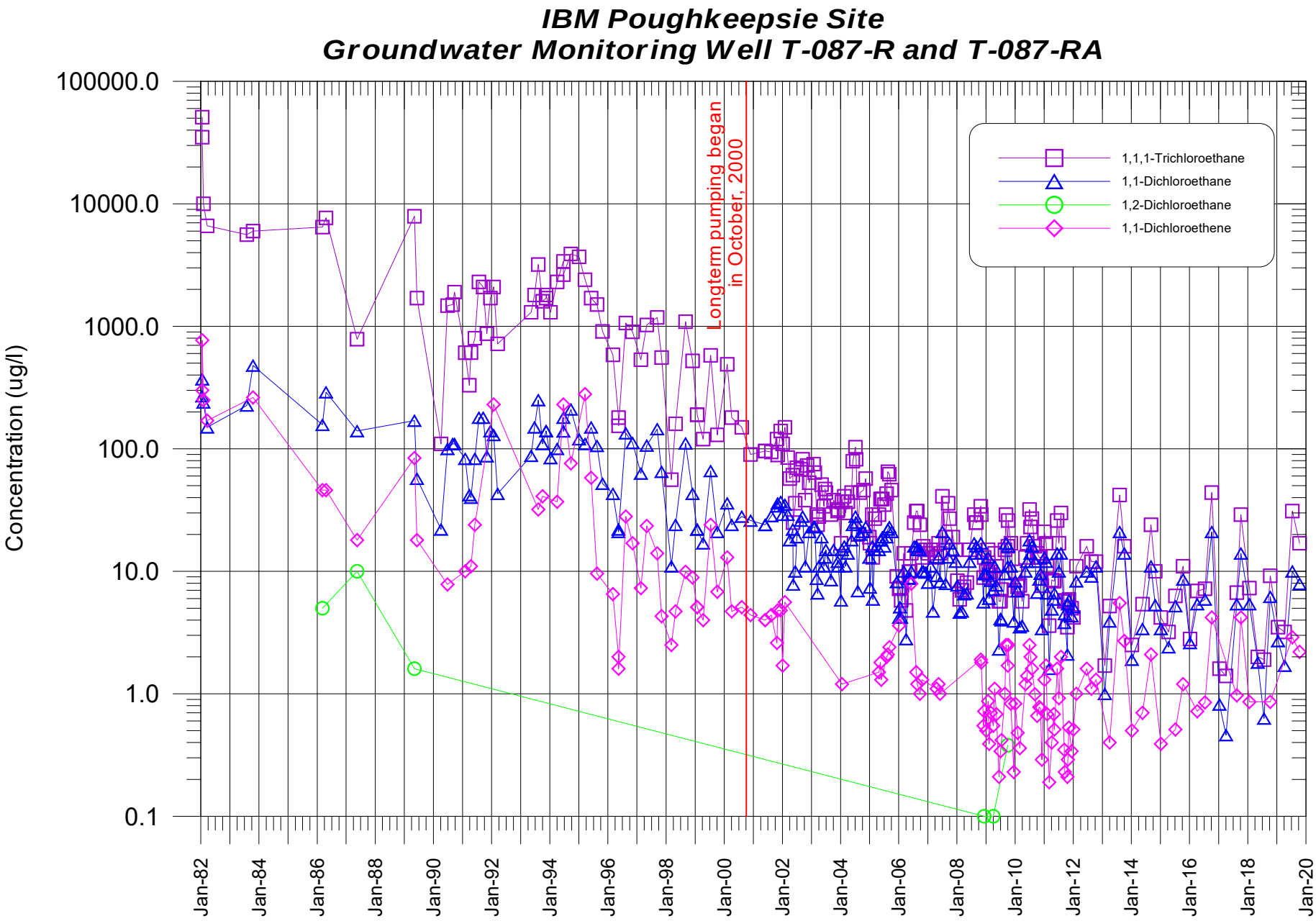

IBM Hudson Valley - Poughkeepsie
Groundwater Monitoring Well T-314-S
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Tetrachloroethene

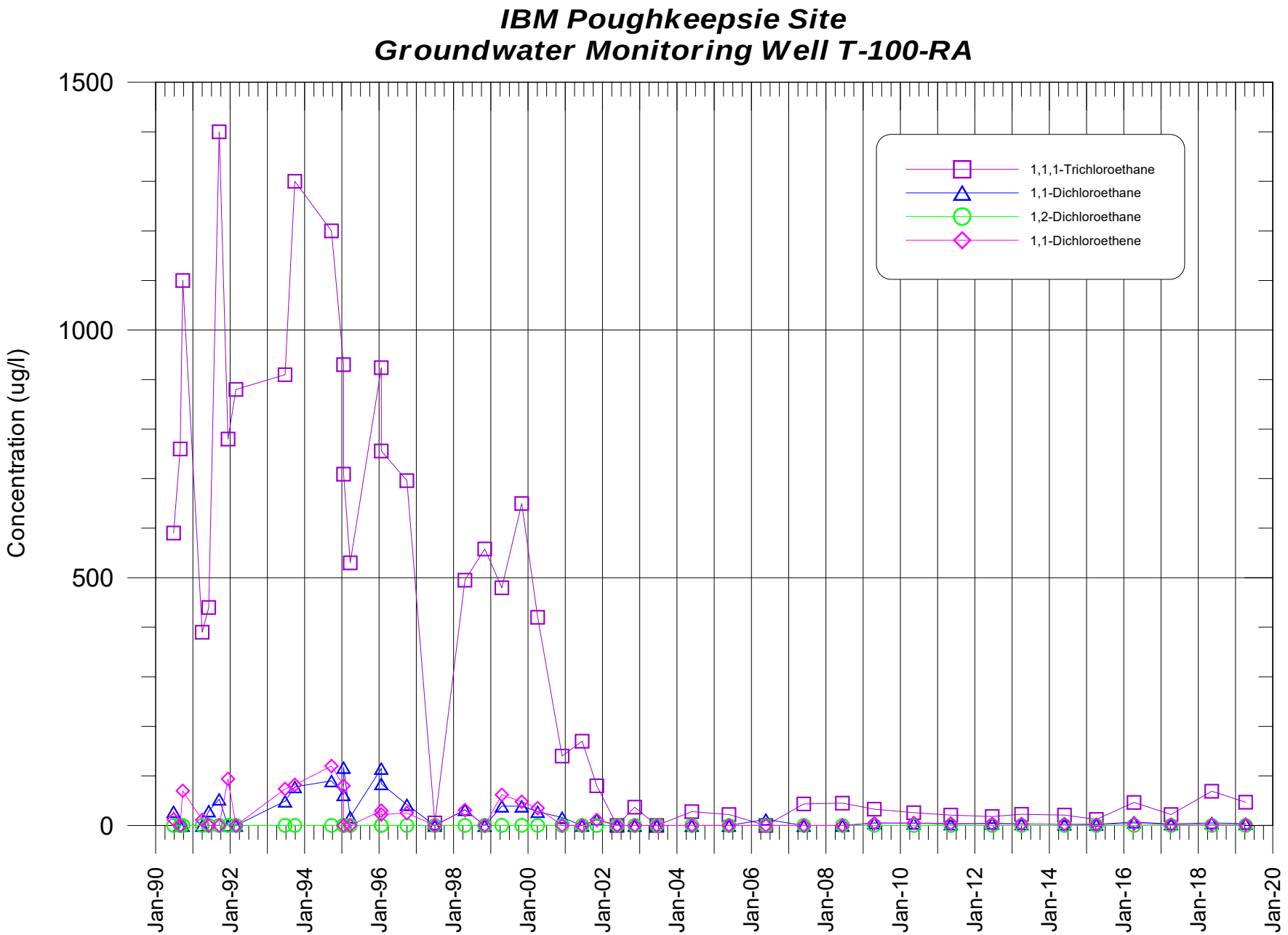

IBM Poughkeepsie Site
Groundwater Monitoring Well T-314-S
Concentration (ug/l)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

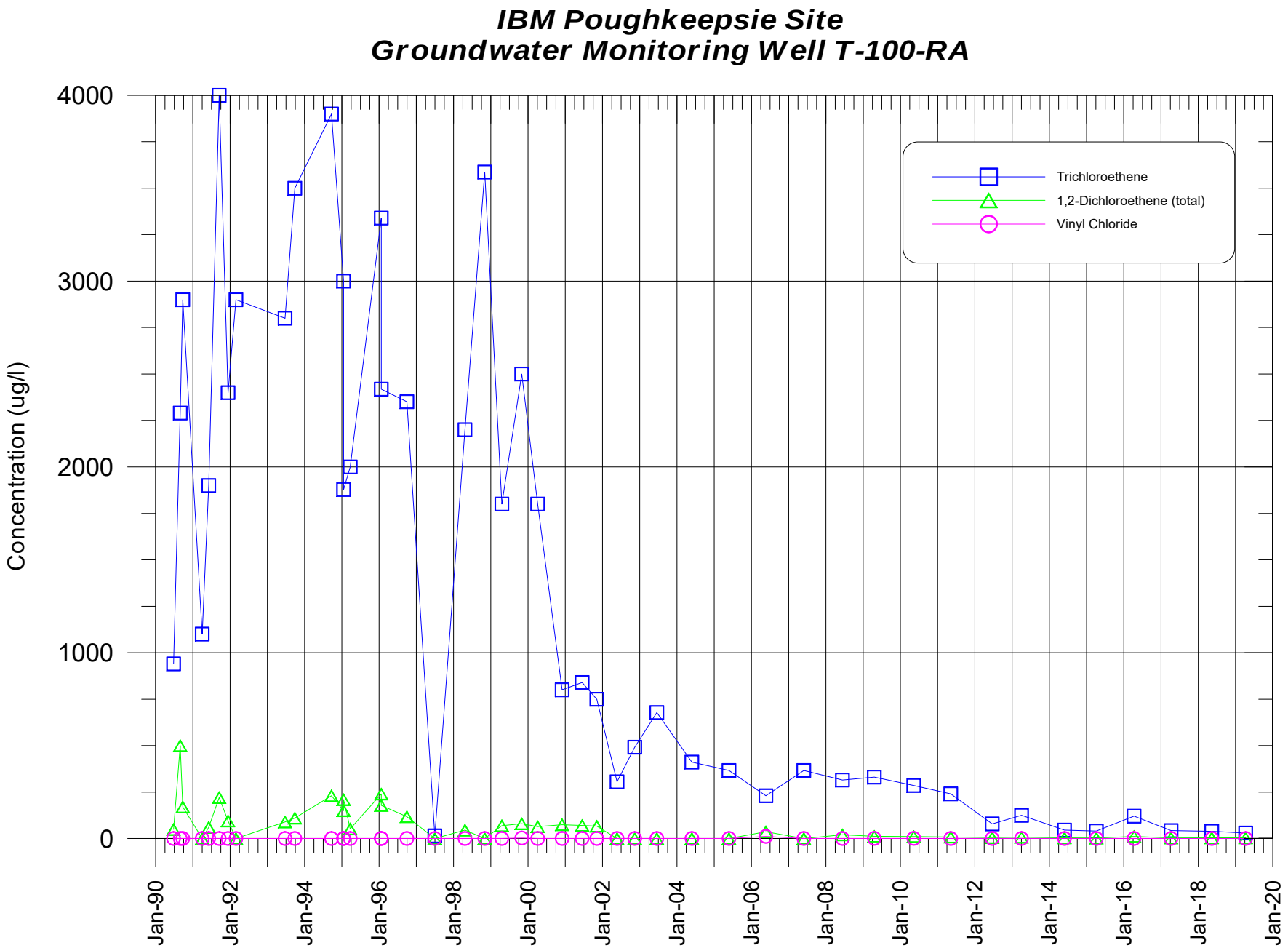

IBM Poughkeepsie Site
Groundwater Monitoring Well T-314-S
Concentration (ug/l)
10000
7500
5000
2500
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Startup Extraction Well T-8SB October 29, 1991
Startup Extraction Well T-315S April 9, 1992
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Tetrachloroethene

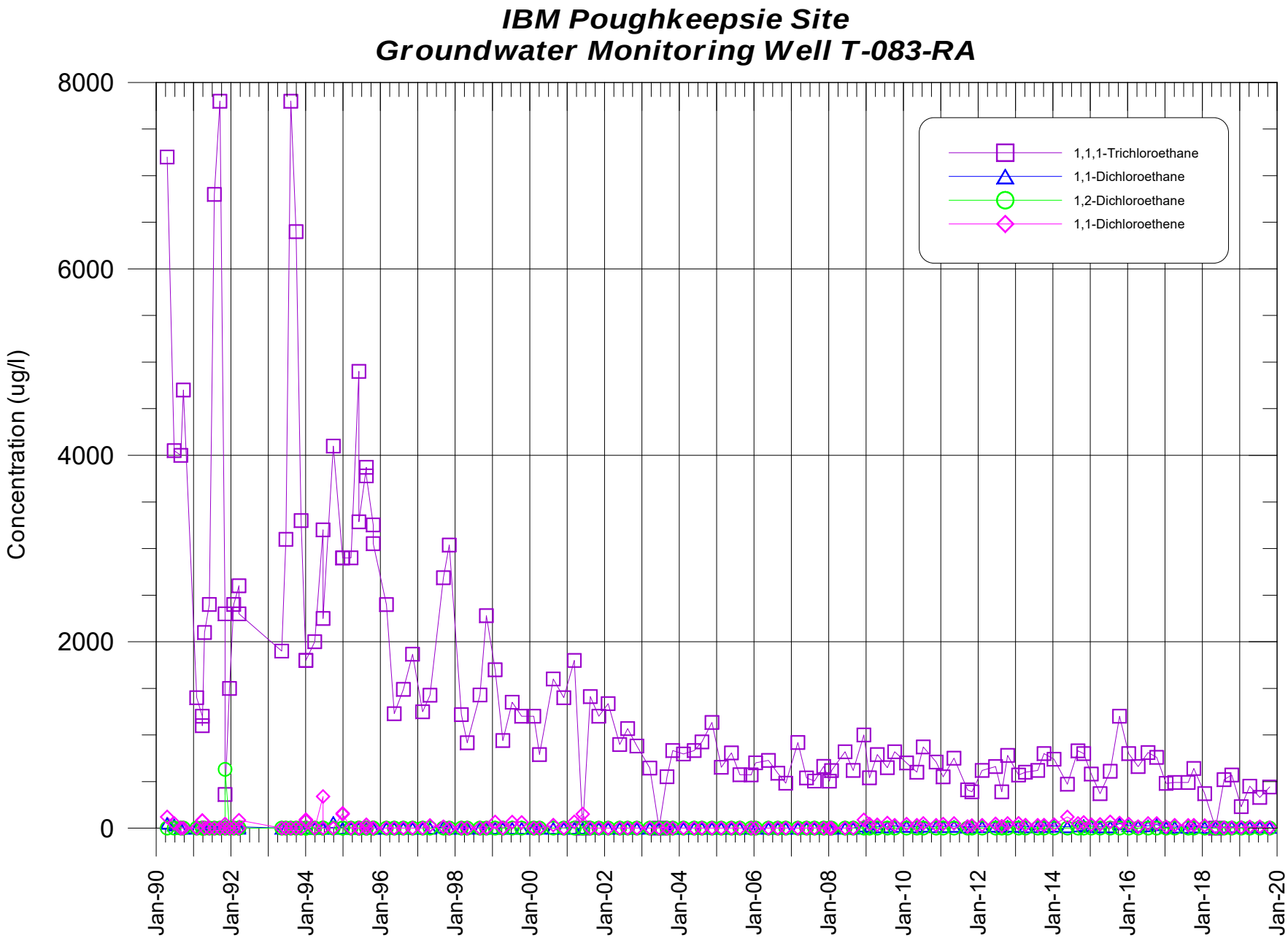

IBM Poughkeepsie Site
Groundwater Monitoring Well T-049-RA
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Longterm pumping began
October, 2000
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20

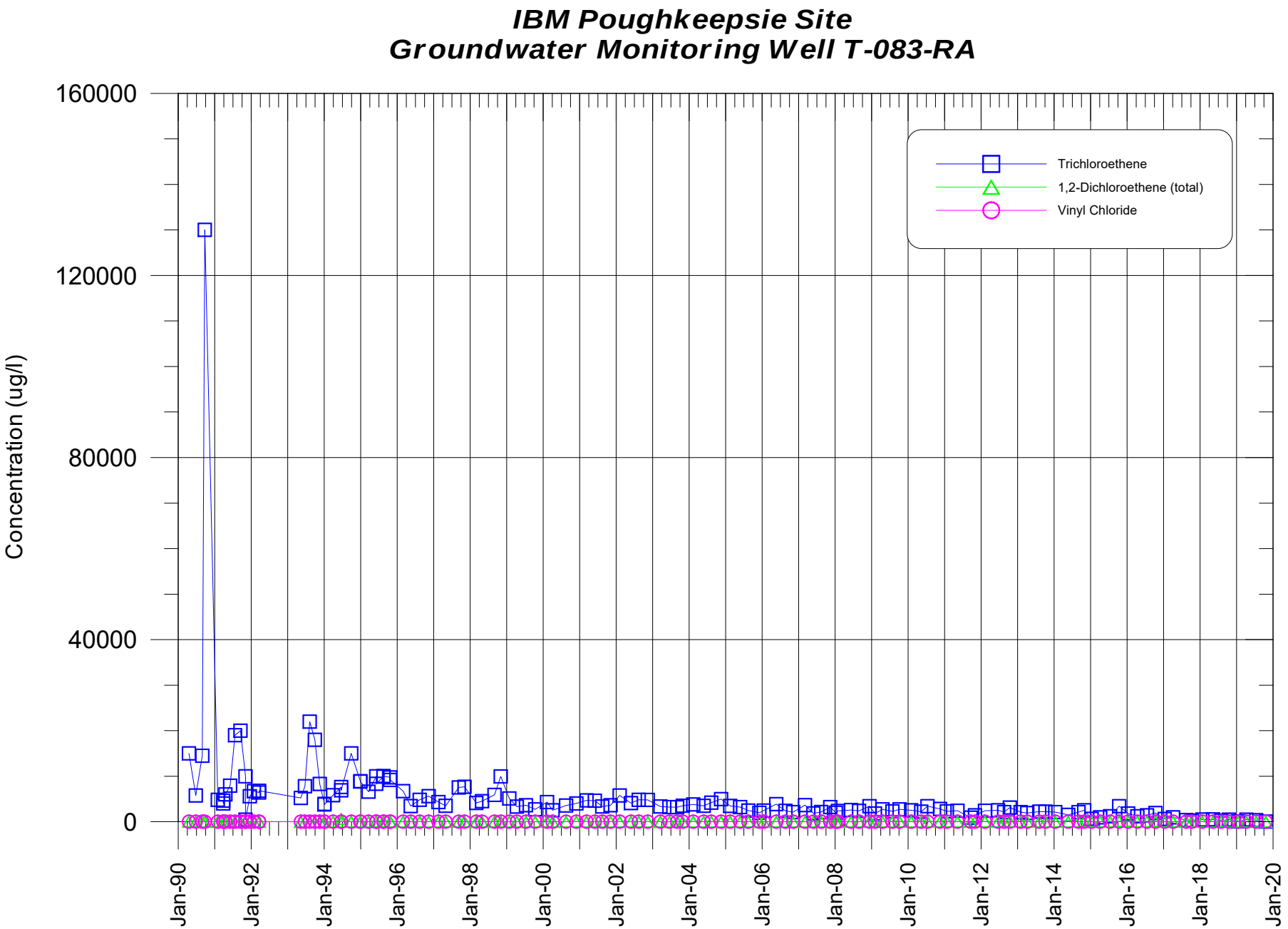

IBM Poughkeepsie Site
Groundwater Monitoring Well T-087-R and T-087-RA
Concentration (ug/l)
10000.0
1000.0
100.0
10.0
1.0
0.1
Longterm pumping
began in October, 2000
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20

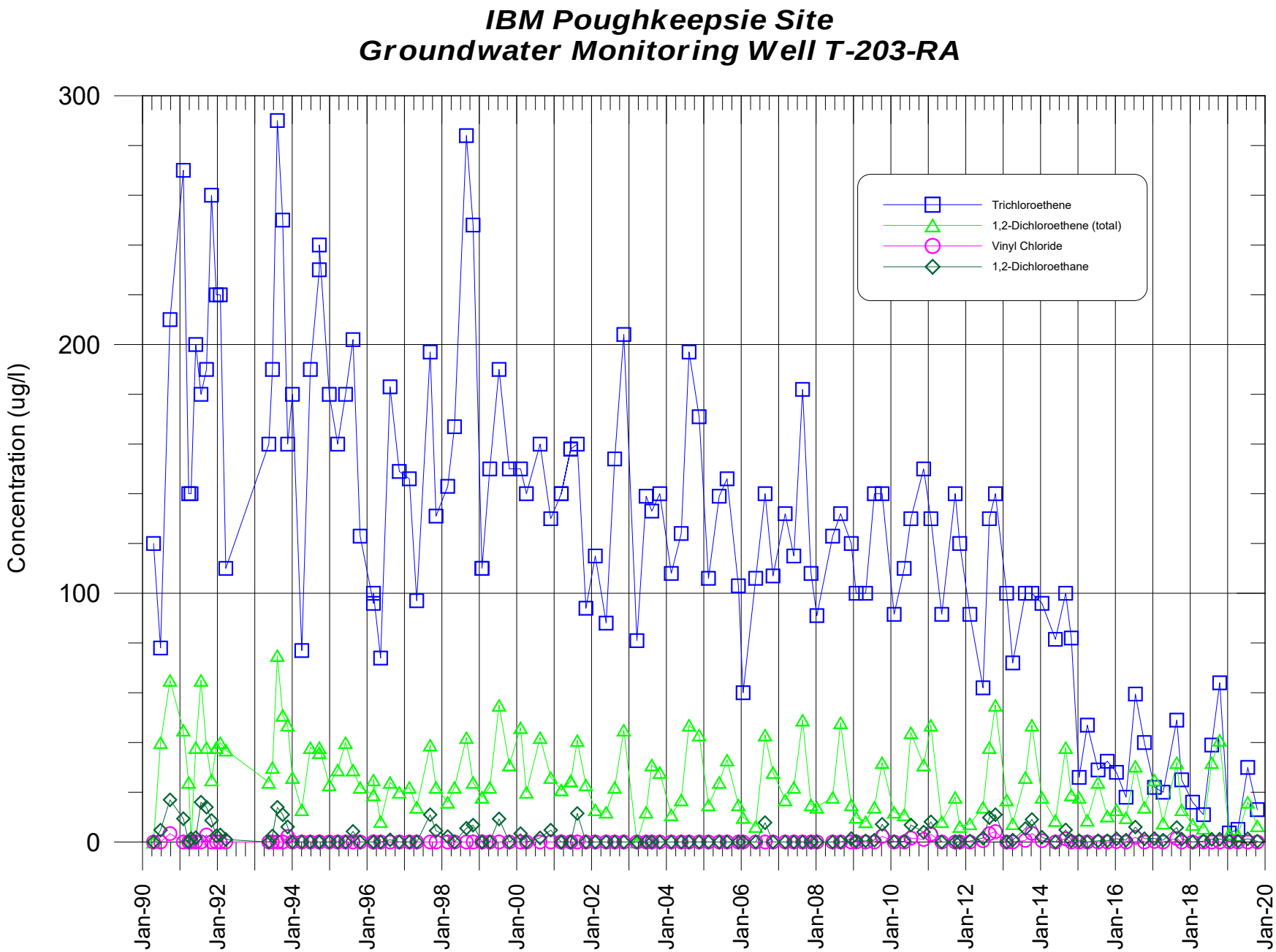

IBM Poughkeepsie Site
Groundwater Monitoring Well T-087-R and T-087-RA
Concentration (ug/l)
100000.0
10000.0
1000.0
100.0
10.0
1.0
0.1
Longterm pumping began in October, 2000
1,1,1-Trichloroethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20

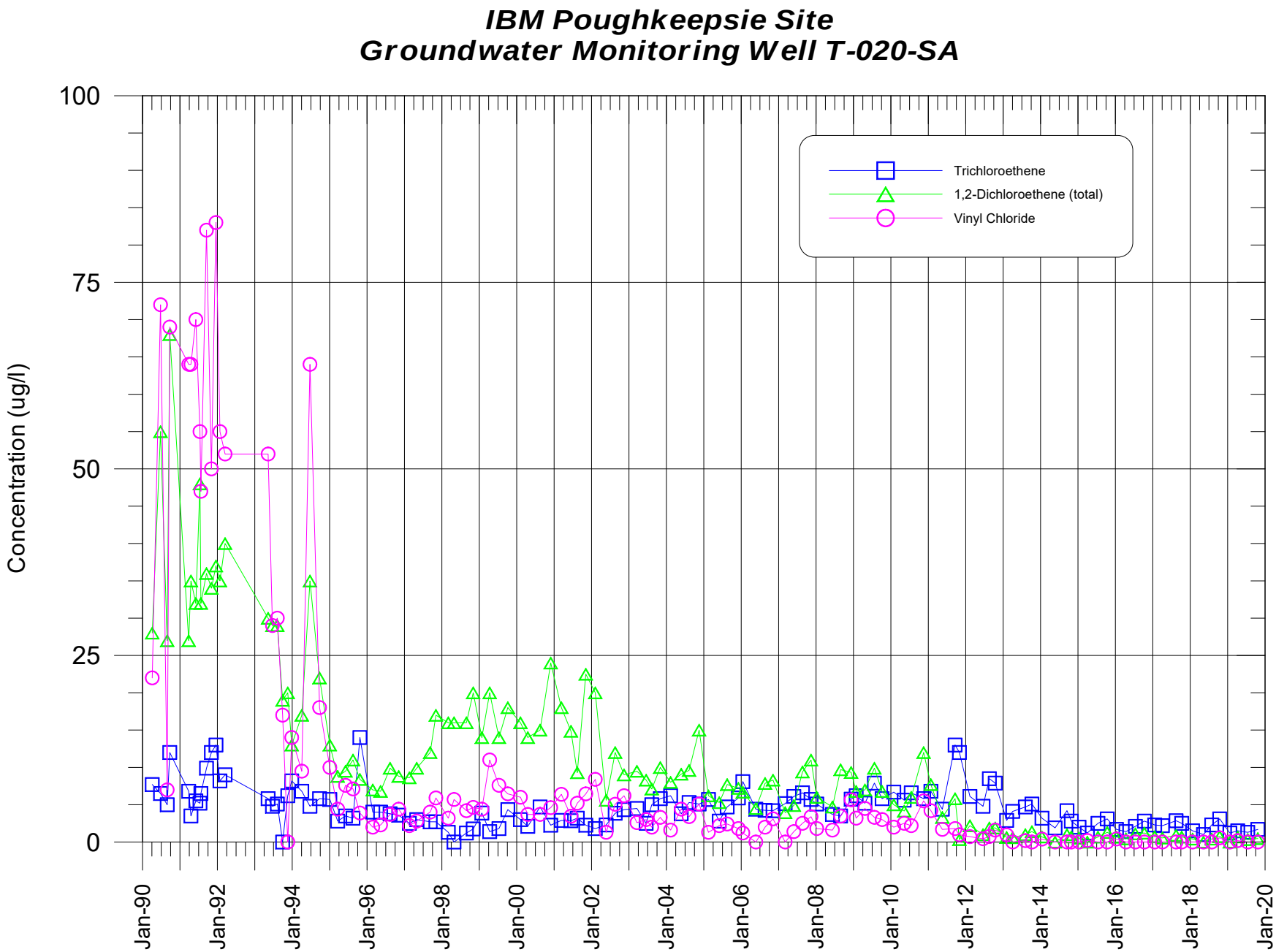

IBM Poughkeepsie Site
Groundwater Monitoring Well T-100-RA
Concentration (ug/l)
1500
1000
500
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
1,1,1-Trichloroethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene

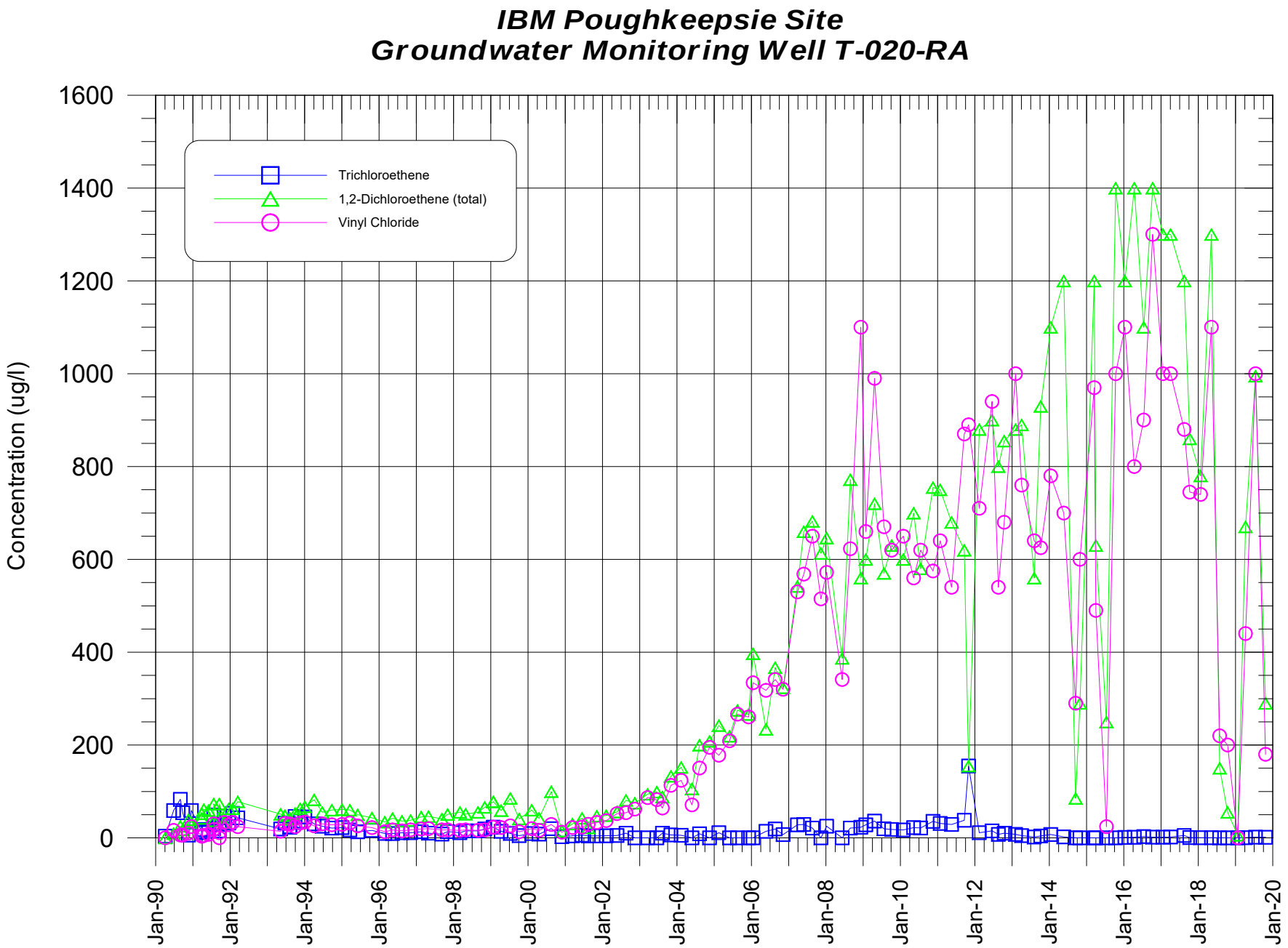

IBM Poughkeepsie Site
Groundwater Monitoring Well T-100-RA
Concentration (ug/l)
4000
3000
2000
1000
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

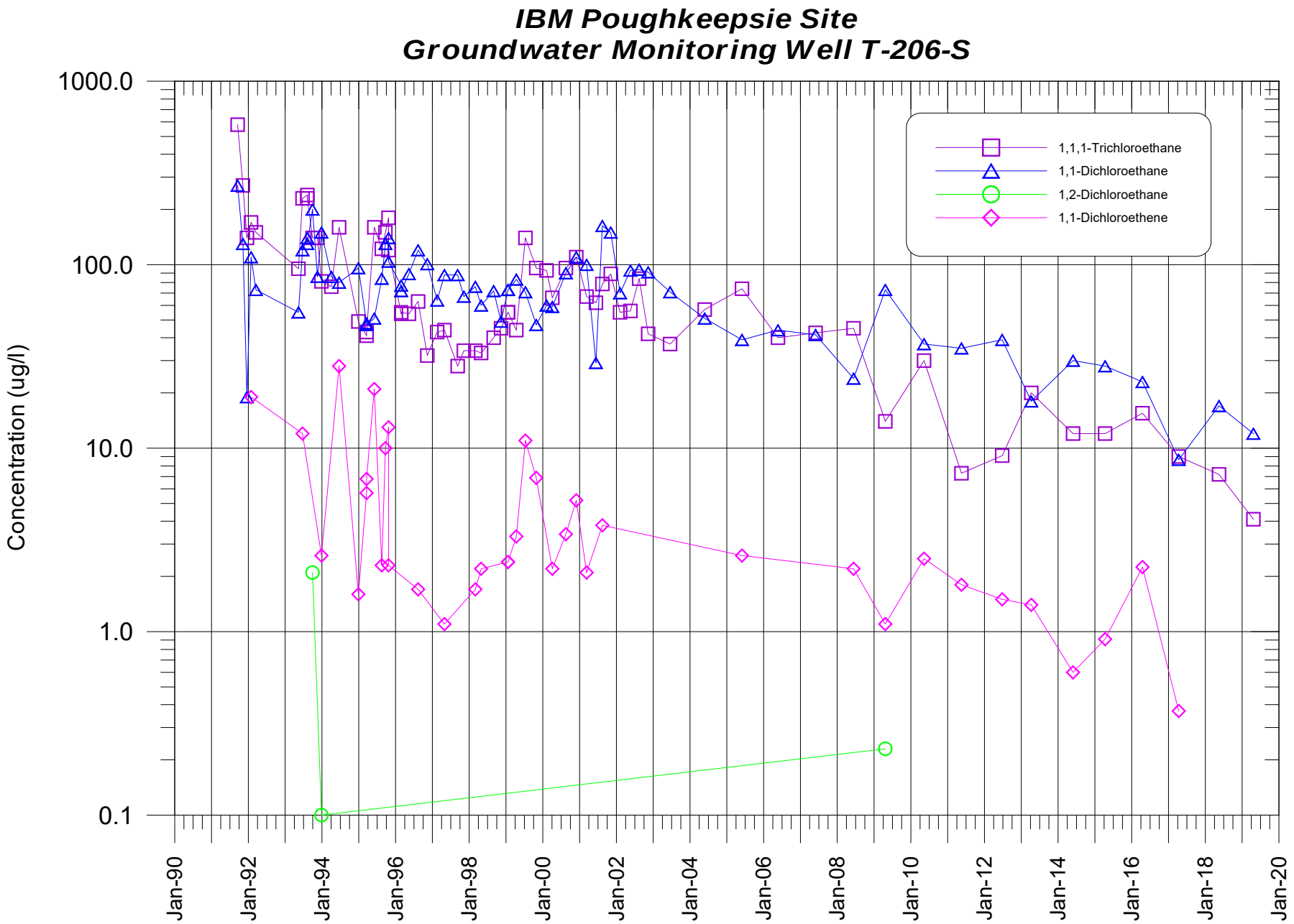

IBM Poughkeepsie Site
Groundwater Monitoring Well T-083-RA
Concentration (ug/l)
8000
6000
4000
2000
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
1,1,1-Trichloroethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene

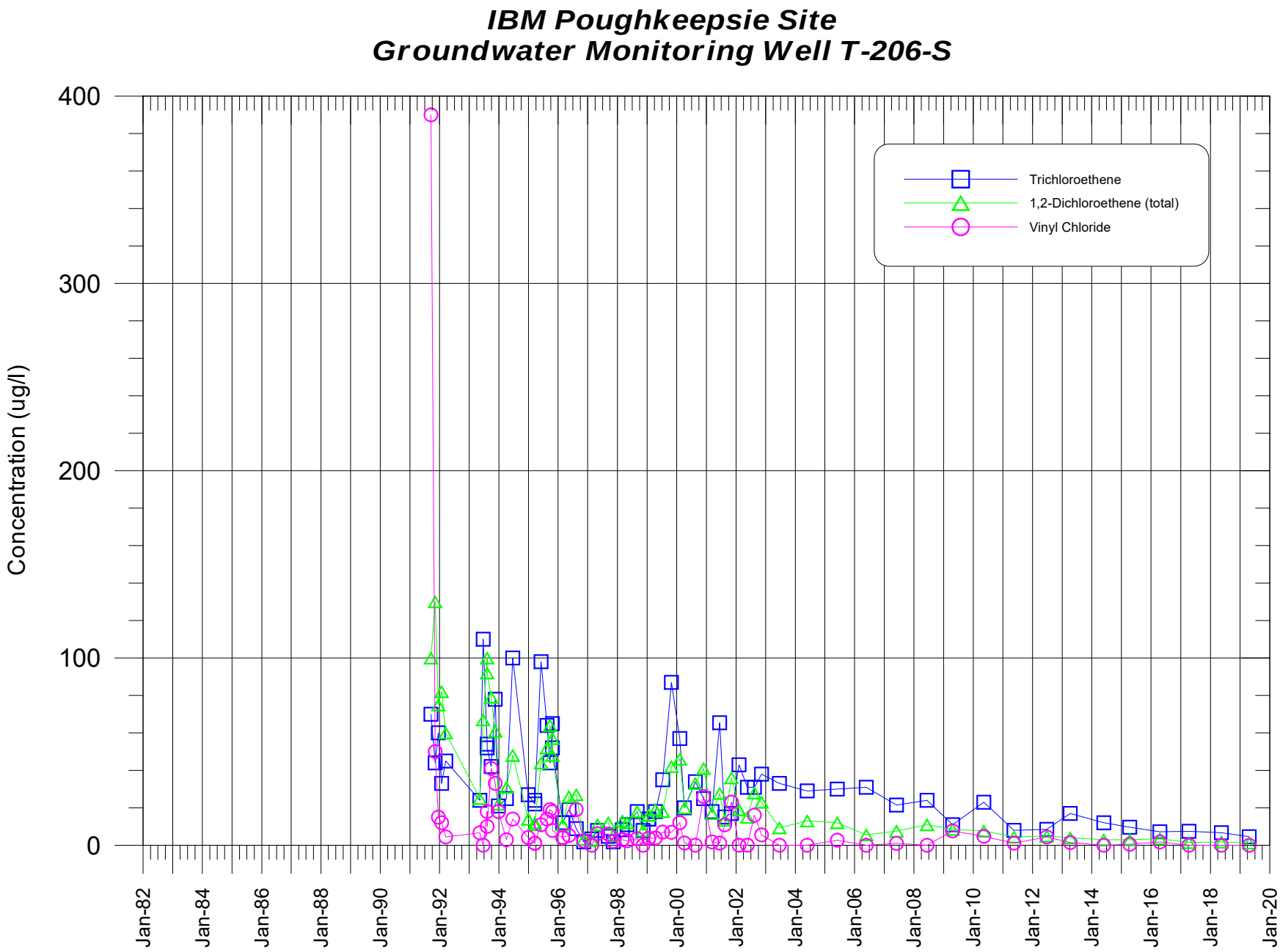

IBM Poughkeepsie Site
Groundwater Monitoring Well T-083-RA
Concentration (ug/l)
160000
120000
80000
40000
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride


IBM Poughkeepsie Site
Groundwater Monitoring Well T-203-RA
Concentration (ug/l)
300
200
100
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
1,2-Dichloroethane


IBM Poughkeepsie Site
Groundwater Monitoring Well T-020-SA
Concentration (ug/l)
100
75
50
25
0
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride


IBM Poughkeepsie Site
Groundwater Monitoring Well T-020-RA
Concentration (ug/l)
1600
1400
1200
1000
800
600
400
200
0
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20


IBM Poughkeepsie Site
Groundwater Monitoring Well T-206-S
Concentration (ug/l)
1000.0
100.0
10.0
1.0
0.1
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
1,1,1-Trichloroethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene


IBM Poughkeepsie Site
Groundwater Monitoring Well T-206-S
Concentration (ug/l)
400
300
200
100
0
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Trichloroethene
1,2-Dichloroethene (total)
Vinyl Chloride

APPENDIX D: GROUNDWATER ELEVATION TABLES

IBM Poughkeepsie Main Plant Site
2019 Quarterly Water Level Data
Last Updated: 11/15/19

Well Number	Elevation TOC	01/04/19 DTW	GWE	04/03/19 DTW	GWE	07/12/19 DTW	GWE	11/15/19 DTW	GWE
75-B	**98.16**	5.26	92.90	13.92	84.24	24.62	73.54	39.16	59.00
75-C	**97.38**	17.27	80.11	20.63	76.75	56.32	41.06	43.38	54.00
75-D	**96.40**	10.40	86.00	11.06	85.34	11.28	85.12	11.39	85.01
75-E	**97.57**	14.06	83.51	14.81	82.76	16.22	81.35	15.50	82.07
75-GA	**94.56**	14.22	80.34	15.10	79.46	15.28	79.28	15.62	78.94
75-I	**97.38**	13.48	83.90	15.42	81.96	15.92	81.46	17.80	79.58
75-K	**96.11**	23.68	72.43	30.00	66.11	34.08	62.03	34.84	61.27
75-L	**86.64**	10.00	76.64	14.00	72.64	14.27	72.37	18.97	67.67
75-O	**80.75**	11.68	69.07	12.68	68.07	12.78	67.97	14.97	65.78
BK-1	**74.62**	22.95	51.67	24.39	50.23	24.40	50.22	24.10	50.52
BK-2	**63.15**	10.58	52.57	11.82	51.33	11.70	51.45	11.92	51.23
BK-3	**50.87**	11.83	39.04	13.25	37.62	13.47	37.40	12.33	38.54
BK-4	**55.77**	10.12	45.65	11.32	44.45	11.28	44.49	11.29	44.48
BK-5	**61.04**	17.12	43.92	18.92	42.12	18.52	42.52	18.63	42.41
MW-B11-R	**17.78**	14.64	3.14	12.51	5.27	12.53	5.25	14.79	2.99
MW-19-S	**86.14**	8.16	77.98	8.20	77.94	8.27	77.87	8.33	77.81
T-8-S	**90.67**	14.22	76.45	14.14	76.53	14.20	76.47	14.02	76.65
T-8-SB	**90.67**	30.90	59.77	30.86	59.81	30.82	59.85	30.71	59.96
T-10-S	**92.90**	14.25	78.65	14.03	78.87	13.95	78.95	14.82	78.08
T-15RA	**15.14**	12.58	2.56	13.32	1.82	12.40	2.74	13.00	2.14
T-15-SA	**15.02**	6.88	8.14	8.47	6.55	6.92	8.10	6.71	8.31
T-17SA	**91.14**	15.79	75.35	15.82	75.32	15.87	75.27	18.06	73.08
T-20-RA	**18.56**	18.82	-0.26	18.82	-0.26	17.32	1.24	17.79	0.77
T-20-SA	**18.90**	13.11	5.79	14.43	4.47	12.78	6.12	13.09	5.81
T-22-SA	**59.14**	10.01	49.13	10.41	48.73	10.32	48.82	9.70	49.44
T-31-RS	**87.91**	13.71	74.20	13.68	74.23	13.90	74.01	13.99	73.92
T-32SA	**91.78**	14.55	77.23	14.20	77.58	14.45	77.33	14.39	77.39
T-34SA	**90.01**	13.42	76.59	13.10	76.91	13.00	77.01	13.71	76.30
T-41SA	**93.88**	24.12	69.76	24.55	69.33	24.48	69.40	24.33	69.55
T-42-RA	**56.55**	8.53	48.02	8.20	48.35	8.15	48.40	8.35	48.20
T-43-SB	**87.24**	24.50	62.74	24.50	62.74	24.49	62.75	24.32	62.92
T-48-R	**14.09**	11.03	3.06	12.18	1.91	11.99	2.10	12.13	1.96
T-49-RA	**18.07**	24.60	-6.53	20.10	-2.03	13.80	4.27	19.52	-1.45
T-57SA	**91.06**	34.66	56.40	34.53	56.53	34.62	56.44	34.09	56.97
T-58-R	**93.54**	18.58	74.96	19.00	74.54	30.29	63.25	35.62	57.92
T-74SA	**86.56**	29.68	56.88	29.83	56.73	28.96	57.60	29.06	57.50
T-75-S	**89.32**	30.75	58.57	30.25	59.07	30.58	58.74	31.30	58.02
T-81SA	**83.00**	28.52	54.48	28.91	54.09	28.92	54.08	28.26	54.74
T-83-RA	**20.43**	6.82	13.61	8.92	11.51	9.82	10.61	11.16	9.27
T-85-RB	**54.29**	8.77	45.52	8.88	45.41	8.33	45.96	9.36	44.93
T-86-R	**13.08**	2.02	11.06	2.49	10.59	2.35	10.73	2.69	10.39
T-87-RA	**19.36**	23.75	-4.39	21.20	-1.84	22.23	-2.87	24.20	-4.84
T-88-R	**16.18**	3.10	13.08	3.58	12.60	3.49	12.69	4.45	11.73
T-99-S	**14.93**	5.02	9.91	6.49	8.44	8.10	6.83	8.07	6.86
T-100-RA	**15.18**	12.12	3.06	13.00	2.18	13.33	1.85	13.75	1.43
T-101-RA	**95.66**	66.42	29.24	81.50	14.16	82.91	12.75	78.20	17.46
T-102-R	**96.37**	39.68	56.69	42.46	53.91	48.10	48.27	44.67	51.70
T-103-R	**88.34**	46.22	42.12	Dry		Dry		Dry	
T-104-RA	**82.76**	34.88	47.88	42.33	40.43	56.81	25.95	36.97	45.79
T-104-RB	**82.62**	34.95	47.67	37.58	45.04	39.75	42.87	31.75	50.87
T-108SDA	**86.59**	9.57	77.02	9.54	77.05	9.63	76.96	10.21	76.38
T-203-RA	**53.16**	8.92	44.24	14.66	38.50	18.88	34.28	19.08	34.08
T-204-R	**58.28**	25.18	33.10	27.72	30.56	39.42	18.86	34.25	24.03
T-206-RA	**16.24**	67.13	-50.89	59.82	-43.58	61.63	-45.39	19.75	-3.51
T-206-S	**17.08**	6.32	10.76	8.90	8.18	8.97	8.11	9.80	7.28
T-207-R	**13.29**	2.34	10.95	2.13	11.16	2.10	11.19	2.21	11.08
T-208RA	**87.54**	25.38	62.16	25.31	62.23	25.32	62.22	25.49	62.05

IBM Poughkeepsie Main Plant Site
2019 Quarterly Water Level Data
Last Updated: 11/15/19

Well Number	Elevation TOC	01/04/19 DTW	GWE	04/03/19 DTW	GWE	07/12/19 DTW	GWE	11/15/19 DTW	GWE
T-217-SA	**58.61**	4.86	53.75	5.28	53.33	5.12	53.49	5.16	53.45
T-303-S	**88.30**	8.94	79.36	8.90	79.40	8.99	79.31	8.96	79.34
T-310-C	**93.98**	23.67	70.31	23.68	70.30	23.18	70.80	23.72	70.26
T-311-S	**94.80**	13.85	80.95	13.83	80.97	13.82	80.98	13.82	80.98
T-312-S	**91.37**	10.96	80.41	10.92	80.45	10.90	80.47	10.93	80.44
T-313-SA	**94.49**	13.79	80.70	14.33	80.16	14.36	80.13	14.32	80.17
T-313-SB	**94.50**	14.98	79.52	15.09	79.41	15.11	79.39	15.10	79.40
T-314-S	**82.72**	5.95	76.77	5.90	76.82	6.22	76.50	6.10	76.62
T-315-S	**88.73**	23.17	65.56	23.19	65.54	23.22	65.51	24.74	63.99
T-337-S	**93.86**	12.60	81.26	12.68	81.18	12.72	81.14	12.72	81.14
404-R	**93.05**	17.83	75.22	18.62	74.43	17.78	75.27	18.28	74.77
405-R	**19.99**	83.01	-63.02	84.70	-64.71	85.15	-65.16	87.26	-67.27
406-RB	**16.06**	13.42	2.64	15.06	1.00	14.38	1.68	15.00	1.06
407-R	**20.71**	14.45	6.26	14.82	5.89	13.72	6.99	13.68	7.03
408-S	**6.12**	5.88	0.24	5.12	1.00	4.88	1.24	5.83	0.29
409-S	**10.11**	8.72	1.39	10.68	-0.57	9.00	1.11	8.89	1.22
410-M	**8.46**	7.78	0.68	8.14	0.32	7.78	0.68	8.00	0.46
410-R	**8.04**	7.16	0.88	7.52	0.52	6.27	1.77	7.58	0.46
411-R	**29.38**	28.91	0.47	29.52	-0.14	28.55	0.83	29.27	0.11
412-R	**12.44**	9.35	3.09	10.12	2.32	9.38	3.06	9.60	2.84
412-RB	**12.29**	10.46	1.83	11.11	1.18	10.52	1.77	10.53	1.76
413-R	**31.87**	65.28	-33.41	51.88	-20.01	51.97	-20.10	68.71	-36.84
414-R	**15.84**	37.00	-21.16	37.38	-21.54	37.62	-21.78	33.72	-17.88
415-R	**58.67**	26.82	31.85	23.68	34.99	25.68	32.99	23.72	34.95
416-R	**94.70**	72.25	22.45	67.12	27.58	74.08	20.62	68.42	26.28
417-R	**96.37**	30.00	66.37	32.10	64.27	37.42	58.95	34.43	61.94
422-R	**40.99**	36.93	4.06	37.33	3.66	38.00	2.99	38.79	2.20
423-R(U)	**18.28**	12.57	5.71	13.13	5.15	12.28	6.00	12.53	5.75
425-R	**20.70**	25.35	-4.65	24.28	-3.58	24.02	-3.32	25.10	-4.40
427-R	**24.99**	37.16	-12.17	37.52	-12.53	20.22	4.77	37.83	-12.84

APPENDIX E: DETAILED FLUX CALCULATIONS

IBM Poughkeepsie
Main Plant Site
Summary of Flux Calculations
Last Updated: April 13, 2020

Former Burn Pit / Inactive Waste Disposal Site

Flow = 1062 gpd
VOAs Concentration Leading Edge

Well ID	PCE	TCE	12-DCE tot	VC	111-TCA	11-DCA	12-DCA	11-DCE	FR113	DCM	BZ	TOL	EBZ	XYLTOT	12-DCBZ	13-DCBZ	14-DCBZ	CBZ	DCDFM	FR123A
T-104-RA	0.00	5.43	3.65	0.05	0.00	0.00	0.00	0.00	0.00	0.07					0.00	0.00	0.00	0.10	0.00	0.00
T-104-RB	0.00	0.63	4.58	0.42	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.08	0.00	0.00
T-203-RA	0.00	12.93	7.18	0.00	1.13	0.15	0.58	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00
T-204-R	0.00	7.65	0.88	0.00	0.28	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00
415-R	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00
422-R	0.00	27.25	4.54	0.30	0.05	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.23
average conc (ug/l)	0.0	9.0	3.5	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flux lbs/day (LE) =	0.000000	0.000080	0.000031	0.000001	0.000002	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Overall Flux 0.000116 lbs/day

Former Burn Pit / Inactive Waste Disposal Site

Flow = 6070 gpd
VOAs Concentration Leading Edge

Well ID	PCE	TCE	12-DCE tot	VC	111-TCA	11-DCA	12-DCA	11-DCE	FR113	DCM	BZ	TOL	EBZ	XYLTOT	12-DCBZ	13-DCBZ	14-DCBZ	CBZ	DCDFM	FR123A
T-104-RA	0.000000	8.500000	5.125000	0.307500	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000					0.000000	0.000000	0.000000	0.237500	0.000000	0.000000
T-104-RB	0.000000	2.032500	3.950000	0.207500	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
T-203-RA	0.000000	32.500000	21.425000	0.000000	1.000000	0.000000	0.667500	0.000000	0.000000	0.000000					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
T-204-R	0.000000	4.250000	0.270000	0.000000	0.235000	0.000000	0.000000	0.000000	0.000000	0.000000					0.000000	0.000000	0.000000	0.000000	0.000000	0.205000
415-R	0.000000	0.000000	0.355000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
422-R	0.000000	27.250000	6.362500	0.750000	0.000000	0.000000	0.000000	0.087500	0.000000	0.000000					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
average conc (ug/l)	0.0	12.4	6.2	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flux lbs/day (LE) =	0.000000	0.000629	0.000316	0.000011	0.000010	0.000000	0.000006	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000002	0.000000	0.000002

Overall Flux 0.000976 lbs/day

Site Gravel (H107-Downstream sampling station)

	TCE	12-DCE tot	
Average flux =	0.000000	0.00000	lbs/day

Outfall 013

Engineering Controls

Outfall 009

Engineering Controls